

THE STATE OF SOUTH CAROLINA
In The Court of Appeals

APPEAL FROM CLARENDON COUNTY
COURT OF COMMON PLEAS

W. Jeffrey Young, Circuit Court Judge
And
George C. James, Circuit Court Judge

Case No. 2008 CP 14-0461

Andreal Holland by his Guardian Ad
Litem Peggy Knox,
Plaintiff/Appellant,
vs.

Morbark, Inc, Precision Husky
Corporation, A & K Mulch, LLC,
Watford Industry, Inc., Defendants,
of whom Morbark, Inc. is the Respondent.

RECORD ON APPEAL-VOLUME III

Donald E. Jonas, Esquire
PO Box 99 (29071)
142 A.B. Frye Rd.
Lexington, SC 29073
(803) 309-2483
Attorney For Appellant

Curtis L. Ott, Esquire
Laura W. Jordan, Esquire
Gallivan, White & Boyd, P.A.
PO Box 7368 (29202)
1201 Main Street, Suite 1200
Columbia, S.C. 29201
(803) 779-1833
Attorney For Respondent

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Roger E. Davis, P.E., C.F.E.I.

1 and the issues that I was dealing with.

2 MR. JONAS CONTINUING:

3 Q. Were there other forest products
4 manufacturing equipment that you have
5 investigated?

6 A. Yes, I've investigated others. I had
7 a case involving a delimbing machine; had a
8 case in -- I think it was in Mississippi where
9 I found really no fault with the equipment.

10 Q. So the delimbing machine case was the
11 one in Mississippi?

12 A. Yes.

13 Q. All right. And do you know the
14 manufacturer of that?

15 A. I don't recall. It might have been
16 Prentice, but I'm not sure of that.

17 MR. CARTER: Don, can we go off the
18 record one second?

19 MR. JONAS: Sure.

20 (Brief recess.)

21 MR. JONAS CONTINUING:

22 Q. All right. You mentioned British
23 Columbia earlier in your testimony, that you
24 had looked at some safety standards in British
25 Columbia --

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Roger E. Davis, P.E., C.F.E.I.

1 A. Yes.

2 Q. -- in connection with this case?

3 A. Yes.

4 Q. All right. And apparently those
5 standards, you've referred to them. I guess
6 they're part of the materials that are in
7 your -- these Exhibits 2 and 3 now?

8 A. They are.

9 Q. All right. What standards are you
10 referring to?

11 A. Let me find it so I can give you the
12 correct citation. The standard I'm referring
13 to is actually an OSHA standard specifically
14 for British Columbia. I haven't laid my hands
15 on the specific document yet. I apologize. I
16 reorganized my file, and I don't know it like I
17 typically would as to where the stuff is.

18 Q. Is this the document?

19 A. Yes, it is.

20 Q. All right. Referring to the
21 document --

22 A. Yeah. I didn't realize it was the
23 second page of it.

24 Yes. Part 27, Wood Products
25 Manufacturing. The relevant statement in here

Roger E. Davis, P.E., C.F.E.I.

1 is paragraph 27.41, subparagraph -- I'm
2 sorry -- 27.42, hogs, chippers, and cutting
3 heads. Subparagraph 3 states, "A mill chipper
4 with a shroud, hood, or inspection plate that
5 can be removed before the rotor has stopped
6 must have an effective brake."

7 Q. Now, does Morbark sell its equipment
8 in British Columbia?

9 A. Well, their plant is in Michigan,
10 which is near that market, and that market, of
11 course, is heavily -- there are a lot of
12 industries dealing with forest products in
13 that -- forest harvesting in that area, so I
14 don't know specifically, but I would think so,
15 yes.

16 Q. All right. So in terms of national
17 and international standards that might apply to
18 this Morbark's machinery that they might have
19 considered in designing their machinery, do you
20 know where else they sell their equipment?

21 MR. OTT: Objection to form.

22 A. No, I don't know what their market
23 is, although I believe they market all over
24 North America.

25 MR. JONAS CONTINUING:

Roger E. Davis, P.E., C.F.E.I.

1 Q. All right. One of the questions I
2 had specifically about the history of this
3 particular machine, in preparing for your
4 deposition, did you have a chance to review
5 what essentially are Defendant Morbark's
6 Answers to Plaintiff's Interrogatories?

7 A. I did.

8 Q. All right. These are documents you
9 sometime in your history of seeing similar
10 documents?

11 A. Yes.

12 Q. All right. Have you seen this
13 specific document in this case?

14 A. Yes.

15 Q. All right. I just want to be sure
16 what we're looking at here. With regard to the
17 answer to interrogatory 8 -- I'll just read the
18 question: Identify each and every assembly,
19 subassembly, parts, disposable parts, and/or
20 renewable parts that were included and/or
21 attached to the machine that was finally
22 manufactured and distributed.

23 The answer to this other than the
24 objection, it picks up: If Plaintiff limits
25 the information sought in this interrogatory,

Roger E. Davis, P.E., C.F.E.I.

1 clarifies what specific information is sought,
2 Morbark will reconsider its answer and attempt
3 to respond further. Notwithstanding said
4 objection, without waiving the same, Morbark
5 identifies the following: Morbark model
6 48-inch and 58-inch stationary, R. H.
7 chipper parts manual, Morbark documents 12
8 through 22, and part No. 30160-580 heavy-duty
9 fan blade diagram, Morbark 000023.

10 A. Uh-huh. Yes.

11 Q. You've got a copy of the parts manual
12 and the heavy-duty fan blade diagram, 0023;
13 don't you?

14 A. I do.

15 Q. Would you see if you can locate those
16 for me.

17 A. Yeah. Okay. I have it.

18 MR. JONAS: All right. Let me get
19 this marked if you would.

20 (Exhibit 6 marked for identification.)

21 MR. JONAS: The witness is referring
22 to Davis 6, the fan blade identified in
23 response to interrogatory, document 30160-580.

24 MR. JONAS CONTINUING:

25 Q. Do you understand based on this

Roger E. Davis, P.E., C.F.E.I.

1 answer to interrogatory that that is the fan
2 blade that was in the machine?

3 A. Well --

4 MR. OTT: Objection.

5 MR. JONAS CONTINUING:

6 Q. As was finally manufactured and
7 distributed?

8 MR. OTT: Objection to form.

9 A. That's my understanding. In their
10 response to that interrogatory they provided
11 this document, so yes.

12 MR. JONAS CONTINUING:

13 Q. All right. Now, you've also been
14 provided under a protective order something
15 called a fan blade No. 40293-580?

16 A. Correct.

17 Q. Now, these two fan blades are
18 somewhat different?

19 A. They're similar.

20 Q. They're box-type blades?

21 A. Yes.

22 Q. Yeah. At some point, did you rely on
23 these answers to interrogatories in forming
24 your opinions?

25 MR. OTT: Objection to form.

Roger E. Davis, P.E., C.F.E.I.

1 A. No. My opinions were formed before I
2 ever saw these. I believe, by way of
3 explanation, I believe there's an earlier
4 drawing of the box fan blade as well. I think
5 it's dated 1992.

6 MR. JONAS CONTINUING:

7 Q. All right.

8 A. I can find it.

9 Q. The parts manual, if you've got that
10 available, I think would help us.

11 A. Oh, there it is. Okay.

12 Q. All right. Looking at Morbark
13 document 020, which is part of the parts
14 manual. It would be page seven.

15 A. 0020. Okay.

16 Q. All right. And item No. 16 on that
17 parts manual, do you see the parts number on
18 it?

19 A. I do.

20 Q. All right. Is that the same as the
21 drawing numbered Davis 6?

22 A. It is.

23 Q. All right. So if this were accurate
24 information, you would understand that this
25 machine was originally produced with that fan

Roger E. Davis, P.E., C.F.E.I.

1 blade as represented in this parts manual?

2 A. Correct.

3 Q. If that fan blade is different, okay,
4 as -- and you haven't had a chance to review
5 the deposition of Jim Strong at this point who
6 is one of the Morbark reps that was deposed
7 last week in Michigan?

8 A. No, I have not.

9 Q. So you would consider any additional
10 testimony Mr. Strong might have as a person
11 familiar with that particular machine?

12 A. Of course, yes.

13 Q. All right. Now, looking further at
14 the Morbark answers to interrogatories, with
15 regard to the interrogatory answer No. 15, the
16 question is: What, if any, consideration was
17 made during the design of the machine to
18 equipping the machine with an interlock hood
19 cutter access door from opening until the
20 rotating wheel stopped turning.

21 After the first, I think, two
22 sentences -- three sentences of objections, it
23 says, Notwithstanding and without waiving the
24 said objection, Morbark states that Norval
25 Morey, deceased, who was the original designer

Roger E. Davis, P.E., C.F.E.I.

1 of the Morbark model 58 chipper, was originally
2 designed and began as a production unit around
3 1969. Norval Morey died in 1997. There are no
4 notes, files, or other documentation available
5 today indicating what was or not considered by
6 Norval Morey at the time with regard to design
7 considerations.

8 Now, based on that, what is your
9 understanding about the available design
10 information that Morbark has to produce to
11 explain the design or considerations, testing,
12 or anything else that might have supported the
13 design of this machine?

14 MR. OTT: Objection to form.

15 A. Well, apparently it's very limited.

16 MR. JONAS CONTINUING:

17 Q. 1969 in terms of -- and I think
18 you've been provided -- strike that.

19 You've been provided some documents
20 that you've referred to here that were produced
21 last week under a protective order that show
22 some design -- or some changes to the machine,
23 the Morbark 58, horizontal feed, top discharge
24 chipper. Have you reviewed those documents?

25 A. Yes. I looked at all those

Roger E. Davis, P.E., C.F.E.I.

1 documents.

2 Q. All right. Now, was there any change
3 or -- was there any change made by those
4 documents as it may appear that would have
5 affected the safety of the machine itself to
6 the operator?

7 MR. OTT: Objection to form.

8 A. Not that I could discern. In fact,
9 the purchase documentation indicates this
10 particular machine, this serial number -- 914 I
11 believe it was.

12 MR. JONAS CONTINUING:

13 Q. 914, yes.

14 A. Serial No. 914 was purchased with the
15 box-type fan blades.

16 Q. All right. So fundamentally, if we
17 just stick to the area of machine safety and
18 guarding, has there been any change in the
19 design of the machine since 1969 that you were
20 able to discern based on the documents,
21 drawings, and Morbark's responses to
22 interrogatories?

23 A. I think it's basically the same
24 machine as the original design. This
25 particular machine, though, and one other were

Roger E. Davis, P.E., C.F.E.I.

1 somewhat unique in that they equipped them with
2 a five-inch-wide disc versus a four-inch-wide
3 that was their standard.

4 Q. All right. And as I understood, you
5 were making some comparison of clearance
6 distances, I think. In one of your
7 photographs, you indicated you had measured the
8 clearance between the fan blade of the unit you
9 inspected, the serial No. 914 at A & K Mulch on
10 the day -- I guess July 26 of 2006?

11 A. Yes, I did.

12 Q. And you came up with a clearance a
13 half-inch or less I think was your testimony?

14 A. Correct.

15 Q. And I think you also indicated that
16 was not the hood that came from Morbark that
17 you were measuring that clearance against?

18 A. Correct.

19 Q. And the hood, as we know, is the
20 damaged piece that's shown in your photographs?

21 A. Yes.

22 Q. Do you know the history of the hood
23 that actually was on the machine, whether it
24 was a Morbark item or a manufactured,
25 fabricated part by Watford Industry?

Roger E. Davis, P.E., C.F.E.I.

1 A. The latter. It was manufactured as a
2 result of this incident to replace the damaged
3 hood.

4 Q. Do you know whether that damaged hood
5 and its specifications and sizing was exactly
6 the same as the Morbark hood that -- or as the
7 hood that Watford created or fabricated?

8 A. I don't know that for sure, but I
9 would think that he would use the damaged hood
10 as a model.

11 Q. All right. So basically the
12 half-inch clearance that you've testified about
13 or less was the clearance between the blades on
14 the machine that was as equipped on July the
15 26th of 2006 and the size of the hood that was
16 fabricated by Watford; that's what that
17 measurement actually is?

18 A. The measurement was the clearance
19 that existed on the day that I looked at it,
20 and it was represented to me that there were
21 modifications to the machine. Of course, I now
22 know that the hood was replaced. But that
23 measurement on that day was a half-inch or
24 less. .

25 Q. All right. Now, again, the testimony

Roger E. Davis, P.E., C.F.E.I.

1 of Jim Strong will be available. I think
2 they're shipping it priority this afternoon.
3 But if that hood clearance at a minimum was
4 supposed to be five-eighths of an inch, not a
5 half an inch, would the difference between the
6 hood devices and/or the fan blades account for
7 any changes in operation of the machine?

8 MR. OTT: Objection to form.

9 A. With respect to the hazard, I would
10 expect not. I think that a little bit, an
11 eighth of an inch additional clearance probably
12 would not have mattered. There is enough
13 wobble in the hinge pin and the hinge itself to
14 account for, you know, the hood striking the
15 blade in either case in my opinion.

16 MR. JONAS CONTINUING:

17 Q. All right. Now, you had indicated in
18 response to counsel's questions that you were
19 provided some basic information from me
20 regarding the activities of Andreal Holland
21 shortly before the accident.

22 A. Yes.

23 Q. All right. And other than the
24 deposition testimony that you've had available
25 from the workers' comp case, I mean, no one

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1 apparently has interviewed Andreal Holland, not
2 in this case or any other case other than that.
3 deposition?

4 MR. OTT: Objection to form.

5 A. Not as far as I know.

6 MR. JONAS CONTINUING:

7 Q. So other than what I've recounted for
8 you as to Andreal Holland's activities that
9 day, you don't have any other source of
10 information?

11 A. Correct.

12 Q. All right. One of the -- do you have
13 the safety manual there, the operations manual
14 available?

15 A. For the Morbark?

16 Q. Yes.

17 A. Actually, they don't, as far as I
18 know, they don't have an operator's manual.
19 They have a parts manual. I have that right
20 here.

21 Q. Okay. Behind that, I think, is the
22 safety operator's manual.

23 A. Okay.

24 Q. All right. So referring to Morbark
25 024 through Morbark 061, this operator's

Roger E. Davis, P.E., C.F.E.I.

1 manual, and specifically at page 025; Morbark
2 025 it's marked. It's dated, the bottom
3 right-hand corner, it's dated 5/93 revision.

4 A. Right.

5 Q. There is a section called "Safety
6 Maintenance," and it says, "Changing Chipper
7 Knives" at 1-4.

8 A. Correct.

9 Q. Let's turn to that. All right. Just
10 to refer then to page Morbark 055, changing the
11 chipper manual.

12 A. Oh, you're on 1-19?

13 Q. Maybe I've got the wrong one.

14 A. You said 1-4.

15 Q. I'm sorry. It's my mistake. I had
16 my stuff out of whack.

17 A. Morbark 0040.

18 Q. 0040. Thank you. All right. 1-4 is
19 the page number in the manual. What is the
20 procedure that Morbark has instructed users of
21 this machine to follow to change the chipper
22 knives?

23 MR. OTT: Objection; form.

24 A. Well, they provide a couple of
25 warnings. They say read the safety procedures

Roger E. Davis, P.E., C.F.E.I.

1 carefully before beginning. Use the disc lock
2 that I referred to earlier when changing
3 knives. That's actually the pin that holds the
4 hood is used for that purpose, to lock the disc
5 from rotating. Disengage the power. Let it
6 coast down until it completely stops, which
7 they say to verify by looking at the sheave.

8 MR. JONAS CONTINUING:

9 Q. All right. Now, is there any
10 reference to bolts?

11 A. No.

12 Q. All right. Now, where is the sheave
13 of the machine?

14 A. It's behind that metal guard that's
15 shown in the photographs.

16 Q. All right. And if there's any other
17 reference to checking, where to check the
18 machine, would you look over this, and be very
19 specific if you find anything else other than
20 paragraph one at page 1.4.

21 A. To check whether the machine is
22 rotating, is that your question?

23 Q. Yeah. Any advice at all to someone
24 operating this machine as to what to do to
25 change the chipper knives.

Roger E. Davis, P.E., C.F.E.I.

1 A. Well, they, of course, say to wait
2 till it stops rotating. Use the hood pin to
3 lock the disc in place. Two people are used to
4 change the knives. And then they go to the
5 procedure of loosening the bolts and changing
6 the knives out. Blow debris and dirt out with
7 air, compressed air. Inspect and so forth.

8 Q. All right. So in between pages 024
9 and -- I think the last page of this is in
10 061. There's one paragraph at page 1.4 about
11 an operator's procedure to change the chipper
12 knives.

13 A. Okay.

14 Q. Now, in addition to this -- and I
15 asked you specifically about bolts, any mention
16 of bolts, and I asked you to take a look at the
17 parts manual and see if there's any reference
18 to bolts.

19 A. There I did look at the parts
20 manual. There is no reference to bolts. In
21 fact, the drawing does not show the bolt holes
22 in the hood. I noted that the photograph from
23 the time it was manufactured showed it had
24 bolts in it, but there are no bolt holes shown
25 in the drawing.

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1 Q. All right. So let's look at the pins
2 that hold the hood in place, the additional
3 materials that you were provided that are under
4 the protective order.

5 A. The drawing, you're talking about, of
6 the pin?

7 Q. Yes.

8 A. Okay.

9 Q. All right. The pin that is a
10 three-quarter-inch pin --

11 A. Yes.

12 Q. -- three-quarters by 11-inch?

13 A. Yes.

14 Q. And just by description, it's got a
15 handle or at least a bend section to it that
16 could operate as a handle?

17 A. Correct.

18 Q. And it's got a drilled hole at the
19 bottom?

20 A. Correct.

21 Q. To be specific about the testimony so
22 far, it's that pin that went into this hood
23 receptacles that held the hood in place?

24 A. That's the purpose of that pin, yes.

25 Q. All right. And there's some sort of

Roger E. Davis, P.E., C.F.E.I.

1 sir clip -- I think people call it a cotter
2 pin. It's really not. But a sir clip or some
3 kind of spring device?

4 A. Correct.

5 Q. That goes through that hole in the
6 pin?

7 A. Yes.

8 Q. And the normal operation of that pin
9 is to be -- as it's used in this machine is to
10 drop through the hood into the receiving end in
11 the fixed section of the hood of the machine?

12 A. Correct.

13 Q. All right. Now, if the pin is
14 properly fit, should it require a hammer to
15 remove it?

16 MR. OTT: Objection to form.

17 A. Not in a well-fitted hood, no. You
18 should be able to slip it out. There's plenty
19 of clearance to do so.

20 MR. JONAS CONTINUING:

21 Q. So the clip has a purpose; it's to
22 keep the pin from popping out or vibrating out?

23 A. Correct.

24 Q. Do you have any photographs of the
25 machine that you took that show different views

Roger E. Davis, P.E., C.F.E.I.

1 of the machine? I mean, I've seen a head-on
2 view of the hood as you saw it on July 26th of
3 2006. I've seen partial views of the sides.
4 But do you have any other photographs that
5 would show the decals that were on the machine
6 on July the 26th?

7 A. You're referring particularly to
8 photographs that I took --

9 Q. Yes.

10 A. -- or any photographs that I have?

11 Q. Yeah.

12 A. 133 shows a decal on the movable part
13 of the hood.

14 Q. Which side of the machine is this?
15 In using the --

16 A. The motor side.

17 Q. The motor side. All right. So
18 there's one decal on the side of the hood on
19 the motor side?

20 A. Correct.

21 Q. Okay. What about the other side of
22 the machine?

23 A. On the opposite side I see, in this
24 view, 137, I see two decals.

25 Q. Can you read them?

Roger E. Davis, P.E., C.F.E.I.

1 A. Yes, I think so. "Danger. Lock out
2 for safety."

3 Q. Okay.

4 A. Wait a minute. There's some more
5 language there I'm having trouble with.
6 "Before attempting any maintenance."

7 The second one, I can't read the
8 writing, but I think it refers to reading the
9 operator's manual based on the graphic that's
10 on it.

11 Q. All right. Now --

12 A. I have another view of that, and it
13 reads, "Warning: Read and understand
14 operator's manual before operating or
15 servicing."

16 Q. Okay. And the partial view that you
17 show there -- and you've got the date up right
18 there in image 138?

19 A. Yes.

20 Q. All right.

21 A. That's for the motor, actually.

22 Q. For the motor?

23 A. Right.

24 Q. All right. Let me ask you about the
25 general issue of design since -- and we're not

Roger E. Davis, P.E., C.F.E.I.

1 sure how Morbark considered this design. If
2 ANSI standards aren't generally applicable, or
3 there's no specific ANSI or ASTM standard
4 that's applicable in this case; is that what I
5 understand?

6 MR. OTT: Objection to form; multiple
7 questions.

8 A. Correct..

9 MR. JONAS CONTINUING:

10 Q. All right. Well, let me ask one at a
11 time. Is there an ASTM standard that
12 specifically applies?

13 A. No.

14 Q. Is there an ANSI standard that
15 specifically applies?

16 A. You're talking about to stationary
17 chippers; right?

18 Q. To this 58-inch Morbark stationary
19 chipper.

20 A. No.

21 Q. All right. But as to general
22 practices of machine design, is there
23 recognition as an industry practice that was
24 existing at least by 1996 that addressed
25 general principles of machine design or the

Roger E. Davis, P.E., C.F.E.I.

1 hierarchy of machine design?

2 MR. OTT: Objection to form.

3 A. Yes. There's a well-known hierarchy
4 of safety that's a design standard that's
5 well-known in the design field. It's been
6 around for years. And it's, as I say, it's
7 called hierarchy of safety, placing the burden
8 upon the designer to consider the hazards and
9 to try to minimize the risks of being injured
10 on those hazards as much as is reasonable.

11 MR. JONAS CONTINUING:

12 Q. So that has been incorporated now as
13 an ASTM standard, this principle of the
14 hierarchy of machine design?

15 A. It has.

16 MR. OTT: Objection to form.

17 A. Yes, it has.

18 MR. JONAS CONTINUING:

19 Q. Where has it been incorporated?

20 A. It's an ASTM standard. I don't
21 recall the number, but --

22 Q. All right. Well, the practice of the
23 hierarchy of machine design as a general
24 practice of design and engineering, as an
25 engineering standard, common engineering

Roger E. Davis, P.E., C.F.E.I.

1 criteria, I'll call it, you say it's been
2 around for years. I mean, how many years? I
3 mean, 50, 100?

4 A. I'd say --

5 MR. OTT: Objection to the form;
6 multiple questions.

7 A. -- at least 50.

8 MR. JONAS CONTINUING:

9 Q. So how long has, to your knowledge,
10 has the principle of the hierarchy of machine
11 design been known and accepted generally by the
12 engineering community?

13 MR. OTT: Objection to form.

14 A. Well, I recall, you know, having done
15 research on that issue in the past, and it's --
16 I think at a minimum back in the 1950s and that
17 era; probably earlier.

18 MR. JONAS CONTINUING:

19 Q. Is this a practice that is taught in
20 engineering schools presently?

21 A. I don't know that it is taught in
22 every engineering school. I believe that it's
23 taught in some engineering schools. I
24 personally did not have that taught to me in
25 1968 and the years preceding that.

Roger E. Davis, P.E., C.F.E.I.

1 Q. Okay. Well, at some point --
2 Well, let me ask you your
3 experience. When did you first become familiar
4 with the basis for design safety, I'll call it,
5 the hierarchy of safety?

6 A. Well, I guess in terms of that
7 process, probably the first time I knew about
8 it was when I began working as a forensic
9 engineer.

10 Q. All right. Now, what are the
11 principles of safety hierarchy?

12 A. Well, the principles are if there's a
13 hazard in a piece of equipment, that you try to
14 eliminate it by design. If it's not possible
15 to eliminate the hazard, then you provide --
16 you design safeguards to minimize the risk of
17 injury from the hazard.

18 The third tier is if you can't
19 practically -- and when I say practically, I
20 mean technologically and economically -- if
21 it's not technologically and economically
22 feasible to design a safeguard without
23 impairing the utility of the machine, then you
24 go to the next tier, which is warnings and
25 procedures, warnings and operating procedures.

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Roger E. Davis, P.E., C.F.E.I.

1 But it's not acceptable to use simply
2 a warning in a case where it's feasible to
3 safeguard to minimize the risk.

4 Q. Based on your study, what is the
5 hazard of this Morbark horizontal feed, top
6 vertical discharge chipper, 58-inch chipper,
7 serial No. 914?

8 A. Well, in the most basic terms, a
9 rotating member is a hazard that can injure a
10 person either from a shearing action or as in
11 this case in striking another component which
12 imparts a motion that will injure a person.

13 Q. Some people use the word struck-by
14 hazard; is that something you're familiar with?

15 A. Right. Yes.

16 Q. That would be different than getting
17 your body member involved in losing a finger or
18 a hand or something --

19 A. Correct.

20 Q. -- in the cutter?

21 In terms of the level of severity of
22 the possible injuries to this, is there any --
23 have you ever made any assessment of the level
24 of severity of injuries that are likely if
25 there's a mistake in operating this machine?

Roger E. Davis, P.E., C.F.E.I.

1 MR. OTT: Objection to form.

2 A. Yes. Those injuries can be and in
3 this case were, in fact, very serious. It
4 could kill a person if struck the way that
5 Mr. Holland was in some circumstances. If the
6 machine, for example, were running at a -- were
7 coasting down and were running at a faster
8 speed, had more momentum, then the violence of
9 the strike and injury would have been more
10 severe.

11 MR. JONAS CONTINUING:

12 Q. Now, we've talked about Mr. Holland.
13 You testified about Mr. Holland's general
14 comprehension, ability to comprehend. Is there
15 any consideration in the process of the
16 hierarchy of safety for considering the
17 industrial experience of the operator, new
18 operators and experienced operators?

19 MR. OTT: Objection to form.

20 A. Well, the hierarchy is set up such
21 that even an inexperienced operator should be
22 protected, and that makes the assumption that a
23 worker is going to either ignore or forget
24 procedures and ignore warnings. People
25 oftentimes get used to seeing something, and

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1 they tend to ignore it after a period of time.

2 People get bored, inattentive.

3 Things of that type require that you provide a
4 means of safeguarding a person in that
5 condition if there's a feasible means of doing
6 so, and in this case there is.

7 MR. JONAS CONTINUING:

8 Q. What is the feasible means -- or what
9 are the feasible means of protecting the
10 operator in this -- based on your
11 investigation?

12 A. Well, clearly, you know, the machine
13 to provide the utility that it does has to have
14 a rotating member, so you can't prevent the
15 machine from rotating and still have an
16 operable machine, so the rotating member is
17 present. What you have to do is provide a
18 safeguard that keeps the worker or a bystander
19 separated from that hazard. In this case, of
20 course, the manufacturer does that with a
21 hood. But the hood is not effective if the
22 machine is still rotating when it's opened in
23 the unprotected position as it was in this
24 case.

25 And I think to rely on simply

Roger E. Davis, P.E., C.F.E.I.

1 warnings and procedures to ensure that a worker
2 does not open the hood prematurely is a failure
3 on the part of the manufacturer to protect this
4 machine to the degree that he could do so both
5 economically and technologically. There are --
6 you can either do it mechanically or you can do
7 it electronically.

8 The fix I suggested was a safeguard
9 that provided a timed locking device on the
10 locking -- the latching mechanism for the hood
11 that would not allow you to open it until such
12 time that the machine coasted down even under
13 the worst of circumstances; that is, the
14 longest coast-down time. If you lock it out
15 from being open during that period of time,
16 then the operator should be protected from it.

17 You can also design -- and I think
18 we've seen some documentation in here for a
19 patent on a mechanical device which does the
20 same thing; that is, prevents the opening of
21 the latching mechanism while the machine is
22 still rotating.

23 Q. So an engineering fix or at least a
24 design is feasible? I mean, they have been
25 produced?

Roger E. Davis, P.E., C.F.E.I.

1 A. They have, yes.

2 MR. OTT: Objection; form.

3 MR. JONAS CONTINUING:

4 Q. All right. Now, let's look at the --

5 MR. JONAS: Let's get this one
6 marked.

7 (Exhibit 7 marked for identification.)

8 MR. JONAS CONTINUING:

9 Q. Just looking at -- let me get the
10 number on it -- Deposition Davis 7, this
11 particular patent device, as I understand, is
12 one that was applied for, it looks like, in
13 1998 by a Michael Boyd Morey at Tramor, Inc.,
14 in Remus, Michigan, which as we recently found
15 out is very close to Winn. In describing this
16 device by way of the patent --

17 You are familiar with patents, aren't
18 you?

19 A. Yes.

20 MR. OTT: Objection to form.

21 A. Yes.

22 MR. JONAS CONTINUING:

23 Q. The background of the invention, just
24 as to the general description that is required
25 there, under No. 1, what does it say there?

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1 A. "The present invention relates
2 generally to wood chippers."

3 Q. And following that, is there an
4 explanation of what Mr. Morey is attempting to
5 accomplish with his patent?

6 A. Yeah. Paragraph 2 is entitled,
7 "Description of the Related Art." Then he
8 summarizes his invention.

9 Q. All right. But while he's describing
10 the state of the art -- now, what do you
11 understand that term means?

12 A. That is where the industry is with
13 respect to addressing the issue that is the
14 subject of the patent at the point in time that
15 he applied for it.

16 Q. One of the things about Mr. Morey --
17 do you recognize that name, Morey?

18 A. Yes.

19 Q. All right. Apparently he had some
20 relationship to Norval Morey. I think I
21 represented that to you.

22 A. Yes, you did.

23 Q. All right. And one of the points
24 that -- I think in the research, did you
25 discover that Morbark and Norval Morey had

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Roger E. Davis, P.E., C.F.E.I.

1 applied for patents --

2 A. Yes.

3 Q. -- involving which of their wood
4 chippers?

5 MR. OTT: Objection; form.

6 MR. JONAS CONTINUING:

7 Q. All right. Morbark, you've looked at
8 some of their materials as to the type of
9 equipment they produce; large pieces of
10 equipment?

11 A. Yes.

12 Q. Would you refer to them as a
13 sophisticated manufacturer, designer and
14 manufacturer of forest products processing
15 equipment?

16 A. Yes. I mean, they've been in the
17 industry for some years, and they're nationally
18 known. They have some of their equipment
19 patented. I would say so, yes.

20 Q. Well, would you make any assumptions
21 at all about their ability to understand the
22 state of the art of the wood chipper field and
23 the developments within that field?

24 MR. OTT: Objection; form.

25 MR. JONAS CONTINUING:

Roger E. Davis, P.E., C.F.E.I.

1 Q. Have you made any assumptions?

2 A. Well, I think they certainly keep
3 abreast with the industry. They're located in
4 the area where there are a number of similar
5 companies that manufacture this kind of
6 equipment, and they've been doing it for a long
7 time.

8 MR. JONAS: All right. Let me get
9 this one marked.

10 (Exhibit 8 marked for identification.)

11 MR. JONAS CONTINUING:

12 Q. Now, looking at Davis 8, that's
13 another patent; again by Michael Boyd Morey
14 from Shepherd, Michigan, and for Tramor, Inc.,
15 at Remus. This one is March the 4th, 1999,
16 when the application was filed. What is this
17 one for?

18 A. This is actually for a hood assembly
19 for a wood chipper it says in the title of it.

20 Q. All right.

21 A. And it's actually an interlock,
22 mechanical interlock device that prevents
23 unlatching the hood while the chipper is
24 rotating.

25 Q. In the application materials,

1 paragraph 2, "Description of the Related Art,"
2 is there any mention about what he recognizes
3 to be the danger of movable hoods?

4 A. He states that there is a preferred
5 need in the art to provide a hood assembly for
6 a wood chipper to prevent access by an operator
7 to the cutting assembly while the cutting
8 assembly is rotating.

9 Q. All right. And in that patent he
10 provides some mechanical device. I think
11 it's -- this is patent No. 6,016,855. And I
12 think at figure 2 in the materials there's a
13 device.

14 A. Yes.

15 Q. Okay. And what's your understanding
16 of the operation of that device?

17 MR. OTT: Objection to form.

18 A. Well, it's a mechanical device that
19 blocks the removal of the hood pin while the
20 shaft driving the chipper disc is rotating.

21 MR. JONAS CONTINUING:

22 Q. So as long as that shaft is rotating,
23 you can't move the lock?

24 A. That's correct.

25 Q. And you mentioned other devices

Roger E. Davis, P.E., C.F.E.I.

1 within -- that are currently on the market.
2 Without going into the history of them, there
3 are other methods of locking the hood?

4 MR. OTT: Objection to form.

5 A. There are, yes.

6 MR. JONAS CONTINUING:

7 Q. All right. Is there any -- if that
8 device were fitted, a similar device to a
9 stationary chipper, horizontal feed, top
10 discharge chipper, is there any reason it
11 couldn't be fitted and operate effectively the
12 same way?

13 MR. OTT: Objection to form.

14 MR. JONAS CONTINUING:

15 Q. Is it feasible?

16 A. It's feasible.

17 Q. All right. This timing device
18 connected to an interlock that you refer to, is
19 that type of lockout typical on other types of
20 industrial machinery?

21 A. It is. It's used on machinery that
22 has a long -- typically has a long coast-down
23 time.

24 Q. And going back in the history of
25 chipper's it's been called a lot of things, but,

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1 you know, they all have similar issues with the
2 rotating disc; don't they?

3 A. Yes.

4 Q. All right. This goes back a century
5 or more, this concern about what to do with
6 rotating discs?

7 MR. OTT: Objection; form.

8 A. It's certainly long-standing, yes.

9 MR. JONAS CONTINUING:

10 Q. All right. There's never been a
11 question about what the hazard or the risk is?

12 MR. OTT: Objection; form.

13 A. No. I think that's well recognized.

14 MR. JONAS CONTINUING:

15 Q. Now, on these patents, they refer to
16 materials that -- essentially they call them
17 references cited. And there's all variety of
18 things that go, it appears, in all sorts of
19 devices?

20 A. Yes.

21 Q. All right. So the designer of this
22 patent, this Mr. Morey, apparently did his
23 research and looked at all sorts of machinery
24 that had similar devices?

25 MR. OTT: Objection to form.

Roger E. Davis, P.E., C.F.E.I.

1 A. Correct.

2 MR. JONAS CONTINUING:

3 Q. Now, one other way to -- is there
4 another way to deal with this problem with the
5 chipper? I mean, is a brake assembly feasible.
6 as the British Columbia standard requires?

7 MR. OTT: Objection to form.

8 A. I think a brake assembly could be
9 employed. Based on the momentum this thing
10 generates, it would have to be a rather
11 substantial brake and rather costly compared to
12 a device of the mechanical interlock type or
13 the timed interlock. It would be more costly,
14 in my opinion.

15 There also is the issue with, you
16 know, how quickly does the brake stop the
17 machine. That would have to be a
18 consideration.

19 MR. JONAS CONTINUING:

20 Q. All right. So if you were evaluating
21 a design, you know, that essentially had a
22 known risk of a movable part to a machine that
23 had a guard or a hood access to it, and you
24 were trying to prevent the operator from
25 getting to it before it had stopped turning,

Roger E. Davis, P.E., C.F.E.I.

1 the superior device in your opinion is what?

2 MR. OTT: Objection to form.

3 A. Well, I prefer the interlock, either
4 mechanical or electric, because of the fact
5 that you can't stop that rotating mass
6 quickly. It's going to take -- even with a
7 brake it's going to take some seconds. There
8 might be a period of time that an operator
9 could actually access it even then if it's
10 quickly stopped, and with that kind of rotating
11 mass it certainly still produces a hazard. So
12 my preference is to do something that ensures
13 that the operator does not access the hazard at
14 all.

15 MR. JONAS CONTINUING:

16 Q. This concern -- this fact as
17 apparently you've discovered that these are --
18 I think counsel called them automatically fed
19 machines. They are machines at least that
20 don't require operators to continue to feed
21 them?

22 A. Yes.

23 Q. All right. But the idea of feeding
24 the machine with this automatic process, this
25 vibrating conveyer, that also has risk, does it

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1 not, I mean, if it's separately controlled?

2 A. Well, certainly that plays into the
3 way you shut the machine down. I think that
4 the users of this machine probably try to use
5 that to their advantage to slow this machine
6 down quicker so they can open it up quicker,
7 and that may present some hazard with clogging
8 it up and then presenting a whole other sort of
9 a risk with trying to unclog the machine.

10 Q. Okay. It could actually stop the
11 machine at some point?

12 A. Yes, it could.

13 Q. If the material that is on its way
14 from Michigan to be reviewed includes
15 information involving chippers produced by
16 Morbark that involved movable hood accidents,
17 would that be significant to you?

18 MR. OTT: Objection to form.

19 A. Well, I think it would support the
20 opinions that I have, yes.

21 MR. JONAS CONTINUING:

22 Q. You had started to refer to a CDC
23 report in your materials that was a statistical
24 study. I think it went back to 1992; did it
25 not?

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1 MR. OTT: Objection.

2 A. Yes. I don't recall the date, but I
3 did refer to that.

4 MR. JONAS CONTINUING:

5 Q. And that statistical information you
6 referred to broke it down by different types of
7 equipment that were involved in various either
8 striking injuries or different types of things?

9 A. Right.

10 Q. Do you have that available?

11 A. I do.

12 MR. JONAS: Let me get that marked.

13 (Exhibit 9 marked for identification.)

14 MR. JONAS CONTINUING:

15 Q. Referring to Davis 9, which is the
16 Morbidity and Mortality Weekly Report of
17 December 10 of 2004, on the -- this is
18 volume 53, No. 48 at page 1130, which I think
19 is the second page of the exhibit.

20 A. Correct.

21 Q. What is the report entitled?

22 A. Well, that section of the report is
23 entitled, "Fatal and Nonfatal Occupational
24 Injuries Involving Wood Chippers, United
25 States, 1992 through 2002."

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1 Q. All right. And the method of study
2 that's referred to in the second paragraph, how
3 is it reported there?

4 A. (No response.)

5 Q. It says, "To describe" --

6 A. I'm sorry; what's your question? I
7 see the paragraph.

8 Q. Yeah. My question is: The method of
9 study employed by the CDC here, what did they
10 do to --

11 A. They analyzed 11 years' worth of data
12 from BLS, Bureau of Labor Statistics.

13 Q. All right. And at the right-hand
14 corner of this same page, there's a title,
15 "Nonfatal Cases Involving Mobile and
16 Stationary Wood Chippers."

17 A. I see that.

18 Q. All right. And what is the report
19 indicating?

20 A. It indicates that during the period
21 '92 through 2001 an estimated 2,042 injuries
22 resulted from working with chippers, an average
23 of 204 per year.

24 Q. And is there any distinction about
25 age groups?

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1 A. They say 47 percent occurred among
2 workers 25 to 34 years.

3 Q. All right. Now, and the type of
4 injuries?

5 A. Sixty percent of the injuries were to
6 upper extremities.

7 Q. All right. Now, the next page, 1131,
8 I think, page -- there's an editorial note here
9 about the primary risks associated with the use
10 of wood chippers.

11 A. Yes.

12 Q. What are those as reported?

13 A. Well, they talk about primary risks
14 associated with wood chippers being caught in
15 the rotating knives, obviously, and also being
16 struck by flying objects; for example, the
17 chipper hood which can fly off if it contacts
18 the rotating blades.

19 Q. All right. Now, this information
20 about the known risks, at least as the Bureau
21 of Labor Statistics studies them and reports
22 them, is this information you've considered in
23 making your opinion?

24 MR. OTT: Objection to form.

25 A. No, I did not have this in my

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1 possession when I wrote my opinion, but it
2 certainly is supportive of my opinion.

3 MR. JONAS CONTINUING:

4 Q. All right. One other thing here. We
5 looked at the Precision Husky machine with this
6 bar device. Locking device I think they call
7 it in their manual.

8 MR. JONAS: And let me go ahead and
9 get this marked. Let me get this marked also.

10 (Exhibits 10 and 11 marked for
11 identification.)

12 MR. JONAS CONTINUING:

13 Q. All right. Mr. Davis, looking at
14 Davis 10, that's the -- is that the same
15 machine that you were referring to earlier in
16 your testimony in reference to counsel's
17 question about the nature of the device, the
18 locking device on the Precision Husky machine?

19 A. Yeah. This is the machine that I
20 referred to that had a different type locking
21 device on the hood.

22 Q. All right. And there's also another
23 indicator -- change or difference, I mean?

24 A. Well, they have a mesh covering that
25 allows you to view the rotation of the disc.

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1 Q. All right. Now, one of the other
2 materials or pieces of information I wanted to
3 be clear about, are you familiar with the
4 market for these used chippers?

5 A. Yes. I have seen some of the
6 advertising for that.

7 Q. All right. Handing you Davis 11,
8 this is, I think, an ad from Ben Jones
9 Machinery.

10 A. Yes, it is.

11 Q. And they're advertising what?

12 A. A Precision 84-inch chipper.

13 Q. And what is the year?

14 A. I'm sorry?

15 Q. The year?

16 A. The year of that chipper, 1989.

17 Q. All right. And would you look at a
18 more detailed photograph of the chipper they're
19 offering, the second page.

20 A. Okay.

21 Q. All right. And does that Precision
22 chipper with that bar guard, the 1989 chipper,
23 I mean, is that the device, the same type of
24 device?

25 A. It is, yes.

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1 Q. All right. So if that information is
2 accurate, then certainly since 1989 this
3 chipper has been available and part of the
4 industry; it's worked its way in the retail --
5 in, well, the used machinery market?

6 A. Yes. Assuming this one hasn't been
7 modified. But yes, I believe that's the case.

8 Q. All right. And I think you've
9 explained the significance of that guard or
10 that bar. It seems to be a substantial piece
11 of equipment?

12 A. It is, yes.

13 Q. And there seems to be pictured there
14 a machine that seems new, and it's -- certainly
15 it's been repainted.

16 A. Yes.

17 MR. JONAS: All right. We'll take a
18 look at that device some other time. Give me a
19 short break, and hopefully I can finish this in
20 five minutes.

21 MR. OTT: All right.

22 (Brief recess.)

23 MR. JONAS: I only have one more
24 question for you.

25 MR. JONAS CONTINUING:

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1 Q. All right. Mr. Davis, if the
2 information I've provided you about Andreal
3 Holland and his activities prior to his injury
4 on June the 1st of 2006 at approximately
5 4:30 p.m. was accurate, that is, that he was
6 actually attempting to investigate what he
7 believed was a problem with the machine and not
8 to change the blade, would that be significant
9 to you in forming your opinion?

10 MR. OTT: Objection to form.

11 A. I'm not sure that would have any
12 particular relevance because in either case I
13 think he would be attempting to access the disc
14 by opening the hood, so in either case he's
15 exposed to a hazard.

16 MR. JONAS: All right. Thank you.

17 BY MR. OTT:

18 Q. Mr. Davis, just to go over some of
19 the material that's been brought up now by
20 Mr. Jonas. It's your opinion that the machine
21 shown in Exhibits 10 and 11, the Precision
22 Husky chipper, is defective; right?

23 A. Yes.

24 Q. It would not have prevented this
25 accident from happening according to the way

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1 Mr. Holland alleges it did?

2 A. Probably not. There is a
3 circumstance where it might have; that is, if
4 the disc or its components struck the hood
5 before it rotated -- opened very far it might
6 have been prevented by virtue that the bar
7 would not have been moved out of position.

8 Q. Mr. Holland's description of how he
9 got hurt or what he's alleged to have happened
10 to result in his injury still could happen on
11 the machine shown in Exhibits 10 and 11;
12 correct?

13 A. It could happen if the bar had been
14 moved out of place, yes.

15 Q. The patents that you looked at,
16 Exhibits 7 and 8, both of those are dated after
17 the date of manufacture and distribution;
18 correct?

19 A. Correct.

20 Q. You're not aware of any similar
21 patents that were in existence at the time of
22 manufacture and distribution, are you?

23 A. I am not.

24 Q. Are those patent applications
25 actually -- are they applications, or are they

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1 actually patents awarded?

2 A. I think they're patents.

3 Q. Do those patents pertain specifically
4 to stationary wood chippers?

5 A. I think they apply to either. It
6 refers to chippers, not specifically --
7 although the drawings show mobile chippers, it
8 refers to chippers in general.

9 Q. Are you aware of any company,
10 including Mr. Morey's who got the patent, that
11 has incorporated the device that's been
12 patented in either 7 or 8 into its stationary
13 wood chipper?

14 A. Vermeer may be one of those
15 companies. Let me look and see if theirs is
16 mechanical or electrical.

17 Q. Again, limited to stationary wood
18 chippers. We've been through this, and I
19 thought you told me that you are not aware of
20 any manufacturer in the world that has
21 incorporated --

22 A. Correct.

23 Q. -- the type of device you claim
24 should be used in this case?

25 A. I thought you were asking about the

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1 device, not the equipment. But yes, correct.

2 Q. So you are not aware of any company,
3 including Mr. Morey's, who has utilized either
4 patent shown in Exhibit 7 or 8 into a
5 stationary wood chipper?

6 A. Correct.

7 Q. The CDC statistics do not give a
8 description of how the person operating the
9 chipper got injured, does it?

10 A. Well, it indicates being struck by a
11 hood which -- and then it refers to the
12 rotating member striking the hood to create the
13 hazard.

14 Q. But whether they are operating it or
15 standing by the area or trying to change out
16 the knives or not letting the hood come to a
17 stop before touching the machine, it doesn't
18 get into that kind of specificity, does it?

19 A. Well, the hazard is the same whether
20 you're about to change the knives or whether
21 you actually have it running. You have a
22 rotating hazard which --

23 Q. That's not my question.

24 A. Okay.

25 Q. It's been a long day.

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1 A. Yes, it has.

2 Q. Let's try to stick to my questions.

3 A. Let's go.

4 Q. The statistics don't break it down by
5 whether the person is injured because they're
6 trying to open the hood before the wheel has
7 coasted to a stop or whether the machine
8 malfunctioned and the hood blew off; it doesn't
9 get into that level of specificity?

10 A. That's correct.

11 Q. And you're still not aware of any
12 other incident where someone operating a
13 stationary wood chipper and attempting to
14 change the cutting knives failed to wait for
15 the disc to stop before opening it and got
16 hurt?

17 A. No.

18 Q. This machine does have a brake on it,
19 doesn't it?

20 A. I am not aware of a brake on this
21 machine.

22 Q. How does it slow down?

23 A. Well, it slows down through friction
24 in the bearings and the -- it is rotating -- it
25 continues to rotate for 14 minutes, which is

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1 quite a long coast-down time.

2 Q. Do you have an opinion that this
3 machine is improperly designed because it
4 doesn't have a brake?

5 A. No. I didn't say that. That brake
6 is only one means of accomplishing the goal of
7 protecting the operator. I think there are
8 other methods that could have likewise been
9 used, including the two that I mention, the
10 mechanical interlock and the electric
11 interlock.

12 Q. Are you aware of any person or
13 company that has performed a feasibility
14 analysis for incorporating an interlock into a
15 stationary wood chipper?

16 A. Well, the patent that we referred to
17 earlier is not specific to mobile wood
18 chippers, so apparently that designer has made
19 such an investigation.

20 Q. Stay with me now. I'm real narrow.
21 Are you aware of any person or company that has
22 performed a feasibility analysis to incorporate
23 an interlock into a stationary wood chipper?

24 A. I have not seen such a study.

25 Q. You yourself have not done such a

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1 study?

2 A. Correct.

3 Q. You have not prepared a design for an
4 interlock into a stationary wood chipper, have
5 you?

6 A. Not a detailed design; more of a
7 conceptual design.

8 MR. OTT: That was the word I was
9 looking for. Thank you. That's all the
10 questions I have.

11 MR. JONAS: All right.

12 Further deponent sayeth not.

13 (Whereupon, the taking of this
14 deposition was concluded at 4:00 p.m.)

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The *Warren* Group
Forensic Engineers & Consultants

The Warren Group, Inc.
PO Box 1608
Columbia, SC 29063

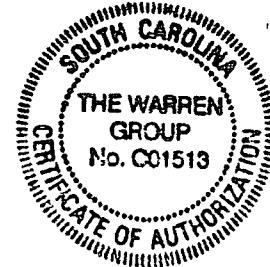
803.732.6600
803.732.7576 (Fax)
888.827.7823 (Toll Free)
www.warren-group.com

DATE: August 3, 2006

REPORT TO: Southeastern Claims Service, Inc.
Attn: Ms. Paula Dyches
Post Office Box 212128
Columbia, South Carolina 29221

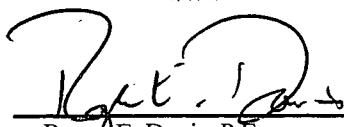
Chipper Access Door Injury

Insured: J.C. Witherspoon
D.o.L.: 6/1/2006
L.o.L.: Alcolu, SC
Claim No.: WC071306
The Warren Group File Number: 60236



 **FILE**



PREPARED BY: 
Roger E. Davis, P.E.

August 3, 2006
Date

Engineering Analysis of Claims and Accidents

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INTRODUCTION

On June 1, 2006, Mr. Andreal Holland was injured while performing his regularly assigned duties as an employee of J. C. Witherspoon, Inc. in Alcolu, South Carolina.

Ms. Paula Dyches of Southeastern Claims Service, Inc. assigned The Warren Group to:

1. Inspect the equipment involved in the injury;
2. Review the available information; and,
3. Determine if a defect in the equipment was a cause of the injury to Mr. Holland.

As a result of the investigation, a number of observations have been made and conclusions have been reached. The observations and conclusions stated in this report are based on information available as of this writing. It is conceivable that additional information may be forthcoming which bears on these conclusions and opinions. The author of this report reserves the right to review all conclusions and opinions at any future point in time, should, in fact, additional information become available.

BACKGROUND

Investigation

I, Roger E. Davis, P.E., Senior Consulting Engineer with The Warren Group, inspected, photographed, and measured the equipment on July 27, 2006. Mr. Woodrow Woods, Jr., Mill Supervisor for J. C. Witherspoon, Inc., was interviewed during the inspection. Ms. Martha Odom, Office Manager for J. C. Witherspoon, Inc., provided model and serial numbers for the incident equipment after the inspection. The Parts Department of Morbark, Inc. provided the manufacturing date of the equipment based on the serial number.

Description of the Equipment

The equipment involved in the injury to Mr. Holland is a Model 58 Morbark chipper, Serial No. 914. The chipper is a stationary model with a 58-inch wheel and replaceable cutters. The chipper is powered by a 150 hp electric motor. The hood (access door) for changing the cutters is quarter-circle shaped and hinged at the bottom and locked in place with two pins at the top. The disc is equipped with both cutters and fan blades to pneumatically convey product from the chipper.

Circumstances of the Incident

The following sequence of events is based on information provided by Mr. Woods, observations of the equipment, and on the engineering analysis that follows.

Mr. Holland is employed at a sawmill that produces mulch as one of its products. A high-powered stationary chipper produces the mulch.

Mr. Holland was about to change the cutters in the chipper at the time of his injury. He turned off the electrical power to the chipper at the control panel, and locked and tagged it out. Before the disc coasted to a stop, Mr. Holland removed the two retaining pins from the hood and began to tilt it open. The hood contacted the rotating fan blades, which caused the hood to suddenly and violently strike Mr. Holland.

FACTS AND OBSERVATIONS

Appendix I contains 13 captioned photographs of the chipper involved in the injury to Mr. Holland. The photographs and captions illustrate and list some of the facts and observations used in the engineering analysis in this report.

Additional Facts and Observations:

1. The incident chipper was bought by J. C. Witherspoon, Inc. as used equipment, and was installed in February 2006.
2. The chipper is a Model 58, Serial No. 914, manufactured by Morbark, Inc. of Winn, Michigan in 2000.
3. The chipper blades are changed twice a day when the chipper is in service.
4. The clearance between the fan blades mounted to the cutter disc and the hood is less than 1/2-inch.
5. The hood rotates about an approximately 1/2-inch in diameter pin when it opens. No bushing or bearing is provided for the pivot point to control clearance between the pin and the hole in the hood.
6. Mr. Woods stated that the pin in the hood hinge was not worn appreciably at the time of the injury.
7. The chipper disc coasts to a stop about 14 minutes after the electrical power is turned off.
8. Mr. Holland shut off the power and locked and tagged out the switch to prevent accidental restarting of the chipper before he was injured.
9. J. C. Witherspoon, Inc did not modify the chipper from the time it was acquired until the time of the injury.
10. The chipper has warning labels affixed that state: *"Never open the hood while disc is turning"* and *"To confirm disc is stopped, visually check disc shaft or drive wheel."* The warning label includes a drawing of the hazard involved with opening the hood while the disc is rotating.
11. The hood that was damaged at the time of the injury to Mr. Holland had been replaced before the time of the inspection.

ENGINEERING ANALYSIS AND DISCUSSION

The clearance between the fan blades and the hood on the chipper must be fairly tight, or the fan will not generate sufficient air velocity to pneumatically convey material. However, the tight clearance raises the probability that the loose fit of the hinge pin for the hood will allow the hood to contact the fan blades. If the disc is rotating at the time the hood contacts the fan blades, the large momentum of the rotating disc and its drive mechanism will impart enough energy to the hood to rip it from the hinge.

The manufacturer has recognized the hazard of the rotating disc possibly contacting the hood, and has placed labels on the machine to warn of the hazard; however, it is insufficient to warn of a hazard that is likely to cause serious injury when it is technologically and economically feasible to provide a higher level of protection such as elimination of the hazard by design or providing safeguards for the hazard.

It is necessary to provide a hood or some other access to the disc of the chipper for maintenance purposes. As designed, if the rotating disc of the Morbark chipper strikes the hood, the hood is violently propelled open, because the door opens in the same direction of rotation as the disc rotation. The chipper could have been designed to provide a fitted bushing or bearing at the hood pivot point to minimize lateral motion, or "wobble," of the hood as it opens. If the hood cannot "wobble," it will not come in contact with the fan blades when the hood is rotated open. However, the hood is so heavy and the likelihood that such a tight fitting pivot would quickly wear out does not make a tight fitting pivot a reliable means of eliminating the hazard for the long term, and the shear point hazard would not be addressed by such a design change. Therefore, no feasible change in design has been found that would eliminate the hazard involved in the injury to Mr. Holland without creating a different hazard and failing to address a second hazard of the shear point between the fan and the housing.

It is foreseeable that an operator might open the hood before the disc coasts to a full stop. An operator will not likely be able to judge when the momentum of the rotating disc has

dissipated enough that contact of the hood by the blades will present no serious risk. The designer of equipment must anticipate hazards in the equipment whether present during use or foreseeable misuse. The manufacturer was well aware of the hazard that was involved in the injury to Mr. Holland, but failed to provide a safeguard to protect the operator from the hazard.

The manufacturer affixed a warning label on the chipper that addresses the hazard that caused the injury to Mr. Holland. The warning, however, fails to convey that serious injury or death could result from the hazard.

The chipper should have been equipped with an interlock to prevent the hood from opening until the disc has stopped turning. One such interlock is a heavy-duty solenoid-latching safety interlock switch. A commercially available interlock of this type is described in the literature included in Appendix II. The interlock could be controlled by a time delay or a motion detector. The time delay would be set for a time period longer than the coasting period of the disc after the power has been shut off. The motion detector could be mounted in a location that would not be affected by the chips and flying debris inside the hood, such as at a location to detect shaft rotation, rather than disc rotation.

A solenoid-latching safety switch would not have allowed Mr. Holland to open the hood of the chipper until the disc had fully stopped. Therefore, the inclusion of a safety switch on the chipper at the time it was manufactured would have prevented the injury to Mr. Holland.

A machine that contains an uncontrolled hazard when it is economically and technologically feasible a safeguard to protect the operator is a machine that contains a defect. The defect in the incident chipper was a cause of the injury to Mr. Holland.

CONCLUSIONS

1. The incident chipper contains a hazard created by a heavy rotating member that continues to rotate long after the electrical power has been shut off.
2. The manufacturer of the chipper warned of the hazard, but the warning does not convey the serious nature of the injury or death that could result from the hazard.
3. The manufacturer did not provide a safeguard to protect the operator from a foreseeable misuse of the equipment.
4. It is economically and technologically feasible to provide a safeguard that would have prevented the injury to Mr. Holland.
5. A machine that contains an uncontrolled hazard when it is economically and technologically feasible to reduce the risk of the hazard to a tolerable level is defective.
6. The defect in the incident chipper was a cause of the injury to Mr. Holland.

APPENDIX I

- Figures 1 - 13

Figures 1 through 13 are captioned photographs that depict the equipment involved in the injury to Mr. Holland

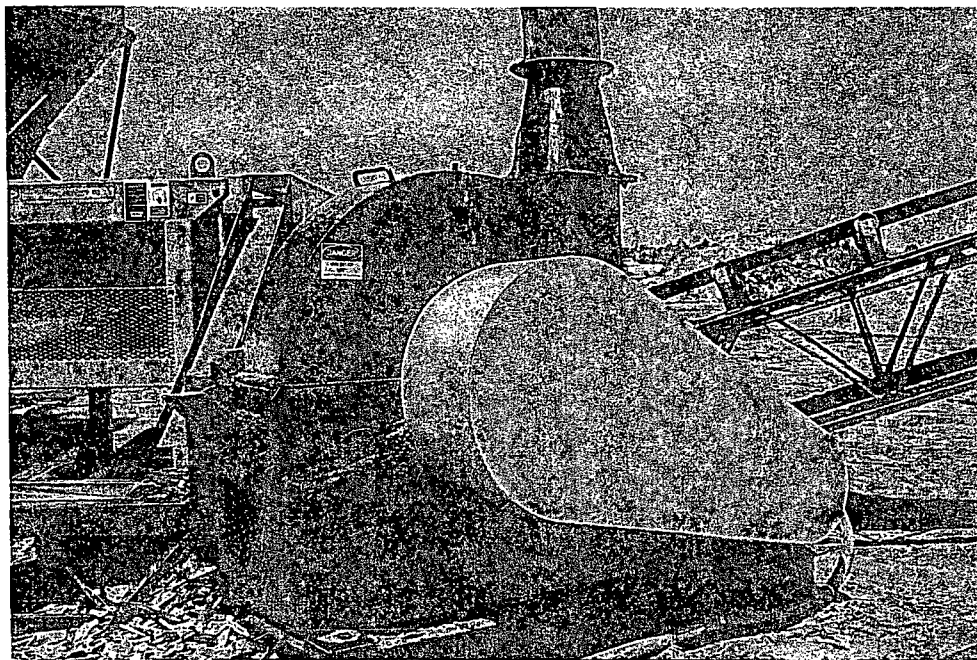


Figure 1. A view of the stationary chipper involved in the injury to Mr. Holland.

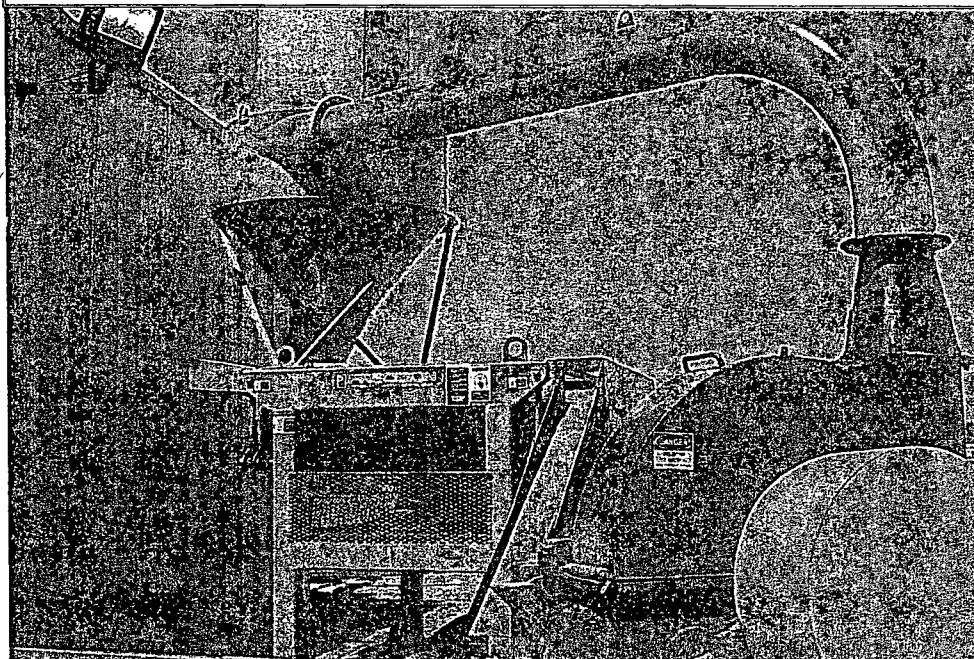


Figure 2. A view of the discharge chute that conveys chips from the chipper to the cyclone device. The chips are conveyed by air movement created by the fan attached to the rotating disc inside the chipper housing.

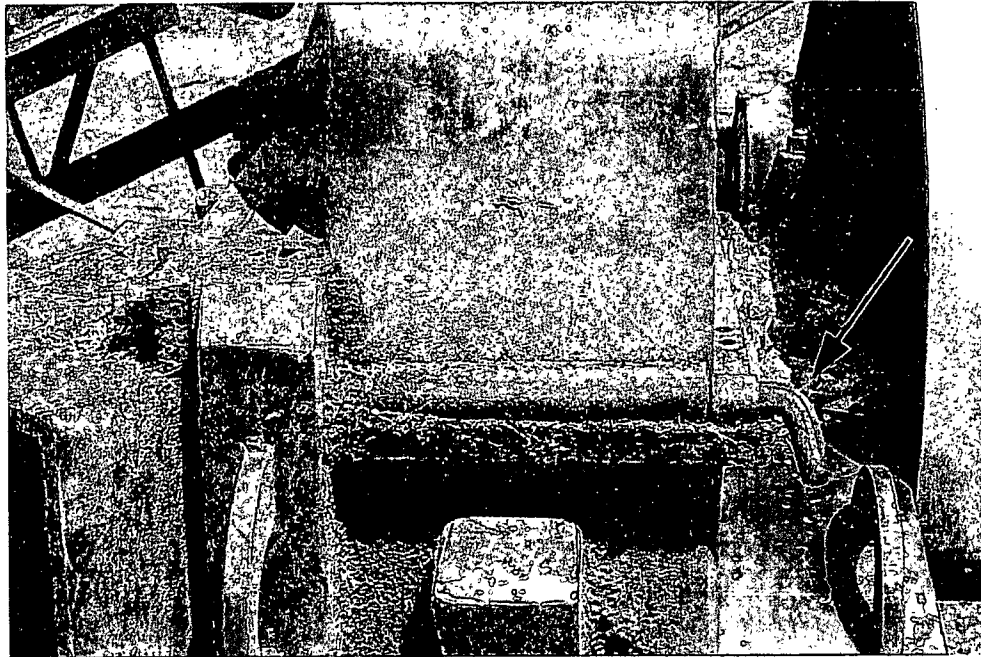


Figure 3. A view of the hinge about which the hood rotates to provide access to the disc for maintenance. The arrow indicates the hinge pin.

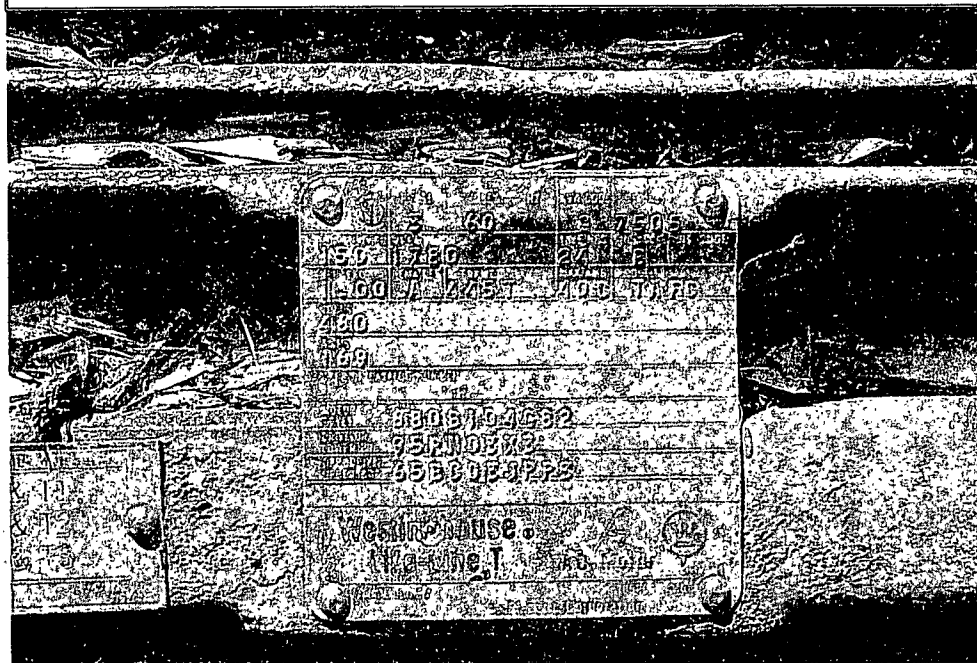


Figure 4. A view of the data plate on the electric motor that powers the chipper. The motor is rated at 150 hp

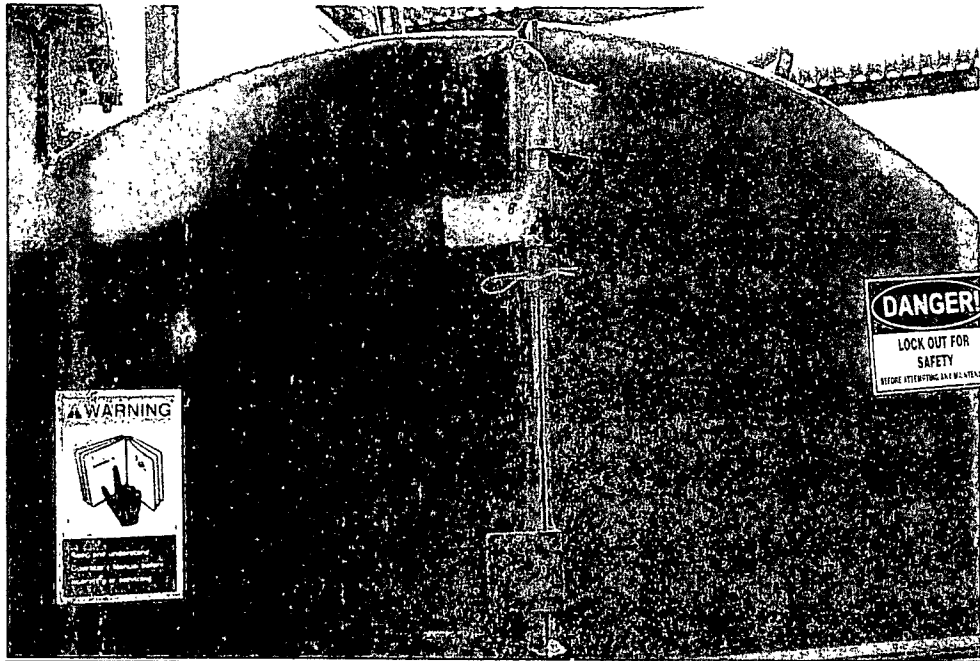


Figure 5. A view of one of the latching pins at the top of the hood.

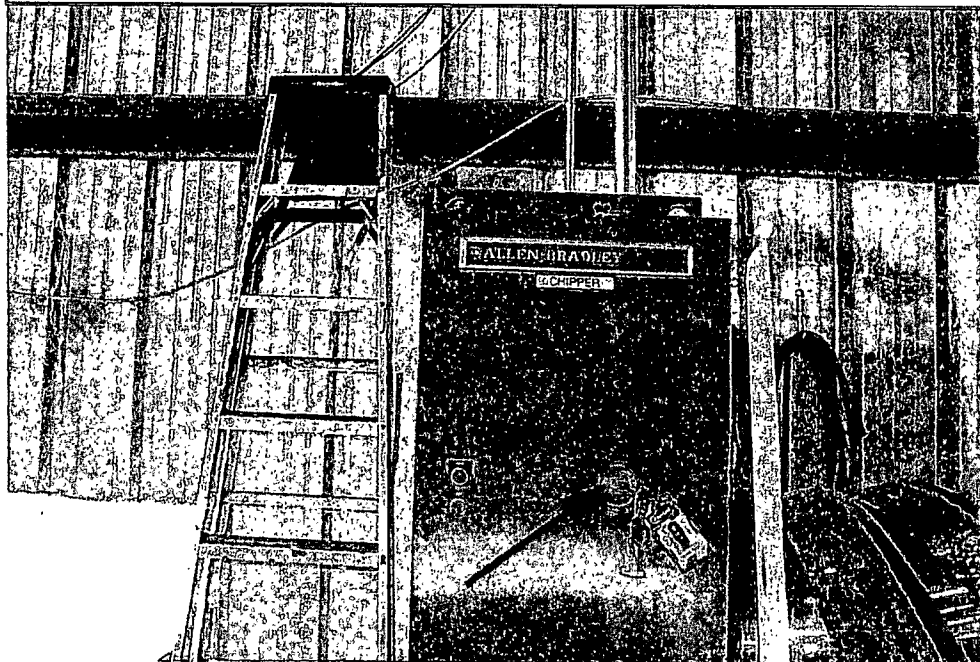


Figure 6. A view of the electrical control panel for the incident chipper. The arrow indicates the lockout/tagout device similar to the one used by Mr. Holland at the time of his injury.



Figure 7. A view of the chipper disc with the hood in the open position.



Figure 8. A view of the fan blade attached to the chipper disc, indicated by the arrow.

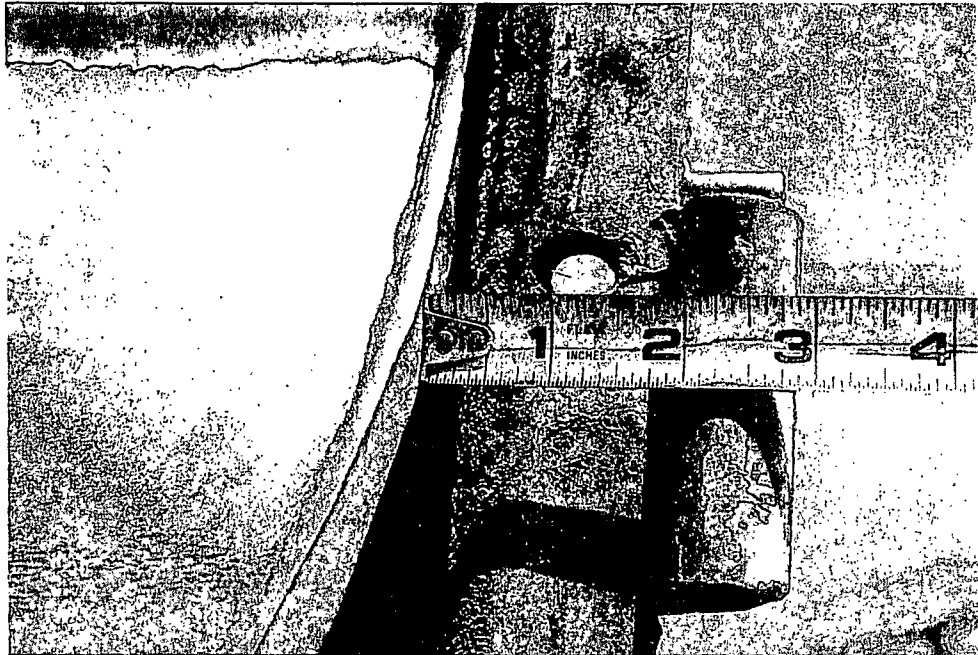


Figure 9. A view of the clearance between the fan blade and the chipper housing.
The tight clearance is necessary to generate adequate air velocity to convey the processed material.

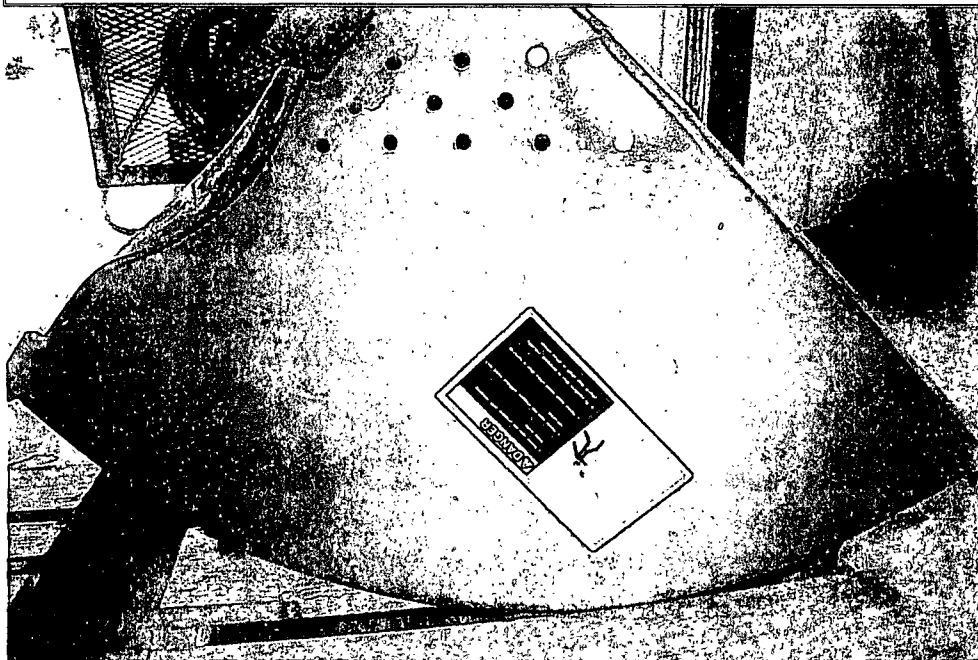


Figure 10. A view of the damaged hood that had been removed from the chipper at the time of the inspection.

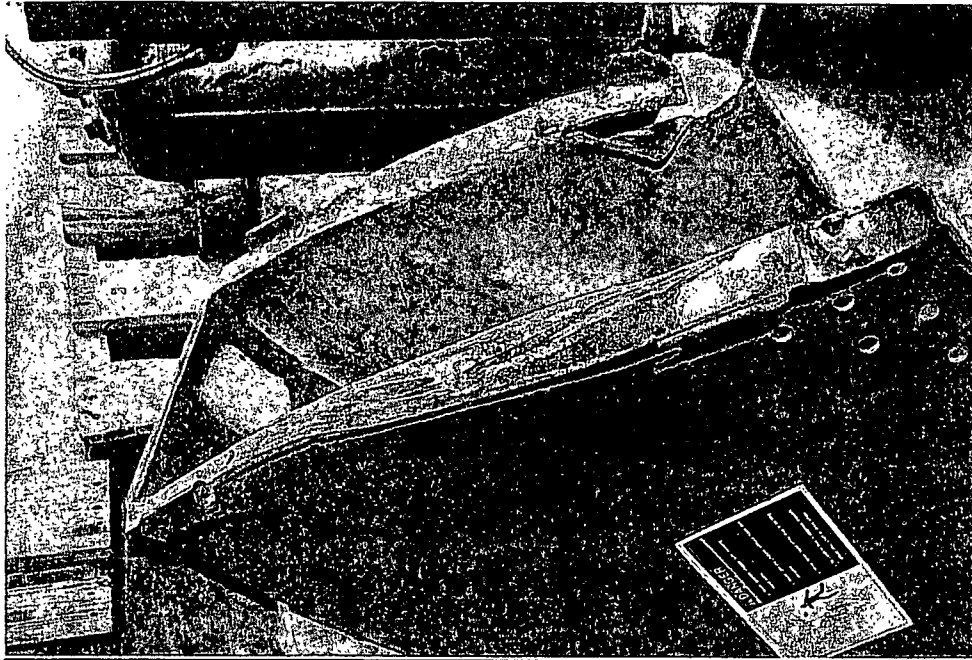


Figure 11. Another view of the damaged hood.

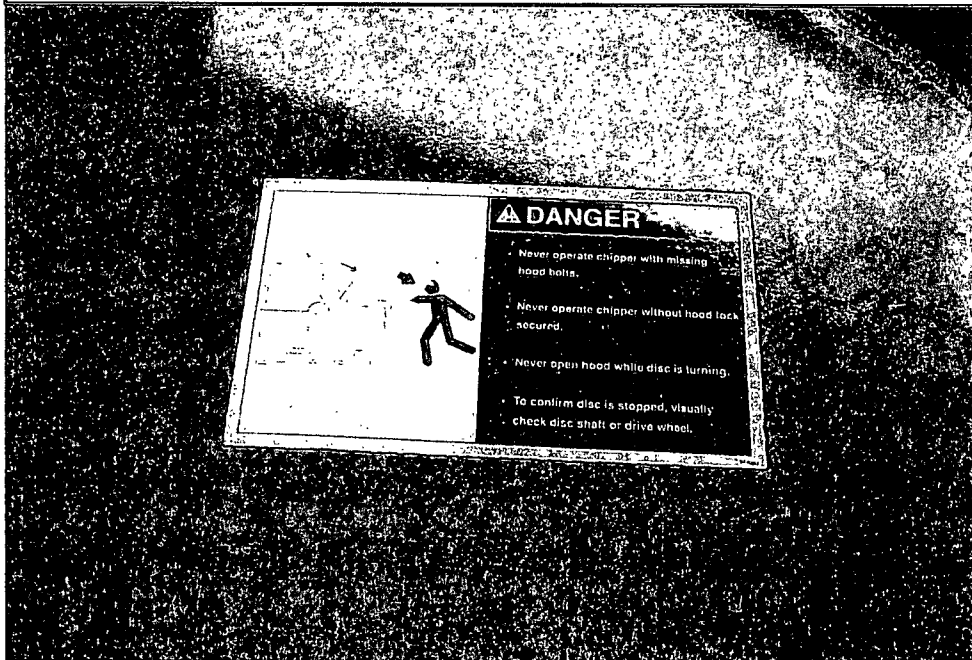


Figure 12. A view of the warning most relevant to the hazard that caused the injury to Mr. Holland, specifically the statement: *"Never open hood while disc is turning."*

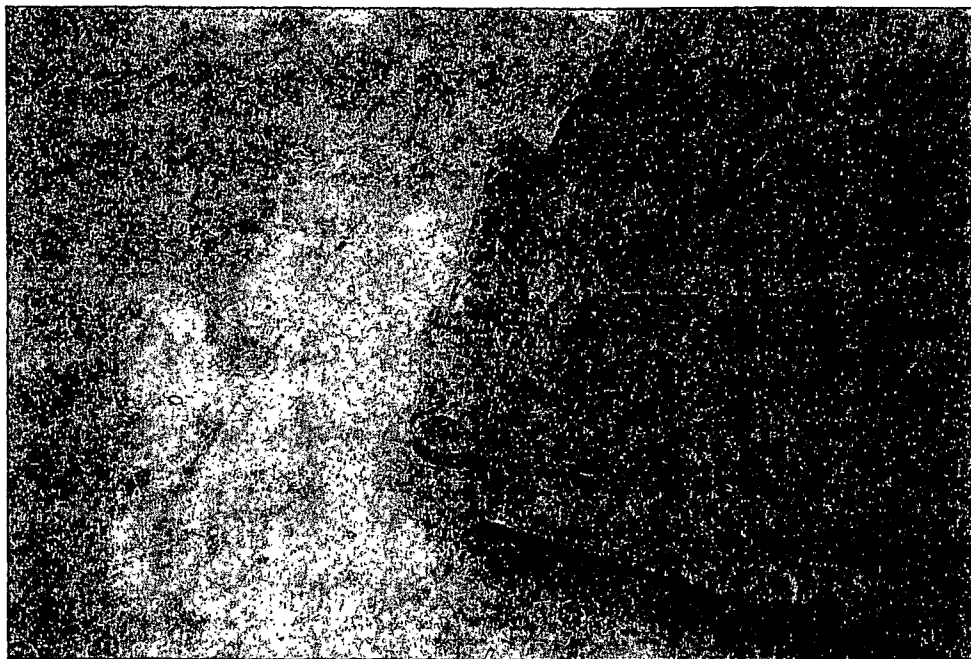


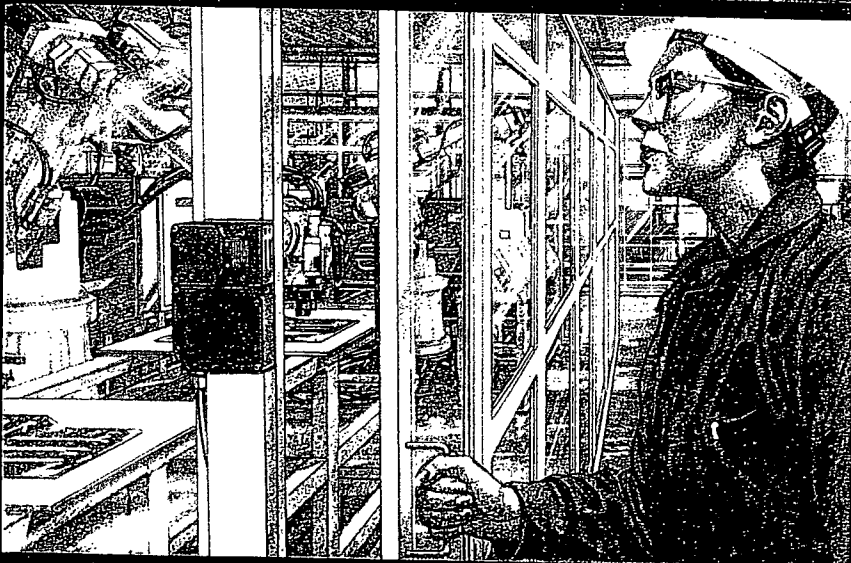
Figure 13. A view of the hinge half attached to the damaged hood.

01052

Appendix II

Product Literature for a Safety Interlock Switch

GK-1 CATALOG-HANDBOOK
FIFTH EDITION



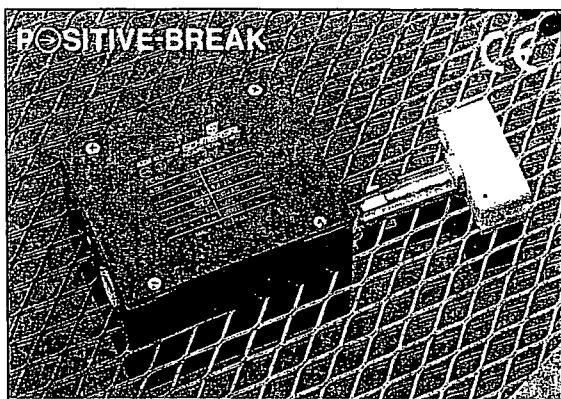
MACHINE GUARDING SAFETY PRODUCTS

- Safety Interlock Switches
- Coded-Magnet Sensors
- Emergency Cable-Pull Switches
- Safety Controllers
- Hinged Safety Interlocks
- Safety Edges/Bumpers
- Positive-Break Limit Switches
- Safety Foot Switches

SCHMERSAL

SERIES AZM415

Heavy-Duty Solenoid-Latching Safety Interlock Switch



Description

The AZM415 Series is designed for movable machine guards where access to a hazardous work area must be controlled until safe conditions exist. Their solenoid-latching feature permits locking a machine guard until dangerous conditions, which may exist immediately after removal of power, have abated. Solenoid-latching may be controlled by a time-delay, motion detector, position sensor or other suitable component.

Latching may occur upon energizing or de-energizing the solenoid — depending upon model. In addition the AZM415 features "positive-break" NC contacts, and an adjustable-force ball latch which maintains a holding force on the guard when the key is in the unlocked state.

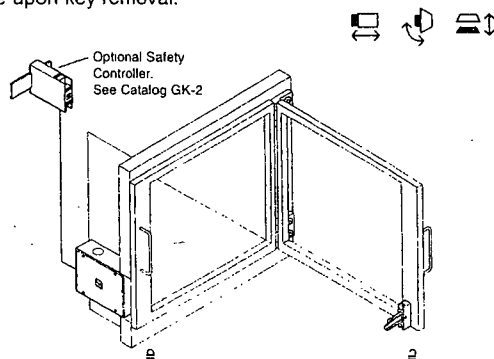
A two-key model is also available for guards which may be open in two directions (Model AZM415-33zpdk).

Operation

The AZM415 two-piece electromechanical safety interlock switch consists of a rugged switch and solenoid-latching mechanism and a geometrically-unique actuating key. The switch actuating key is typically mounted to a movable machine guard.

When the guard is closed, the actuator key is locked in position by a toggle-lever system. The guard may only be opened by energizing or de-energizing (depending upon model) the solenoid-latching mechanism.

Upon opening of the guard the switch's "positive-break" NC contacts are forced to open through a direct (non-resilient) mechanical linkage with the actuating key. The NO contacts close upon key removal.



Features & Benefits

- **Solenoid-locking design** ... controls access to hazardous areas until safe conditions exist.
- **Highly tamper-resistant** ... difficult to defeat.
- **"Positive-break" NC contacts** ... assure circuit interruption upon actuator key removal.
- **Watertight design** ... meets IP67 washdown requirements.
- **High-strength, metal actuator key** ... tolerates mechanical abuse without damage.
- **Rugged, enamel-coated metal housing** ... tolerates the most hostile environments.
- **Adjustable actuator key holding force up to 110 pounds** ... permits use of switch as door latch.
- **Available in "solenoid-locking" and "solenoid-unlocking" models** ... for application versatility.
- **Meets rigid safety agency standards** ... UL, CSA, IEC, BG and VDE.
- **Industrial-strength locking force** ... up to 560 pounds.
- **Patented toggle-lever locking system** ... facilitates easy unlocking of (even heavily misaligned) guards.
- **Two-key model** ... for double-sided guards (AZM415-33zpdk).
- **Optional B4 Actuator Key** ... prevents unintentional guard closure.

AVAILABLE STANDARD MODELS

(Actuator key sold separately ... see chart below)

Part Number	Contacts	Description
AZM415-22zpk-120AC	2 NO & 2 NC	Actuating key(s) locked by spring and unlocked by energizing 120VAC solenoid.
AZM415-33zpdk-120AC	3 NO & 3 NC	
AZM415-22zpk-24AC/DC	2 NO & 2 NC	Actuating key(s) locked by spring and unlocked by energizing 24VAC/DC solenoid.
AZM415-33zpdk-24AC/DC	3 NO & 3 NC	
AZM415-22zpk-120AC	2 NO & 2 NC	Actuating key(s) locked by energizing 120VAC solenoid & unlocked by de-energizing solenoid.
AZM415-33zpdk-120AC	3 NO & 3 NC	
AZM415-22zpk-24AC/DC	2 NO & 2 NC	Actuating key(s) locked by energizing 24VAC/DC solenoid & unlocked by de-energizing solenoid.
AZM415-33zpdk-24AC/DC	3 NO & 3 NC	

Other contact configurations available. Please contact factory.

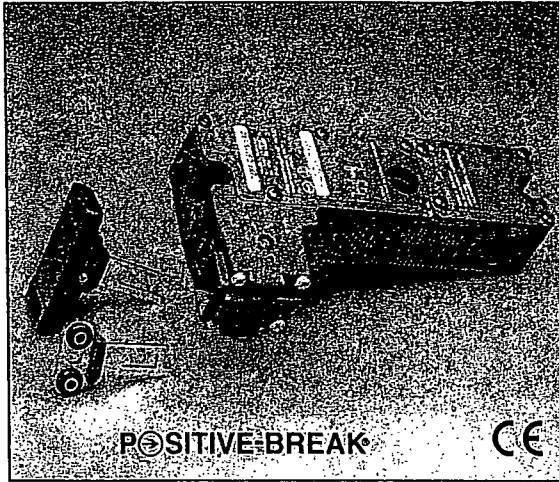
ACTUATING KEYS & ACCESSORIES

Description	Part Number
Linear entry actuator key (For sliding lift-off guards)	AZM415-B1
Small radius (250mm) x-axis entry actuator key (For hinged guards)	AZM415-B2
Small radius (250mm) y-radius entry actuator key (For hinged guards)	AZM415-B3
Slide bolt actuator key (For sliding guards)	AZ/AZM415-B4pS
Special rotary, latching handle-operated key actuating assemblies available	Please consult factory

POSITIVE-BREAK® is a trademark of SCHMERSAL

SERIES TZK

Heavy-Duty Solenoid-Latching Safety Interlock Switch



Description

The TZK Series is designed for machines/work cells where access to a hazardous work area must be controlled until safe conditions exist. Their solenoid-latching feature permits locking a machine guard until dangerous conditions, which may exist immediately after removal of power, have abated. Solenoid-latching may be controlled by a time delay, motion detector, position sensor or other suitable component.

The unit's contact arrangement permits the prevention of a machine restart until the guard is closed and in the locked position.

Each unit is supplied with a 1/2" NPT conduit adaptor.

Operation

The TZK Series electromechanical safety interlock switch consists of a rugged switch with a solenoid-latching mechanism and a geometrically-unique actuating key. The switch actuating key is typically mounted to a movable machine guard.

When the guard is closed, the actuating key is held in position by the solenoid-latching mechanism. The guard may only be opened by energizing or de-energizing (depending upon model) the solenoid-latching mechanism.

Upon opening of the guard, the switch's "positive-break" NC contacts are forced to open through a direct (non-resilient) mechanical linkage with the actuating key. The NO contacts close upon key removal.

Features & Benefits

- **Solenoid-locking design** ... controls access to hazardous areas until safe conditions exist.
- **Highly tamper-resistant** ... difficult to defeat with simple tools, tape, bent wires, etc. Reduces liability exposure.
- **"Positive-break" NC contacts** ... ensure circuit interruption upon key removal.
- **Watertight design** ... meets IP67 environmental sealing requirements.
- **Positive locking** ... integral mechanical interlock prevents solenoid latching until actuating key is fully inserted.
- **High-strength steel actuator key** ... tolerates mechanical abuse without damage.
- **Rugged, corrosion-resistant housing** ... tolerates the most hostile environments.
- **Available in "solenoid-locking" and "solenoid-unlocking" models** ... for application versatility.
- **Optional "floating" actuator key** ... tolerates up to 5mm of guard misalignment without damage.
- **Meets rigid safety agency standards** ... IEC, BG (UL and CSA pending)
- **Rotatable actuating head** ... four user-selectable 90° positions for installation flexibility.
- **Funnel entry** ... forgiving of minor guard misalignment.
- **Optional spring-loaded actuator keys** ... tolerates axial misalignment of guard.
- **Built-in key entry dust cover** ... prevents ingress of dirt and dust when key is removed.

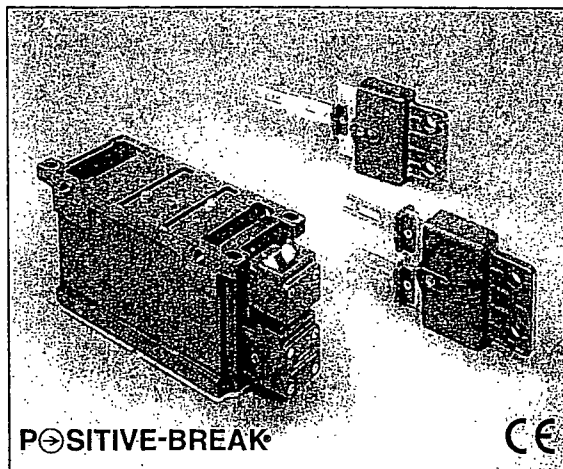
Typical Applications



The TZK Series is intended for use as a safety interlock switch on movable machine guards which must not be opened until dangerous conditions, that may exist after the removal of power, have abated. Such conditions are flywheel overrun, spindle momentum, unstable rest positions, etc. Typical applications are textile machines, stamping presses, articulating robot arms, mixing machines, heavy working equipment, printing presses and packaging machinery.

SERIES TKF/TKM

Heavy-Duty Solenoid-Latching Safety Interlock Switch



Description

The TKF/TKM Series is designed for machines/work cells where access to a hazardous work area must be controlled until safe conditions exist. Their solenoid-latching feature permits locking a machine guard until dangerous conditions, which may exist immediately after removal of power, have abated. Solenoid-latching may be controlled by a time delay, motion detector, position sensor or other suitable component.

The unit features independent actuator key (guard) position and solenoid-latching monitoring contacts. These permit the prevention of machine restart until the guard is closed and the solenoid-latching pin is in the locked position.

The TKF/TKM Series consists of an electromechanical safety interlock switch with "positive-break" contacts and a locking actuator key. In addition, the TKFS model features an auxiliary manual unlocking device ... the latter provided to aid in installation and for use in the event of a power failure (when using the "unlocking by solenoid" model).

Operation

The TKF/TKM Series of electromechanical safety interlock switch assembly consists of a rugged switch, a solenoid-operated latching mechanism, and a geometrically-unique actuator key. The switch actuating key is typically mounted to a movable machine guard.

When the guard is closed, the actuating key is held in position by the latching mechanism. The guard may only be opened by energizing or de-energizing (depending upon model) the latching mechanism.

Upon opening of the guard, the switch's "positive-break" NC contacts are forced to open through a direct (non-resilient) mechanical linkage with the actuating key. The NO contacts close upon key removal.

The solenoid-latching mechanism circuit features a NO and a NC contact which permit monitoring its status. This NC contact is wired in series with the NC contact in the safety switch circuit. Thus the machine is prevented from starting until the actuating key is inserted (guard is closed) and the solenoid has locked it in the closed position.

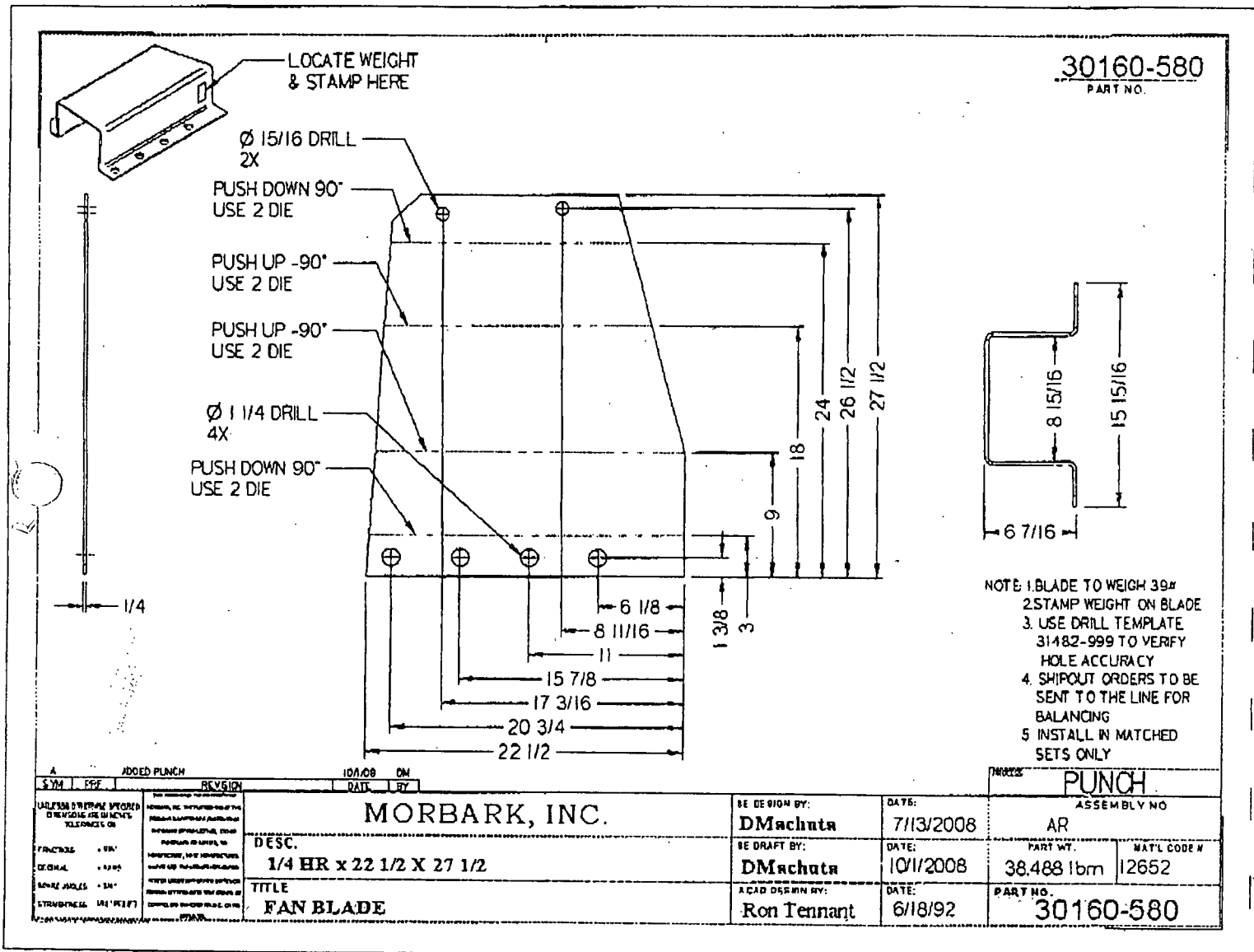
Features & Benefits

- **Solenoid-locking & spring-locking designs** ... controls access to hazardous areas until safe conditions exist.
- **Highly tamper-resistant** ... difficult to defeat with simple tools, tape, bent wires, etc. Reduces liability exposure.
- **"Positive-break" NC contacts** ... assure circuit interruption upon actuator key removal.
- **Conditional "safe" outputs** ... actuating key must be fully inserted and solenoid must be actuated to lock key before "closed" safety signal is provided (Series TKM).
- **Watertight design** ... meets IP67 environmental requirements.
- **High-strength, galvanized-steel actuator key** ... tolerates mechanical abuse without damage.
- **Rugged, corrosion-resistant metal housing** ... tolerates hostile environments.
- **Three optional key entry locations** ... rotatable actuator head provides installation versatility.
- **Independent actuator key position and locking pin position monitoring contacts** ... provide a higher degree of safety.
- **Padlockable key** ... for added security during equipment maintenance.
- **Meets rigid safety agency standards** ... BG, UL, CSA.
- **Wide selection of actuating keys** ... to meet diverse application requirements.
- **Special types available for concealed installation** ... please consult factory.

Typical Applications



The TKF/TKM Series is intended for use as a safety interlock switch on movable machine guards which must not be opened until dangerous conditions, which may exist after the removal of power, have abated. Such conditions are flywheel overrun, spindle momentum, unstable rest positions, etc. Typical applications are textile machines, stamping presses, articulating robot arms, mixing machines, metal working equipment, printing presses and packaging machinery.



DEPOSITION
EXHIBIT
Davis 6
mwh 8/31/10

Morbark-000023
Holland v. Morbark, et al.

01058

APR 17 2009

(1)

HEALTHSOUTH REHABILITATION HOSPITAL
COLUMBIA, SC
OUTPATIENT NEUROPSYCHOLOGICAL CONSULTATION

PATIENT NAME: ANDREAL HOLLAND
MR#: 34439

DATE: 04/09/2009
RM#:

EXAMINER: Robert E. Deysach, PhD
Licensed Clinical Psychologist

Mr. Andreal Holland, a 32-year-old mixed dominant African American male, was referred for a neurological psychological consultation to assess cognitive and emotional functioning as part of a workers comprehension evaluation. The patient has sustained an injury on 06/01/06 when he was struck by a steel door from a machine on which he was working. He sustained a severe concussion, facial fracture, then a subdural hematoma. He had respiratory distress and a tracheostomy was placed at that time.

The patient was apparently "unresponsive" at the scene of the accident and was transported to Clarendon Hospital. He subsequently was admitted to Richland Memorial Hospital in which he was trached and intubated. He remained on a ventilator for some time and was described as exhibiting some "combativeness and confusion". Intracranial pressure was monitored. He underwent an open reduction internal fixation for facial fractures as well as a wiring of his mandible. A PEG tube was placed. He was transferred to Carolinas Rehabilitation two weeks following his accident.

The patient reported a mild headaches and abdominal pain along with tinnitus. He had no recall of the events surrounding his injury and was oriented only to person. Some confusion limited his cooperation on neurological examination the day of his accident. The patient did complete a vocational evaluation at Carolinas Rehabilitation Hospital on 10/25/06 and summary report on 12/13/06 revealed limited vocabulary and reading comprehension competencies along with reduced dexterity and endurance. Auditory and visual processing along with memory abilities fell within the average to low average range. He did exhibit evidence of some decreased left hemibody function.

The patient was examined neuropsychologically by the present examiner in March and April, 2007. At that time he recounted a work history that primarily included warehouse work. He apparently was working at A&K Mulch at the time of his injury. He reported that he had previously lost some jobs as a result of failing drug testing. It was recommended he complete work on his GED and that further vocational assistance be provided. It was also recommended that he have frequent and regular drug testing.

An additional summary report provided by office of Peake and Fowler indicated that the patient's left hemiparesis was resolved but did diagnose him with left carpal tunnel syndrome. It was noted at that time that the patient was experiencing persistent irritability and impaired judgment.

01059

PATIENT NAME: ANDREAL HOLLAND

OUTPATIENT
NEUROPSYCHOLOGICAL
CONSULTATION
Page 2

MR#: 34439

PRESENT INTERVIEW WITH PATIENT: The patient was brought to the session with his mother. He was noted to be quite restless in the waiting room and prior to meeting with the patient; staff reported to the examiner that he was pacing in the lobby. His mother indicated that these difficulties are persistent with him and that he seldom is comfortable sitting and generally restless. He has apparent difficulty with crowds and will often remove himself as he becomes more upset.

The patient has been dating the mother of his children since 2003. He has two biological children and several stepchildren. The patient does have rather solid support from family.

According to his mother, the patient has difficulty with memory and stated that "he will forget half of what you tell him". The patient himself agreed this was a difficulty at times. The patient does also appear to get locked in at times when difficulties appear. In other words, he appears to have an inability to adapt to circumstances in which control is limited. Finally he was described as disinhibited at times. He tends to rush into task solutions and is somewhat intractable in dealing with corrections offered to him in those instances.

The patient did state that he had passed his courses in high school through determined work on his part. He stated that he failed his reading exit exam and has subsequently had difficulty passing the examinations required for a GED. He stated he still desires to complete work on his GED. His mother indicated that he likely had a special learning disability that when unrecognized in high school.

NEUROPSYCHOLOGICAL TESTING:

The patient was initially provided a measure designed to assess task application and effort. On the TOMM, the patient obtained a score of 49/50 and 50/50 across the two trials. Such a performance indicates a solid task application with no indication of a tendency to magnify deficits in the area of memory function.

The patient completed the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS). The patient applied himself actively to the tasks presented. He obtained a combined score across five functional areas of 66. This places him in the impaired range, surpassing approximately 1% of those his age. He had marked difficulty on tasks that measured attention, immediate and delayed memory. His performance overall was somewhat variable. Individual subtest scores are listed below:

<u>Cognitive function</u>	<u>Index score (percentile)</u>
Immediate memory	49 (.1st%)
Visuospatial - constructional	105 (63rd%)
Language	87 (19th%)
Attention	68 (2nd%)
Delayed memory	56 (0.2%)

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PATIENT NAME: ANDREAL HOLLAND

OUTPATIENT
NEUROPSYCHOLOGICAL
CONSULTATION

MR#: 34439

Page 3

The patient also completed the trail making test. This was an examination that he had completed under previous testing condition from this examiner. He completed part A in 44 seconds. This performance does reflect a slight decrease in performance from previous testing. He did appear to have some difficulty in the area of visual search on the task. He required 88 seconds to complete the second part of the task. This does reflect a slight improvement over previous test conditions. Overall, it does appear that little change has been demonstrated in the area of executive skills as measured on the trail making test over the course of the past two years.

The patient also completed the Wisconsin Card Sorting Test (WCST). He did have slightly better success at orienting to this task under present test condition than he had when it was initially introduced to him two years ago. At that time the task was abandoned because the patient had no understanding of the test concept and desire was made to minimize practice effects for followup testing.

On the present administration of the WCST, the patient was able to complete six of six categories committing 35 errors, 19 of which were perseverative. His error rate and perseverative behavior places him in the low average range completed to age mates. (It is not clear whether the patient has been administered this test subsequently). To the extent that is the case, some additional practice effects may be evident.

The patient also completed the Stroop Color and Word Test. The task is designed to assess attentional competencies. Across three trials, he obtained the following scores: Word T=41; Color T=42; Color/word T=41. In general, these performances fall within the low average range.

Finally the patient completed the Wechsler Abbreviated Scale of Intelligence (WASI). On this he obtained a FULL-4 IQ score of 76, falling within the borderline range and surprising approximately 5% of non-clinical age-mates. He had an estimated verbal IQ of 64 (1st percentile) and a performance IQ of 94 (34th percentile). Such a performance does reflect the possibility of a specific language deficit exhibited by the patient. This is consistent with the patient's reports of the patient and mother regarding his developmental history.

The patient had previously exhibited a pattern of performance on the strength of grip test, in which his right hand demonstrated more adequate strength than the left. The patient does write left handed but may well be right hand dominant for other motor tasks (e.g. throwing). The pattern of performance appears the same, although the overall level of his performance on the present testing was not as great as that obtained previously. On present testing, he was able to pull 32.7 kg with his (left) hand and 47.0 kg on the right. The patient did indicate that he had undergone carpal tunnel treatment since the time of his previous test condition. The patient also completed again the finger tapping test. On this task, he again performed fairly well bilaterally. He was able to tap 51.0 kg with (left) hand and 54.2 kg on the right. This performance parallels almost exactly that obtained under previous test conditions and is consistent with findings reported elsewhere in his medical record. No lateralized sensory deficits or tactile/visual intentions were noted. No marked left facial weakness was present.

01061

PATIENT NAME: ANDREAL HOLLAND

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NEUROPSYCHOLOGICAL
CONSULTATION

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SUMMARY: Mr. Andreal Holland is a 34-year-old mixed dominant male who appeared for a followup neuropsychological examination to assess cognitive and emotional functioning in light of a work accident which occurred nearly three years ago. The accident itself involved rather significant facial and head trauma and the patient was diagnosed with a closed head injury. In addition, he did have respiratory distress and tracheostomy was placed at that time.

The patient was examined neuropsychologically approximately two years ago and at that time exhibited a broad range of difficulties which prompted this examiner to recommend some additional physical and occupational therapy as well as case management oversight regarding possibilities in the area of the exercising of social judgment.

It was also recommended he be seen for a followup neuropsychological examination prior to return to work. The present examination served the purpose of evaluating his present level of function.

It was noted that the patient exhibited rather solid work ethic and demonstrated marked effort on all tests presented. On the RBANS battery, the patient was assessed in areas of neuropsychological relevance. His performance was variable. On this and the WASI, he exhibited intact visual perceptual abilities. On the other hand, problems in the area of attention, immediate memory and delayed memory were marked. This pattern of performance parallels quite closely the reports of the patient and family.

The patient's performance on tasks that are designed to assess language function was somewhat variable. His verbal IQ as estimated on the WASI did place him at the first percentile but on the RBANS, he fell within the low average range on a task measuring picture identification and associational fluency. It is reasonable to believe that the patient does demonstrate persistent difficulties in language as well as impaired memory abilities.

The patient demonstrated an improvement in the area of adaptive learning and cognitive flexibility. His family has reported that he tends to be somewhat rigid and that his incapacity to adapt to changes in his daily living environment has caused problems within the family. The patient himself admitted to difficulties in adapting and that the only way that he is able to control himself is at times is to leave the situation. He did describe a situation in which in frustration, he grabbed his fiancé in an aggressive manner but was able to stop himself and later apologized. He does appear to have a strong family core but at the same time, problems in disinhibition are likely to create some difficulties both at home and in a work setting.

The patient has not returned to work since his accident. His performance on the present examination does suggest the presence of cognitive deficits that are likely attributable to the work site accident of three years ago. A particular difficulty appears to be his reduced capacity for anterograde memory. Throughout testing, he was observed to demonstrate solid intelligence at times, only to make very gross and simplistic errors elsewhere. The patient also did appear to become "locked in" on individual tasks.

01062

PATIENT NAME: ANDREAL HOLLAND

OUTPATIENT
NEUROPSYCHOLOGICAL
CONSULTATION

MR#: 34439

Page 5

Overall, it does appear that the combination of cognitive difficulties overlayed upon a limited developmental learning background, combined with problems in the area of social-emotional control very probably make him a poor candidate for return to work in a competitive job environment. Based on the length of time since the accident and the degree of support that he has received both professionally and through his family, it is likely that his status in this regard is likely to be persistent over time.

The patient did report that he was interested in maximizing his productivity over time. It is possible that with closures of matters involving workers compensation, the patient may avail himself of some training through the Office of Disability.

Thank you for allowing us to see this patient. If we can be of further assistance, please let us know.

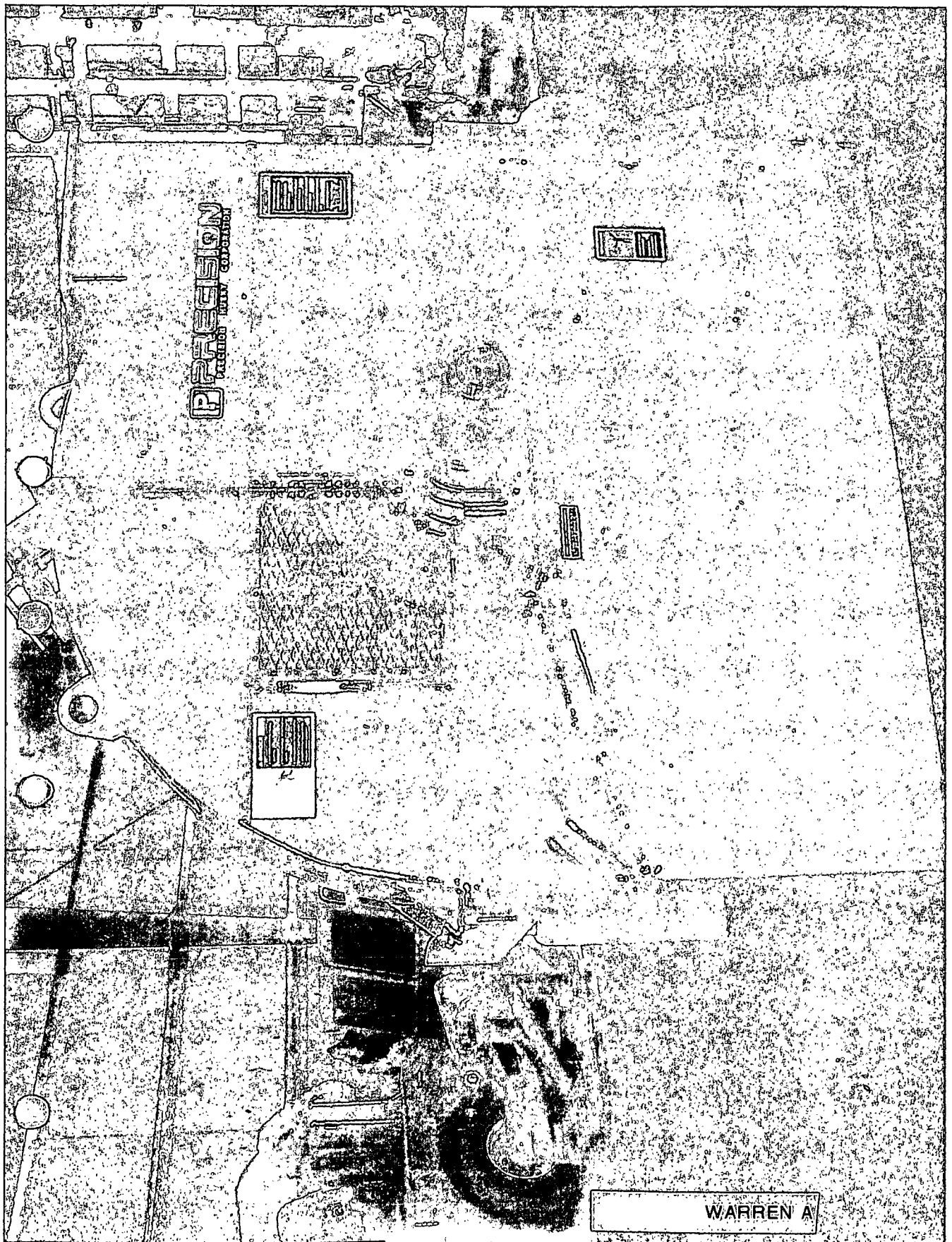
Submitted By: _____
Robert E. Deysach, PhD
Licensed Clinical Psychologist, SC 81

RD/am1146

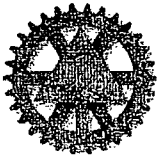
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JobID: 1263659

CC: Mr. Charnell Peake, Esq
9357 Twp Notch Road
Columbia, SC 29223

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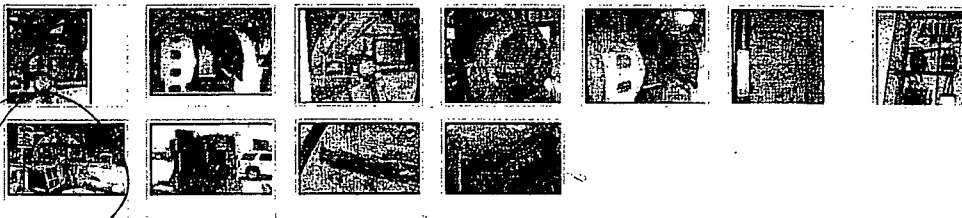
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PRECISION 84" Chipper

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Item #: 12526

Manufacturer: Precision

Description: PRECISION 84" Chipper - 1989 left hand, top discharge chipper with 84" six knife disk. Accepts logs up to 26" in diameter. Item # 12526.

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12526

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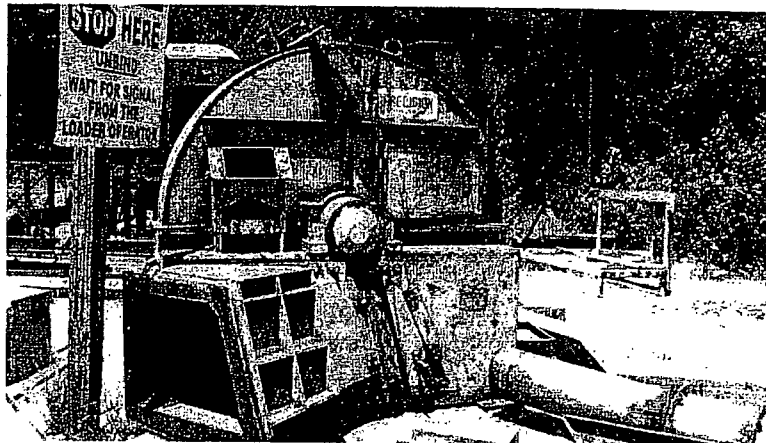
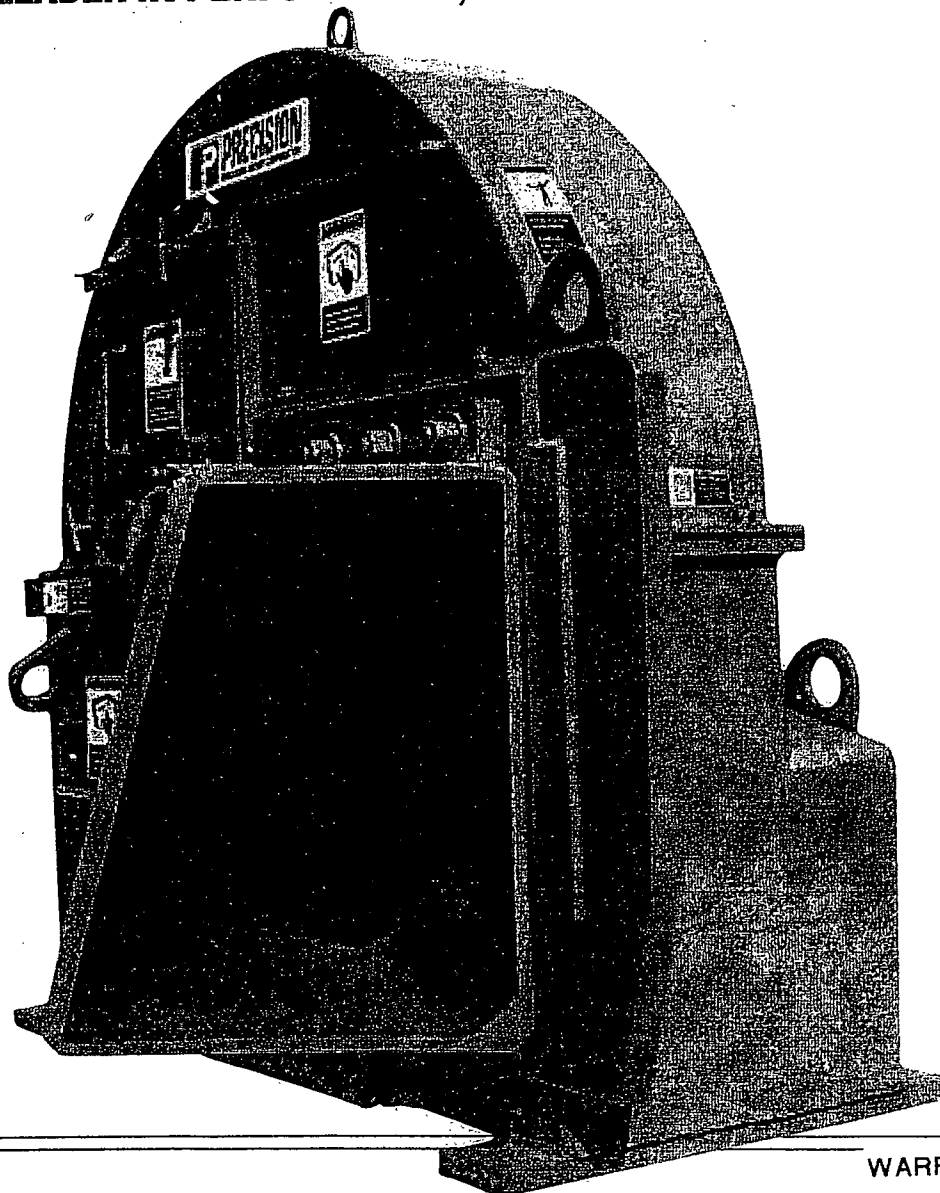


Image 8 of 11

CLOSE X

P PRECISION WASTE WOOD CHIPPERS

WORLD LEADER IN PERFORMANCE, DURABILITY AND INSTALLATIONS



WARREN K

01067

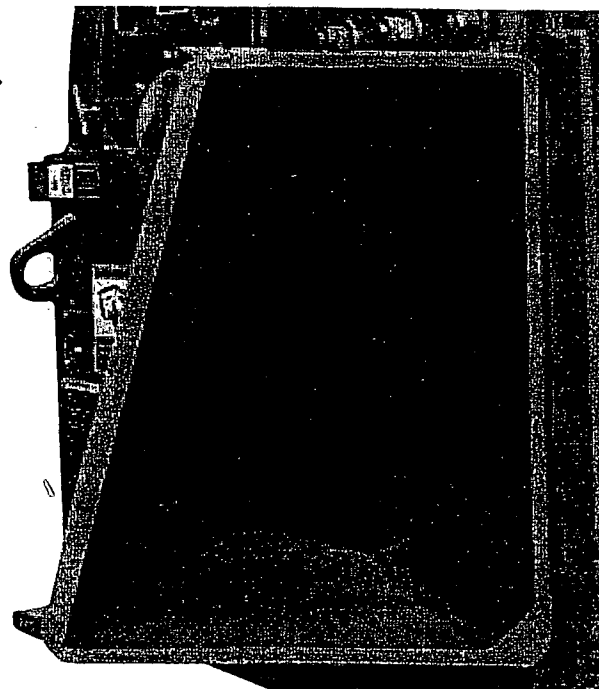
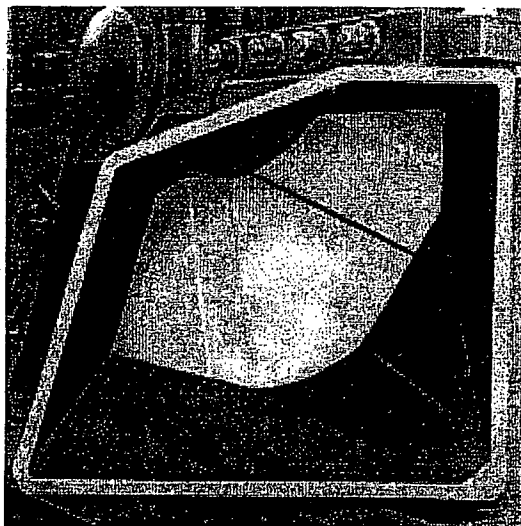


PRECISION'S UNIQUE PROVEN DESIGN HAS EARNED

LARGE INFEEED SPOUTS

The 58" takes 34" slabs and 15" roundwood and the 66" processes 38" slabs and 17" roundwood. ▶

The 38" accommodates 20" slabs and 9" roundwood and the 48" will take 24" slab and 11" roundwood. ▼



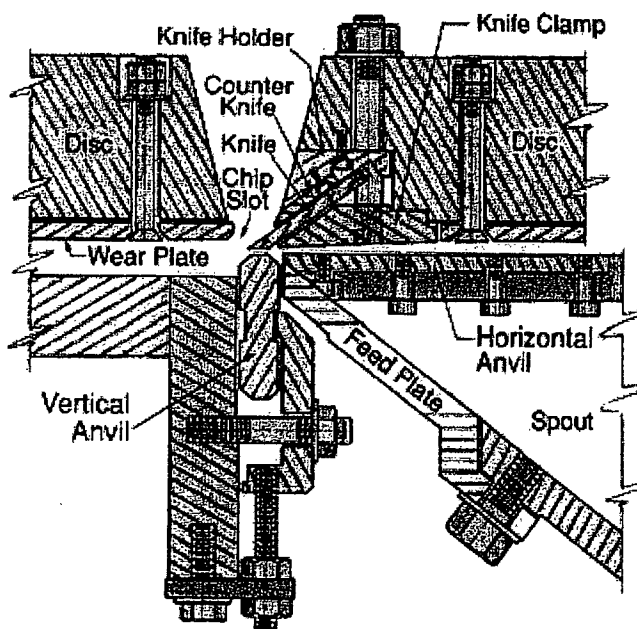
SLICING INSTEAD OF CHOPPING

The canted side spout design and the position of the knife causes a smooth slicing action. The attack angle of the knife gives a gentle lift to the slab as the knife passes the center line and begins the upward swing turning the slab counterclockwise.

The spout has a flat bottom and canted side to give 25% more anvil contact, preventing slapping and wood turning in the wrong direction.

Horizontal and vertical anvils give additional life, requiring less maintenance.

Both anvils are hard surfaced with colmonoy with a hardness of 62-65, Rockwell C scale. With a four sided replaceable anvil, maintenance and time are saved. Less horsepower is needed with Precision's smoother slicing action.



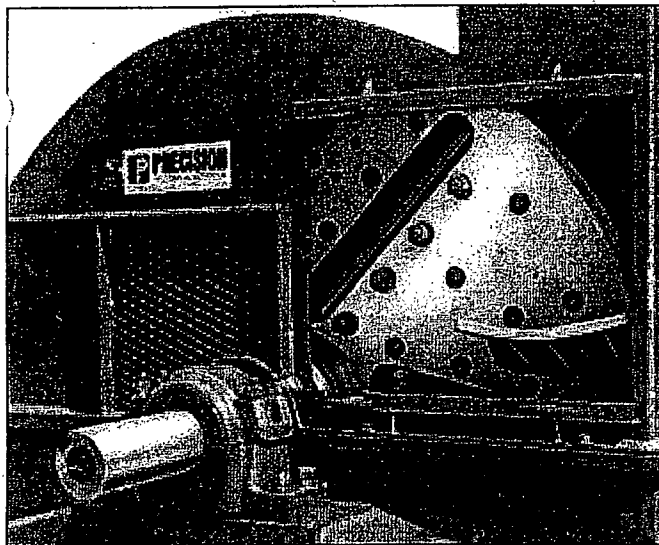
Sectional view of knife clamping and anvil adjustment.

WARREN L

ITS REPUTATION AS "THE BEST CHIPPER IN THE WORLD"



Knives are easily changed through large access door in front section. Easily removed clamp type knives are standard.



Rear section opening is opposite front opening with easy access for knife changing. Fan blades are easily inspected or changed.

OPTIONS FOR 38", 48", 58" and 66" PRECISION CHIPPERS



Dissipator for rear discharge

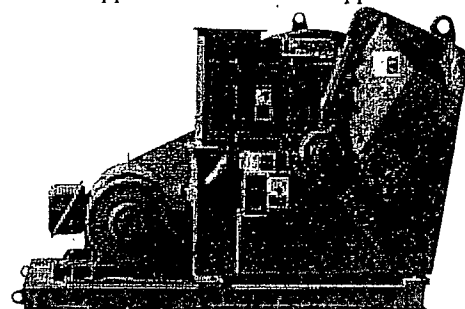
The circular movements of the chips greatly reduce the force of the chip flow and chips are spread more evenly. Available for all four chipper sizes. Cyclone sizes from 4' to 8' in diameter.

OPTIONS

- Horizontal Feed
- Drop or Gravity Feed
- Bottom Discharge
- Top Discharge
- Rear Discharge
- Cardbreakers
- Rechipper Spout
- Helical Wear Plates
- Wear Liners
- Carbide Anvils
- Heavy Duty Chipper
- Two piece hood
- One piece hood
- Left Hand or Right Hand
- 360° Swivel Discharge
- Belt Driven
- Direct Driven
- Dissipator for Rear Discharge Chippers
- Hard Surfaced Counter Knives

Chipper Disc Thickness

38" Chipper-3 1/2"	58" Chipper-5" or 6"
48" Chipper-4" or 5"	66" Chipper-5" or 6"



- Chipper with diesel engine on a common base
- Chipper with electric motor on a common base as shown above

WARREN M

Morbark Bark Bulletin



PARTS Bulletin No. 8

August 1, 1979

Morbark Dealers & Morbark Parts Departments

Mike Morey -- Chipper Dept.

48" & 58" TOP DISCHARGE CHIPPERS

To facilitate better throwing power on the 48" and 58" top discharge chippers, Morbark has designed a new style box-type fan blade that uses the wear plate bolts on each side of the pocket (similar to the maxi-type fan blades).

Previously, the same fan blade fit 48" and 58" fan blades, but with the newly designed style, this will not be the case.

The straight, paddle-type fan blades we have been installing on top discharge chippers will no longer be used or available as of this date. The Chip-Pac chippers will still be using the bent paddle fan blades.

	<u>OBSOLETE FAN BLADE</u>	<u>NEW FAN BLADE</u>
48" top discharge chippers	40194-480 (480A0038G02)	30160-480 (480A0325H00)
58" top discharge chippers	40194-480 (480A0038G02)	30160-580 (580A0325H00)

Morbark-000098
Holland v. Morbark, et al.



MORBARK INDUSTRIES, INC.

WINN, MICHIGAN 48896 • 517-866-2381 • TELEX 227 443 (MORBARK WINN)

01070

Morbark Bark Bulletin



PARTS BULLETIN No. 31

DATE: SEPTEMBER 22, 1980
TO: MORBARK DEALERS AND
PARTS DEPARTMENTS
FROM: CHIPPER DEPARTMENT - MIKE MOREY
SUBJECT: 48" & 58" CHIPPER FAN BLADES

There are two (2) style fan blades being used on 48" & 58" chippers; paddle-type & box-type. Paddle-type fan blades are the same whether for 48" or 58" chippers, however, the box-type are different between 48" & 58" chippers. The chip pac chippers, for production, use paddle-type. The stationary chippers, top discharge, use the box-type because of the improved throwing power that these fan blades offer. Although we are setting up the chippers in this way from our plant, paddle-type can be installed on a disc that had box-type and vice versa. The box-type are bolted on one side with wear plate bolts and the other side with the knife clamp studs.

Fan Blades Can Be Ordered As Follows:

48" CHIPPERS

Paddle-Type	40157-480
Box-Type	30160-480

58" CHIPPERS

Paddle-Type	40157-480
Box-Type	30160-580

Morbark-000100
Holland v. Morbark, et al.



MORBARK INDUSTRIES, INC.

WINN, MICHIGAN 48896 • 517-866-2381 • TELEX 227 443 (MORBARK WINN)

01071



MORBARK BARK BULLETIN

Service Bulletin No. 201

May 21, 2003

Subject: Lock-Out/Tag-Out Requirements

Equipment Affected: All Morbark Equipment

Lock-Out/Tag-Out is a federal OSHA regulation (Reg. 29CFR 1910.147) which requires that employees lock-out before attempting to perform any maintenance on equipment of any kind.

It is the responsibility of all owners and employers to instruct and require its employees to follow these procedures. To learn more of what is required of you, go to www.OSHA.gov.

We are aware of accidents involving Morbark equipment that would have been prevented had these regulations been followed by the people performing the maintenance.

This Bark Bulletin is being sent to you as a follow-up reminder of the importance of following proper lock-out procedures and as a reminder of your responsibility to train and require your employees to follow them.

Morbark has a duty to advise the users of its equipment to follow safe practices and all OSHA regulations regarding job site safety. We include the "lock-out procedure" literature (see attached) in our manuals as part of that effort. We also place decals on the machine to remind people to lock out.

As a Morbark equipment owner, we are sending you additional decals to be placed on your Morbark equipment, along with a diagram of exactly where they should be placed. Please install these decals immediately.

Safety is everyone's responsibility. In keeping with our desire to provide you with safe, reliable quality products, we will always be looking for ways to improve. We cannot force the owners of our equipment to follow proper lock-out procedures, but we strongly recommend it. It could save a life.

Morbark, Inc. • P.O. Box 1000 • 8507 S. Winn Road • Winn, MI 48896
P: 800.233.6065 • F: 989.866.2280 • E: inquire@morbark.com
www.morbark.com

Morbark-000106
Holland v. Morbark, et al.

01072

LOCKOUT PROCEDURES

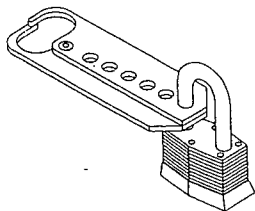
1. Lockout procedures should be used at all times when maintenance is being done or the machine is being shut down. This will prevent accidents and prevent the machine from accidentally being started by other crew members or passersby.
2. The engine, electrical panel or other power source of any equipment to be maintained, adjusted or repaired shall be locked out by each employee doing the work in order to prevent unintended motion, startup or release of stored energy which could cause personal injury.
3. Safety locks are for the personal protection of the employees and are only to be used for locking out equipment. Each and every person should have their own lock and key and be trained on proper lockout procedures in accordance with OSHA requirements.
4. Equipment with main disconnect switches shall be turned off and locked in the off position only after the electrical power is shut off at the point of operation control. Failure to follow this procedure may cause arcing, and possibly an explosion.
5. After locking out the power source, the employee shall try to start the equipment, machine, or process controls to ensure no unintended motion will occur, or test the equipment and machine by use of appropriate test equipment to determine that the energy isolation has been effective.
6. When two or more employees work on the same equipment, each person is responsible for attaching his/her own lock. There should be a separate lock for every person working on the machine. Safety locks and adapters are to be fixed on levers, switches, valves, etc., in the non-operative (off) position.
7. Upon completion of the work, each employee will remove his/her lock, rendering the machine operable when the last lock is removed.
8. The employee responsible for removing the last lock, before doing so, shall assure that all guards have been replaced, the equipment, machine or process is cleared for operation, and appropriate personnel notified that power is being restored.



DANGER



Lock out procedures are to be followed by each and every person performing any type of maintenance and whenever the machine is not in operation. Failure to lock out while performing maintenance could result in serious personal injury or death!



Morbark equipment is designed to be quickly and easily locked out whenever maintenance or repairs are performed. Train your crew to lock out every time!

Morbark-000107
Holland v. Morbark, et al.



US006036125A

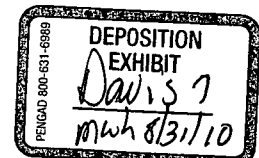
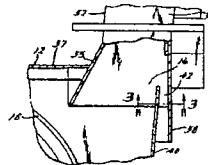
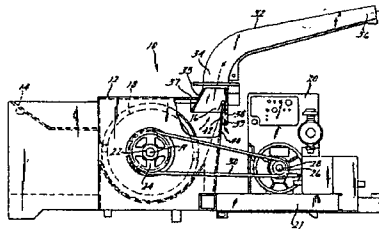
United States Patent [19][11] **Patent Number:** **6,036,125****Morey et al.**[45] **Date of Patent:** **Mar. 14, 2000**[54] **WOOD CHIPPER**[75] Inventors: **Michael Boyd Morey**, Shepherd;
Michael John Peterman, Alma; **Brian**
Lee Bloomquist, St. Louis, all of Mich.[73] Assignee: **Tramor, Inc.**, Remus, Mich.[21] Appl. No.: **09/219,729**[22] Filed: **Dec. 22, 1998**[51] Int. Cl.⁷ **B02C 18/22**[52] U.S. Cl. **241/47; 241/101.76; 241/186.3**[58] Field of Search **241/101.78, 47,**
241/186.3, 189.1, 186.2, 101.76; 144/172,
174[56] **References Cited****U.S. PATENT DOCUMENTS**

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Primary Examiner—John M. Husar**Attorney, Agent, or Firm**—Bliss McGlynn, P.C.[57] **ABSTRACT**

A wood chipper includes a housing having an inlet and an outlet and a cutting assembly disposed within the housing between the inlet and the outlet and a chute disposed about and overhanging the outlet to form a space therebetween.

11 Claims, 2 Drawing Sheets

01074

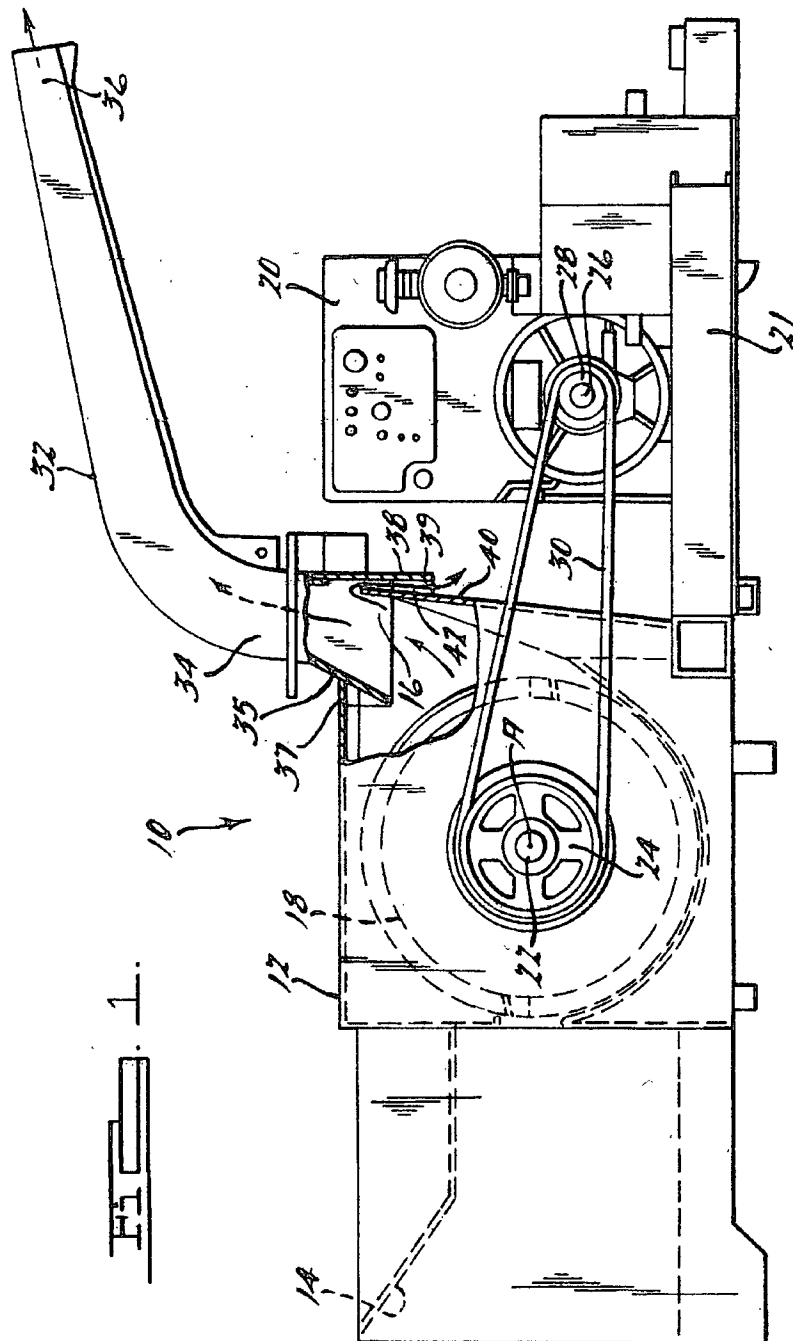


FIG. 1.

01075

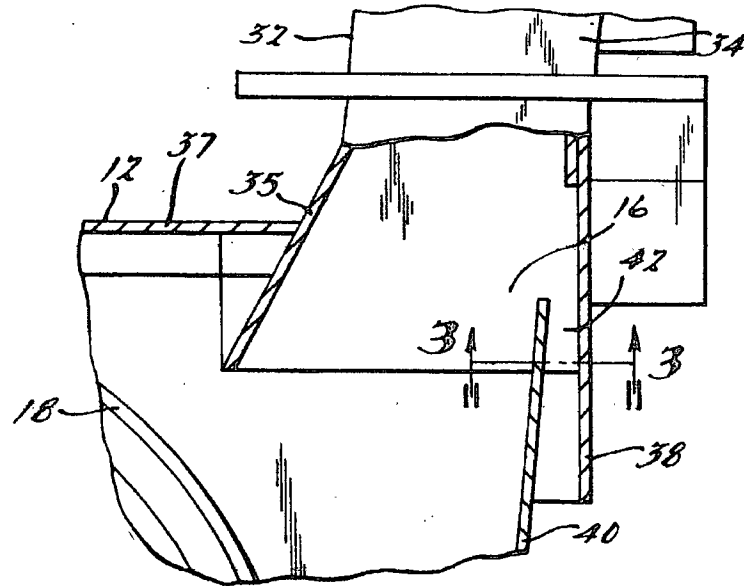


FIG. 2.

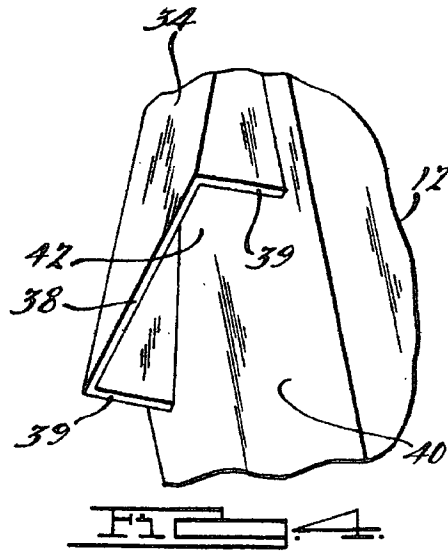
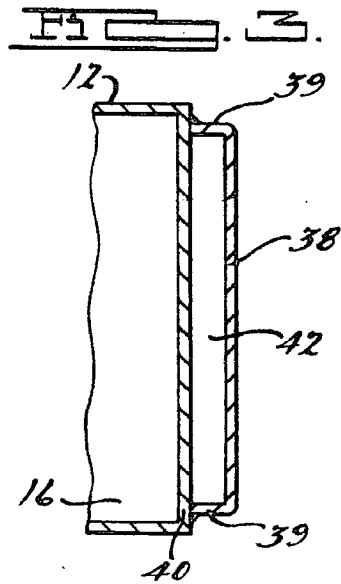


FIG. 4.

1

WOOD CHIPPER

BACKGROUND OF THE INVENTION

1. Field of the Invention

✓ The present invention relates generally to wood chippers.

2. Description of the Related Art

It is known to provide a wood chipper for chipping wood such as brush, branches and the like to produce wood chips. One type of wood chipper known in the art includes a drum assembly having a rotatable drum with a knife or blade for chipping the wood entering the wood chipper and reducing it to wood chips. Typically, the wood chipper includes an outlet or discharge chute for allowing the wood chips from the drum assembly to exit the wood chipper. The chute is flush with an outlet of a housing for the drum assembly and extends upwardly and forwardly to discharge the wood chips past a hitch of the wood chipper. The chute may have a trap door, which is hinged to the chute to allow an operator to unplug the chute.

Although this type of wood chipper has worked well, it suffers from the disadvantage that the chute can become plugged under normal or extreme operating conditions. This may also result in the drum assembly becoming plugged with wood chips. Another disadvantage of the wood chipper is that, when the chute becomes plugged, it takes several hours to unplug the chute and/or drum assembly and resume operation of the wood chipper. Yet another disadvantage of the wood chipper is that dust may blow back on an operator infeeding wood into an inlet of the wood chipper.

SUMMARY OF THE INVENTION

Accordingly, the present invention is a wood chipper including a housing having an inlet and an outlet and a cutting assembly disposed within the housing between the inlet and the outlet and a chute disposed about and overhanging the outlet to form a space therebetween.

One advantage of the present invention is that a new and improved wood chipper is provided. Another advantage of the present invention is that the wood chipper is provided with a chute, which overhangs an outlet of a housing for a cutting assembly such as a drum assembly to prevent plugging of the wood chipper. Yet another advantage of the present invention is that the wood chipper has a chute overhanging an outlet of the cutting assembly to let air flow out of the chute and to prevent plugging of the chute and cutting assembly on in-feeding wood into the wood chipper. Still another advantage of the present invention is that the wood chipper has a chute overhanging an outlet of a cutting assembly to increase chipping power of the wood chipper. A further advantage of the present invention is that the wood chipper has a chute overhanging an outlet of a cutting assembly to prevent blow back of dust on in-feeding wood into the wood chipper.

Other features and advantages of the present invention will be readily appreciated as the same becomes better understood after reading the subsequent description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a fragmentary elevational view of a wood chipper, according to the present invention.

FIG. 2 is an enlarged fragmentary elevational view of a portion of the wood chipper of FIG. 1.

FIG. 3 is a sectional view taken along line 3—3 of FIG. 2.

2

FIG. 4 is a perspective view of a portion of the wood chipper of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT(S)

Referring now to the drawings and in particular FIGS. 1 and 2, one embodiment of a wood chipper 10, according to the present invention, is shown. The wood chipper 10 includes a housing 12 having an inlet 14 and an outlet 16. The wood chipper 10 also includes a cutting assembly such as a drum assembly 18 disposed within the housing 12 between the inlet 14 and outlet 16 for rotation about a horizontal axis A. The drum assembly 18 includes a rotatable drum having a plurality of pockets disposed circumferentially thereabout and a plurality of blades operatively connected to the drum with one of the blades partially overlapping one of the pockets. The drum assembly 18 is of the type disclosed in copending application, Ser. No. 09/218,491, filed Dec. 22, 1998, entitled "Drum Assembly For A Wood Chipper", the disclosure of which is hereby incorporated by reference.

The wood chipper 10 includes an engine 20 mounted on a frame 21 and coupled to the drum assembly 18 by suitable means to cause rotation of the drum assembly 18 about its axis A. The wood chipper 10 includes a rotatable shaft 22 operatively connected to the drum of the drum assembly 18 and a pulley 24 disposed about one end of the shaft 22. The shaft 22 is rotatably mounted to the housing 12 by suitable means such as bearings (not shown). The wood chipper 10 also includes a rotatable shaft 26 operatively connected to the engine 20 and a pulley 28 disposed about the shaft 26. The wood chipper 10 further includes a belt 30 disposed over and interconnecting the pulleys 24 and 28. It should be appreciated that the engine 20 rotates the shaft 26 and pulley 28, in turn, rotating the belt 30, pulley 24 and shaft 22, in turn, rotating the drum assembly 18.

Referring to FIGS. 1 through 4, the wood chipper 10 includes an outlet or discharge chute 32 disposed about the outlet 16 and operatively connected to the housing 12. The discharge chute 32 is generally tubular and may be circular or rectangular in cross-sectional shape. The discharge chute 32 has a lower end 34 and an upper end 36 extending upwardly and forwardly. The discharge chute 32 is made of a rigid material such as metal. It should be appreciated that the discharge chute 32 may have any suitable cross-sectional shape.

The lower end 34 of the discharge chute 32 is of a size proportional to the outlet 16 of the housing 12. The lower end 34 of the discharge chute 32 has a rear side wall 35 disposed partially within the outlet 16 and abutting a top wall 37 of the housing 12. Preferably, only one side, preferably a front side wall 38, of the lower end 34 overhangs a front wall 40 of the outlet 16 to form a gap or space 42 therebetween of a predetermined size, preferably approximately four inches. The front side wall 38 has side flanges 39 generally perpendicular thereto secured to the housing 12 by suitable means such as welding or bolting. The front side wall 38 of the lower end 34 is orientated generally vertical to the front wall 40 of the outlet 16 which extends upwardly at an angle. As a result, the outlet 16 communicates with the space 42 and allows larger wood chips which are too heavy to travel up the discharge chute 32 to fall in the space 42 therebetween and exit the wood chipper 10. The space 42 also allows air to flow out of the lower end 34 of the discharge chute 32 to prevent plugging of the drum assembly 18. It should be appreciated that the

3

lower end 34 may have any suitable size to allow airflow out the upper end 36 and allow wood chips to fall out.

In operation of the wood chipper 10, the engine 20 rotates the drum assembly 18. Wood is fed into the inlet 14 of the housing 12 by an operator and is contacted by the drum assembly 18. As the drum assembly 18 rotates and contacts the wood, the wood is cut or chipped into wood chips, which are typically expelled axially. The drum assembly 18 includes fans (not shown) to help create airflow as indicated by the arrows to move the wood chips through the outlet 16 of the housing 12. The space 12 allows airflow out the bottom of the lower end 34 of the discharge chute 32. The wood chips are expelled out of the upper end 36 of the discharge chute 32 and yet wood chips are allowed to fall out of the space 42 if the discharge chute 32 attempts to start plugging. It should be appreciated that the drum assembly 18 does not become plugged, however, the drum assembly 18 may be stalled under normal operating conditions.

The present invention has been described in an illustrative manner. It is to be understood that the terminology, which has been used, is intended to be in the nature of words of description rather than of limitation.

Many modifications and variations of the present invention are possible in light of the above teachings. Therefore, within the scope of the appended claims, the present invention may be practiced other than as specifically described.

What is claimed is:

1. A wood chipper, comprising:
 - a housing having an inlet and an outlet, said housing having a first wall forming a portion of said outlet;
 - a cutting assembly disposed within said housing between said inlet and said outlet; and
 - a chute having a lower end disposed about said outlet with at least one second wall spaced from said first wall and overhanging said outlet to form a space of a predetermined size between said first wall and said at least one second wall communicating with said outlet.
2. A wood chipper as set forth in claim 1 wherein said first wall extends upwardly at an angle.
3. A wood chipper as set forth in claim 2 wherein said at least one second wall is orientated generally vertically to said first wall.

4

4. A wood chipper as set forth in claim 3 wherein said at least one second wall has flanges extending generally perpendicular thereto.

5. A wood chipper as set forth in claim 1 wherein said space is circular or rectangular in cross-sectional shape.

6. A wood chipper as set forth in claim 1 wherein said predetermined size of said space is approximately four inches in width between said at least one second wall and said first wall.

7. A wood chipper comprising:

- a housing having an inlet and an outlet, said housing having a front wall forming a portion of said outlet;
- a drum assembly disposed within said housing between said inlet and said outlet and rotatable about a horizontal axis; and

- a chute having a lower end disposed about said outlet with a front side wall spaced from said front wall and overhanging said outlet to form a space of a predetermined size between said front wall and said front side wall communicating with said outlet.

8. A wood chipper as set forth in claim 7 wherein said front wall extends upwardly at an angle.

9. A wood chipper as set forth in claim 8 wherein said front side wall is orientated generally vertically to said front wall.

10. A wood chipper as set forth in claim 9 wherein said front side wall has flanges extending generally perpendicular thereto.

11. A wood chipper comprising:

- a housing having an inlet and an outlet, said housing having a front wall extending upwardly at an angle and forming a portion of said outlet;
- a drum assembly disposed within said housing between said inlet and said outlet and rotatable about a horizontal axis; and
- a discharge chute disposed about said outlet and having a front side wall spaced from said front wall and orientated generally vertically to said front wall and overhanging said front wall of said housing to form a space of a predetermined size between said front wall and said front side wall communicating with said outlet.

* * * * *

STATE OF SOUTH CAROLINA	)	IN THE COURT OF COMMON PLEAS
	)	
COUNTY OF CLARENDON	)	
	)	
Andreal Holland by his	)	
Guardian Ad Litem	)	
Peggy Knox,	)	
	)	C/A NO. 2008-CP-14-00461
Plaintiff,	)	
	)	
vs.	)	
	)	
Morbark, Inc., Precision	)	
Husky Corporation, A & K	)	
Mulch, LLC, and Watford	)	
Industry, Inc.,	)	
	)	
Defendants..	)	

DEPOSITION OF

ANDREAL HOLLAND

Friday, January 14, 2011
10:03 a.m.-3:30 p.m.

The deposition of ANDREAL HOLLAND, taken on behalf of the Defendant at the offices of Turner Padgett Graham & Laney, P.A., 1901 Main Street, 17th Floor, Bank of America Building, Columbia, South Carolina, on the 14th day of January, 2011, before Lyn Allen, Court Reporter and Notary Public in and for the State of South Carolina, pursuant to Notice of Deposition and/or agreement of counsel.

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Columbia, South Carolina 29211

(803) 256-4500

01079

1 **ANDREAL HOLLAND**, being duly sworn, deposes and testifies as
2 follows:

3 **MR. HOLLAND - EXAMINATION BY MR. OTT:**

4 Q: Tell us your full name please.

5 A: My name is Andreal Holland.

6 Q: Mr. Holland, my name again is Curtis Ott. And we're
7 here today to do what's called a deposition. Do you
8 know what a deposition is?

9 A: So-so.

10 Q: Okay. What is your understanding of a deposition?

11 A: Where y'all talk to me.

12 Q: That's as good an explanation as we need. I'm going to
13 ask you some questions today. And your job simply is
14 to answer the questions that I ask you. Do you
15 understand that?

16 A: Yes, sir.

17 Q: All right. Have you ever given a deposition or done
18 this before?

19 A: Yes, sir.

20 Q: How many times?

21 A: One I believe if I'm not mistaken.

22 Q: And what was that deposition about?

23 A: I don't remember.

24 Q: Did it have to do with this same accident that you had
25 at A&K Mulch back on June 1 of 2006?

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01080

1 Q: Okay. Have you taken any other medications in the last
2 two weeks?

3 A: The last time I took it was I think the last week or
4 the week before last if I'm not mistaken.

5 Q: Are you taking any medications on a daily basis as we
6 sit here today?

7 A: No, sir.

8 Q: Can you think of any reason, Mr. Holland, why you would
9 not be able to understand the questions that I'm asking
10 you today?

11 A: Because I had a brain injury and I get stuff mixed up
12 and miscomprehend things.

13 Q: And thank you for bringing that out. And we'll
14 certainly go through slowly to make sure that you
15 understand what I'm asking of you before you give your
16 questions. Okay?

17 A: (Nods head affirmatively.)

18 Q: And you do need to give verbal responses.

19 A: Yes, sir.

20 Q: So please answer out loud. Other than your difficulty
21 with understanding things because of your injury, can
22 you think of any other reason why you would have any
23 trouble answering my questions today?

24 A: I don't think before I talk.

25 Q: Okay. Well, I'm going to ask you to think before you

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01081

1 talk; okay? Anything else that you can think of why
 2 you might have any trouble answering my questions
 3 today?
 4 A: I have bad nerves, man. They get popped up very quick.
 5 Q: Okay. All right. Did you do anything to prepare for
 6 your deposition today?
 7 A: As in?
 8 Q: Did you look at any photographs?
 9 A: Yeah, I looked at some.
 10 Q: What photographs did you look at?
 11 A: Of some machines.
 12 Q: What kind of machines?
 13 A: A chipper.
 14 Q: And who showed you those photographs?
 15 A: Mr. John.
 16 Q: Mr. Jonas?
 17 A: Jonas. Yes, sir?
 18 Q: Okay. Did you look at any other photographs?
 19 A: No, sir.
 20 Q: Did you look at any other pieces of paper or documents?
 21 A: Yes, sir.
 22 Q: What did you look at?
 23 A: The warnings on the machines and stuff.
 24 Q: Are you talking about warnings on the machines?
 25 A: (Nods head affirmatively.)

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01082

1 A: Yes, sir. Well, it's in my name but she's got the kids
2 over there and stuff. And like my mom said by me, by
3 my injury and stuff she want to keep account of me and
4 see, make sure I'm doing right to right and not doing
5 wrong. And then that's a break from the kids a little
6 bit too because a lot of noise is real hectic.

7 Q: On an average week how many nights do you spend on
8 Dickson Street and how many nights do you spend at your
9 mom's house?

10 A: Four, three, sometimes I'll switch up. Three nights or
11 whatever. If she got off, whatever days she have off,
12 that's when I go to my mom's house. She might have two
13 days straight or she might have a day. Then I might,
14 you know, the day she have off and then I'll come back
15 the next day. Then she might have the whole weekend
16 off. And then I'll go to my mom's house for the
17 weekend.

18 Q: Okay.

19 A: I might carry one or two boys with me. Either I'll
20 carry one of the kids with me over to her house.

21 Q: What's your mom's address?

22 A: 726 Branchview Drive, Manning, South Carolina, 29102.

23 Q: How long has your mom had that house?

24 A: For 30 years.

25 Q: Did you grow up in that house?

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01083

- 1 A: No, sir.
- 2 Q: -- having to do with this accident?
- 3 A: No, sir.
- 4 Q: Did you ever serve in the military?
- 5 A: No, sir.
- 6 Q: Do you attend church?
- 7 A: Yes, sir.
- 8 Q: Where?
- 9 A: Calvary Baptist Church in Pinewood, South Carolina.
- 10 Q: How long have you been going there?
- 11 A: My life.
- 12 Q: Do you do any work with the church?
- 13 A: Yes, sir.
- 14 Q: Tell me about that.
- 15 A: My mom is over the food bank at church. And she needs
- 16 a young man to help her with the loading the van and
- 17 unloading the van. And she got me and my cousin to
- 18 help out since, you know, I can't work no more, I don't
- 19 do nothing but stay home seven days a week. And I be
- 20 looking forward to go to work with her on Fridays.
- 21 Q: Where do you go to work?
- 22 A: From Pinewood to Columbia, from Columbia back to
- 23 Pinewood.
- 24 Q: Do you come up here to the Harvest Hope Food Bank?
- 25 A: Yes, sir.

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01084

1 Q: How long have you been working with the Harvest Hope
2 Food Bank and your mom?
3 A: Since my, if I'm not mistaken I think since my
4 accident.
5 Q: So you do that most Fridays?
6 A: Yes, sir.
7 Q: You said y'all load and unload the van?
8 A: Yes, sir.
9 Q: What are you putting in and out? Food?
10 A: Boxes. Yes, sir. Boxes and bread and fresh
11 vegetables.
12 Q: How much do those boxes weigh?
13 A: Different sizes. The most it probably weighs like 20
14 pounds, between 15 and 20 pounds.
15 Q: Are you able physically to pick up boxes and carry
16 them?
17 A: Yeah. But to a point where once my hands start hurting
18 or whatever, I left my brace at the house rushing this
19 morning. And I, you know, when I get tired I just
20 completely stop. I don't finish the job at all. I get
21 my cousin to finish it or either Mom will be like,
22 Dreal, take a break or rest or whatever. And I can
23 continue. But by the time I take a break and rest, my
24 mom and Ms. Tiny is unloading the van, heavy boxes and
25 stuff. And I feel disrespectful as in letting them do

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1 two shifts down at nighttime. And he told me, you
2 know, let you go too due to your, you know, by me
3 failing that. They wanted me back but by them closing
4 down there was no need for me to come back. So that's
5 when I went to A&K Mulch if I'm not mistaken.

6 Q: Do you have a family or regular doctor that you see
7 now, Mr. Holland?

8 A: No, sir.

9 Q: Do you know who your pediatrician was when you were
10 growing up?

11 A: No, sir.

12 Q: Have you ever been hospitalized before this accident?

13 A: No, sir.

14 Q: Were you ever diagnosed with any long-term health
15 problems before your accident?

16 A: No, sir.

17 Q: Were you taking any medications back at the time of
18 your accident?

19 A: Say that again.

20 Q: Were you taking any medications back at the time of
21 your accident?

22 A: When my accident occur?

23 Q: Before it happened.

24 A: Oh, no, sir.

25 Q: How far did you go in school?

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- 1 A: I did twelve years of high school. I failed the
2 reading part of the exit exam which stopped me from
3 getting my high school diploma. I went after high
4 school about four or five times to receive my high
5 school diploma. They had read it to me over and over
6 and over and I still had failed it.
- 7 Q: What was the last year that you attended high school?
- 8 A: '95.
- 9 Q: Where did you go to elementary school? Where did you
10 go to elementary school?
- 11 A: Alcolu, South Carolina. Alcolu Elementary.
- 12 Q: Did you have any problems during elementary school?
- 13 A: Yeah. I had problems. I had math problems and reading
14 problems.
- 15 Q: Did you ever get held back a grade?
- 16 A: Yes, sir.
- 17 Q: How many times?
- 18 A: Twice.
- 19 Q: What grades?
- 20 A: First and fourth.
- 21 Q: Have you ever been diagnosed with any learning
22 difficulties or disabilities?
- 23 A: Well, I felt like I had a problem with that. And I
24 never followed back up to get a test done for it.
- 25 Q: Where did you attend middle school?

- 1 A: Manning Middle School.
- 2 Q: Do you remember any particular problems that you might
- 3 have had during middle school?
- 4 A: Just my reading problems.
- 5 Q: What kind of grades did you get in high school?
- 6 A: Well, I had low classes. My grades, the highest grade
- 7 I ever had was a B.
- 8 Q: Do you know what's called your grade point average,
- 9 what that was?
- 10 A: No, sir.
- 11 Q: Do you know what your class rank was at Manning High
- 12 School?
- 13 A: No, sir.
- 14 Q: Did you participate in any school activities?
- 15 A: In junior high, in middle school I did. I played
- 16 football. In high school, all I did was work in the
- 17 fields during the summertime and helped take care of my
- 18 little sisters.
- 19 Q: When you say worked in the fields, what were you doing?
- 20 A: Cropping tobacco, picking sweet potatoes. Not picking
- 21 sweet potatoes. Picking up sweet potatoes and white
- 22 potatoes. And I did tomatoes, cucumbers, all the
- 23 vegetables you can name.
- 24 Q: Why did you stop playing football?
- 25 A: Because my grades wasn't good enough for me to continue

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1 playing football.

2 Q: Did you do any other activities? Music? Any clubs or

3 anything like that --

4 A: No, sir.

5 Q: -- besides football?

6 A: No, sir.

7 Q: And how many times did you go try to get your GED?

8 A: I never tried to get my GED. I tried to get my high

9 school diploma. After high school I did like three

10 years trying to get it. Twice, I did it twice every

11 year.

12 Q: So five or six times?

13 A: Yes, sir. Then I got tired doing that. So I got a

14 job. Got out to start working again. Then I tried

15 while I was working trying to get my high school

16 diploma. And I didn't succeed.

17 Q: Did your brothers and sisters all graduate from Manning

18 High School?

19 A: Yes, sir.

20 Q: Did any of them have any similar problems with reading

21 or anything like that in high school?

22 A: I want to say my sister Kayla. But she received her

23 high school diploma after high school.

24 Q: Anyone else?

25 A: No, sir.

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1 Q: If Dr. Fulton's the one are you scheduled to see him
2 again?
3 A: Am I scheduled to see him again?
4 Q: Right.
5 A: No, sir.
6 Q: Do you remember the last time you saw him?
7 A: The last time he did my hand. I need a break..
8
9 (Break - 11:27 a.m.-11:37 a.m.)
10 Q: Are you ready to go back on, Mr. Holland?
11 A: Yes, sir.
12 Q: All right. We were talking before that break about the
13 doctors that you intend to see going forward. Have we
14 gone over all the doctor's appointments and all the
15 doctors you might go see in the future?
16 A: That I know of, sir.
17 Q: What areas of your body were injured in the accident?
18 A: My face basically. And my left side, my shoulder.
19 Q: Are you working now?
20 A: No, sir.
21 Q: When was the last time you had a job?
22 A: 2006.
23 Q: Was that with A&K Mulch?
24 A: Yes, sir.
25 Q: Have you worked at all since your accident?
A: No, sir.

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01090

- 1 Q: What disability did they find for you to have so that
2 you are getting money?
- 3 A: My mom know all about that.
- 4 Q: Okay. What is preventing you from working?
- 5 A: My injury.
- 6 Q: Meaning what?
- 7 A: I had a brain injury.
- 8 Q: Are you physically able to work?
- 9 A: No, sir.
- 10 Q: You don't think you're strong enough to do some type of
11 work?
- 12 A: No, sir.
- 13 Q: Why not?
- 14 A: Because of my patience and my, like I told you earlier,
15 you know, when I get tired I'm going to actually stop.
16 And you can't be on the job and say you're going to
17 make a stop your work and you start up when you want to
18 start up. If you're on production, you got to do your
19 production instead of stopping. I don't think I can do
20 a production job at all. And that's all, that I know
21 of that's the only kind of jobs out these days is
22 production jobs.
- 23 Q: Can you walk without any problems?
- 24 A: I got problem with walking. I got a limp.
- 25 Q: Did you have a limp before the accident?

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1 to. So after I had left, I been with him more than two
2 times if I'm not mistaken.

3 Q: Do you remember what your next job after Maxi Hicks
4 was?

5 A: I left Maxi Hicks and went to, yeah, A&K Mulch.

6 Q: When did you start working at A&K Mulch?

7 A: 2004.

8 Q: Do you remember what month?

9 A: I want to say April or May.

10 Q: Did you work there continuously from April 2004 up
11 until the date of your accident?

12 A: Yes, sir.

13 Q: Who hired you?

14 A: Jimmy Witherspoon.

15 Q: What were you hired to do for A&K Mulch?

16 A: I was a cut off guy.

17 Q: What does the cut off guy do?

18 A: Okay. My Uncle Dave, he starts the day off, he's the
19 one that runs the main carrier that cuts the log. And
20 whatever he cuts off I could either throw it in the
21 trash or send it to produce to get it produced. I send
22 it to the shipping dock.

23 Q: What's your Uncle Dave's last name?

24 A: Wright.

25 Q: Is he your --

1 A: Yes, sir.

2 Q: He's your father's brother?

3 A: No. Father's cousin. I call him Uncle Dave. That's

4 what the neighborhood guys call him. He looks up to

5 everybody. So we call him Uncle Dave but he's also my

6 father's cousin.

7 Q: You're related to him?

8 A: Yes, sir.

9 Q: Did he get you the job?

10 A: Yes, sir.

11 Q: Who was your first supervisor?

12 A: At A&K Mulch?

13 Q: Right.

14 A: John Witherspoon.

15 Q: Did your job duties ever change from when you were

16 hired up until the date of your accident?

17 A: Job change as in?

18 Q: Well, you were the cut off guy. Were you the cut off

19 guy the whole time?

20 A: Yeah. I was the cut off guy until I got hurt. Then

21 they offered me another job I would say about three

22 months after I started working there since me and Uncle

23 Dave ride together. And I had to wait for him to, I've

24 been on his machine, change his blade and stuff on his

25 machine. Then he will go change the chipper. I'm

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01093

1 right there with him doing everything. Then he showed
 2 me how to change the chipper. And he asked Mr. Jimmy
 3 Witherspoon can I change the chipper, can he teach me
 4 to change the chipper. And that's what he did. He
 5 teach me.

6 Q: So your Uncle Dave, David Wright was the one who taught
 7 you and trained you how to change the chipper blades?

8 A: Yes, sir.

9 Q: And the way that happened was he was getting off work
 10 later than you because he had that last job
 11 responsibility?

12 A: Yes, sir.

13 Q: And so since you had to stay around to catch a ride it
 14 just made sense if you could get a little bit more time
 15 working each day?

16 A: Well, a little bit more money.

17 Q: Okay. And you said before you got hurt did you ever
 18 get hurt at A&K Mulch other than the accident in June?

19 A: Huh-uh (negative response).

20 Q: In 2006?

21 A: Huh-uh (negative response).

22 Q: Is that a no?

23 A: Oh, no, sir. No, sir.

24 Q: So am I right that you started as a cut off guy for the
 25 first three months working there. And then that would

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1 take us to what, June or July of 2004?

2 A: Yes, sir.

3 Q: And then from that point on you started helping out
4 changing the blades on the chippers?

5 A: Yes, sir.

6 Q: And from that point on did you work on the chipper
7 machines every day?

8 A: Yes, sir.

9 Q: And did you do anything with the chipper machines other
10 than change the cutting knives?

11 A: No, sir.

12 Q: Now I understand that there was a 48-inch machine and
13 then a 58-inch machine?

14 A: Yes, sir.

15 Q: Okay. Do you remember that when you started changing
16 knives on the chipper it would have been on the 48-inch
17 machine?

18 A: Yes, sir.

19 Q: Okay. Do you remember when the 58-inch machine was
20 brought in to replace the 48-inch machine?

21 A: I don't remember what year that was.

22 Q: Do you know how much longer before your accident?

23 A: Say that again.

24 Q: Do you know how long it was before your accident that
25 the machines were switched?

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01095

- 1 A: Oh, when they switched them over?
- 2 Q: Right.
- 3 A: Oh, I was told that, you know, he, I seen the machines
4 setting out front of the mill or whatever up front.
5 And he, I ain't know when he had put the new machine in
6 until the foreman told me that they had hooked it up
7 about a weekend ago, the weekend because we started off
8 that Monday on a new machine that Monday. And then
9 that's when the foreman, we had the meeting that
10 morning saying that they had changed the chipper and
11 stuff, a bigger chipper. And I just seen, it been the
12 same color so I didn't know whether they had changed it
13 or not. It been the same color. It looked the same.
- 14 Q: So the 48-inch machine and the 58-inch machine looked
15 very similar to you?
- 16 A: Well, this how I feel. When I first started there it
17 was a green one back there where I started to and then
18 he built another mill. Then he took the green one from
19 back there and put at the small mill. Then he had
20 another one back there. And then later on down the
21 line he see that he establish buying him another
22 chipper. And then when he add that one on to it, it
23 still looked the same to me, the same color orange.
- 24 Q: Okay.
- 25 A: So I didn't know whether he switched it out or what.

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01096

1 He just said he put a new one in there. And I just
 2 said, wow, they all look the same to me. So I didn't
 3 know what the inches of the blade was or what.
 4 Q: Okay. Do you know what size chipper machine you were
 5 working on on the day of your accident?
 6 A: No, sir.
 7 Q: If I tell you it was the 58-inch machine, is it your
 8 testimony that the 58-inch machine looked like the
 9 machine that you worked on before with the 48-inch
 10 machine?
 11 A: They're the same color. That's all I know of.
 12 Q: Did they look the same to you?
 13 A: Uh-huh (affirmative response).
 14 Q: The 48-inch and the 58-inch machine?
 15 A: Yes, sir.
 16 Q: Now, if the 58-inch machine was the one you were
 17 working on at the time of the accident, do you know how
 18 long it had been in place before your accident?
 19 A: So you say I got hurt on that 58-inch?
 20 Q: Yes, sir.
 21 A: I was told he had put that in a month before I got
 22 hurt.
 23 Q: Did you notice anything different about that 58-inch
 24 machine the first time you went over and looked at it?
 25 A: It had a lot of noise. You know how if something

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01097

1 whistled and you can hear it turn and you can hear it
2 vibrate a whole lot.

3 Q: It was noisier than the 48-inch?

4 A: Yes, sir.

5 Q: Was the noise coming from the wheel inside the machine?

6 A: Yes, sir.

7 Q: Were you trained by your uncle on the 48-inch machine?

8 A: Yes, sir.

9 Q: Who else worked on the 48-inch machine besides you?

10 A: Leroy Frierson.

11 Q: Did anyone else besides you change the cutting knives
12 on the 48-inch machine?

13 A: Leroy.

14 Q: Was it a two-person job?

15 A: That what they say.

16 Q: Well, when you changed the cutting knives did you
17 always have someone with you?

18 A: Yeah. Leroy.

19 Q: Now, why wasn't Uncle Dave, Dave Wright helping you
20 with that?

21 A: Because he was in the process of changing his blade, I
22 mean, his saw blade on his machine.

23 Q: Okay. So he changed the knives on a different machine?

24 A: No. He got, you know how a chain saw got a saw?

25 Q: Sure.

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01098

1 A: He got a long blade, a long saw, saw blade like a
2 circle. And he got big old wheels, a carrier that can
3 turn the power of that saw thing to cut the wood with.
4 He got to change, his lunchtime he changed it and time
5 to go home he'll change it.

6 Q: And that's why he would have to stay 30 minutes longer?

7 A: Yes, sir.

8 Q: So he was working on a different machine than the one
9 you got hurt on?

10 A: Yes, sir.

11 Q: I got you. Did he ever work on the 48-inch or 58-inch
12 wood chipper?

13 A: That's what they started off with before I got there.
14 Him and Mr. Leroy Frierson was the one that changed the
15 blade before I got there. Then he showed me a couple
16 of times. Then I had went back there with Leroy
17 because I wasn't changing them yet. So I went back
18 there with Leroy. And he got me to turn the wheel
19 while he take the knife and stuff out. So the only
20 thing I was doing while he was changing the knife was
21 turning the wheel. I don't touch nothing else. And
22 then when he took sick that's when, you know, Uncle
23 Dave told me, you know, well, Dreal, I think you got a
24 lot of experience, you know. I'm going to teach you
25 some more experience. And he started teaching me more

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61099

1 on the chipper because Mr. Frierson took sick. And
2 that's when I was changing it. And I think Mr. Woodrow
3 came, I forgot what year he came. I think he came the
4 same year I came or a couple of months after I did if
5 I'm not mistaken. Or either the next year.

6 Q: Mr. Woodrow Woods?

7 A: Yes, sir.

8 Q: So he started working at A&K about the same time you
9 did?

10 A: No. I was there before him. He probably came like a
11 couple of months after I did.

12 Q: And when he began at A&K, did he become your
13 supervisor?

14 A: Yes, sir.

15 Q: How long was Leroy Frierson out with his illness?

16 A: I can't recall.

17 Q: Was it more than a week?

18 A: I can't recall.

19 Q: But once you were trained to change the blades on the
20 chipper machines, then your uncle went to changing the
21 blades on his machine?

22 A: Yeah. He got, well, we got one blade. See, what it is
23 if he get done before I get done, then he'll come back
24 there where I'm at to finish helping me out so we can
25 hurry up. Now, if I get done before he get done, then,

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01100

1 you know, it's just different. I'll go up there and
2 help him out.

3 Q: Okay. But he was responsible for the blades on his
4 machine and you were responsible --

5 A: Yes, sir.

6 Q: -- for changing the blades on the chipper?

7 A: Yes, sir.

8 Q: Now, after the 58-inch was installed, you changed the
9 blade on that machine; right?

10 A: Yes, sir.

11 Q: Did you change the blades on it every day?

12 A: Yes, sir.

13 Q: Did it have its blades changed twice a day?

14 A: Yes, sir.

15 Q: And did you do it both at lunch and then at quitting
16 time?

17 A: Yes, sir.

18 Q: Every day?

19 A: Yes, sir.

20 Q: From the time it was installed up until your accident?

21 A: Yes, sir. See, some days Mr. Woodrow, the foreman, he
22 will come and say, well, Dreal, since the chipper is
23 cutting good at lunchtime, he said, no need to change
24 the blades since it's cutting good. So I don't change
25 them.

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01101

- 1 Q: But that was rare? Usually you would change them twice
2 a day?
- 3 A: Yes, sir. I would say about three times out of the
4 week I'm going to have to change them until time to go
5 home.
- 6 Q: Okay.
- 7 A: If the blade was sharp right.
- 8 Q: So if at lunchtime Mr. Woods would come up, there were
9 some times when you wouldn't change the blades at lunch
10 but you would always change them before you went home?
- 11 A: Yes, sir.
- 12 Q: Now, from the time that you started changing blades on
13 the 48-inch machine up until the 58-inch machine
14 replaced the 48-inch machine, so that would have been
15 what, from about July of 2004 up until May or
16 April 2006?
- 17 A: Yes, sir.
- 18 Q: So almost two years?
- 19 A: (Nods head affirmatively.)
- 20 Q: Right?
- 21 A: Yes, sir.
- 22 Q: During that nearly two-year period of time, did you
23 change the blades on the 48-inch machine every day?
- 24 A: Yes, sir.
- 25 Q: And was it always twice a day or sometimes once a day?

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01102

- 1 A: Yes, sir.
- 2 Q: Same sort of thing --
- 3 A: Yes, sir.
- 4 Q: -- where he might say we don't need it at lunchtime but
- 5 we always need it at closing time?
- 6 A: Yes, sir.
- 7 Q: So is it fair to say, Mr. Holland, that you changed the
- 8 blades on the 48-inch machine more than anybody else at
- 9 A&K Mulch?
- 10 A: Yeah. Since I got, well, I don't know how long they
- 11 was open before I got there. But as I was there, you
- 12 know, I took the responsibility to change it since the
- 13 time I was there.
- 14 Q: Okay. Once you started changing the blades in June or
- 15 thereabouts in 2004, no one else changed them more
- 16 frequently than you; correct?
- 17 A: Yes, sir. Unless if I, unless my line is broke down or
- 18 something then Leroy, if I take the place will go
- 19 change the blade while I fix on my line.
- 20 Q: Was the procedure for changing the blades on the
- 21 58-inch machine the same as the procedure for changing
- 22 the blades on the 48-inch machine?
- 23 A: Yes, sir. That I remember.
- 24 Q: What did A&K Mulch use the 48-inch machine to do?
- 25 A: Whatever scrapped that. We don't use or whatever Uncle

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01103

- 1 Dave cut off and don't use I throw it in the trash.
 2 And whatever the produce guys in there don't need or
 3 whatever, throws inside the trash line and it will go
 4 down to the 48-inch chipper and cuts it up.
 5 Q: And would it get sent down to the chipper by a
 6 conveyor?
 7 A: Yes, sir.
 8 Q: Was it an automatic conveyor?
 9 A: Yes, sir.
 10 Q: And so is it right to say that there was not a
 11 requirement that someone operate the chipper during the
 12 day because the conveyor would automatically feed it
 13 in, the wood would be grinded?
 14 A: Yeah.
 15 Q: And that could be done without anyone standing there?
 16 A: Yes, sir.
 17 Q: And then at lunchtime you would shut down and change
 18 the blades most days? And then every day at closing
 19 time --
 20 A: Yes, sir.
 21 Q: -- you would come in and change the blades? But when
 22 the machine was doing its cutting it doesn't require
 23 anyone to be standing there watching it, does it?
 24 A: No, sir.
 25 Q: Did A&K use the 58-inch machine to do the same thing

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01104

1 that the 48-inch machine had done before it?

2 A: Yes, sir.

3 Q: Do you know that it was a bigger machine and could

4 produce more mulch?

5 A: No. I didn't know it was bigger or, it just, I thought

6 that was just the size of it. And it does the same

7 thing. I guess you're making more, the 58-inch is

8 making more smaller chips more smaller.

9 Q: But did it work the same as far as the conveyor was

10 concerned as it did with the 48-inch machine?

11 A: No. It kept getting stopped up.

12 Q: Okay. We'll get to the stop up problems. But as far

13 as how it would work as intended --

14 A: Yeah.

15 Q: -- would the scrap wood come down that automatic

16 conveyor and go automatically into --

17 A: Yes, sir.

18 Q: -- the 58-inch machine?

19 A: Yes, sir.

20 Q: Just like it had with the 48-inch machine?

21 A: Yes, sir. What I mean by stop up, you know how when

22 you get to stop, the hopper ain't working and the line

23 get overpack and you got to stop Uncle Dave to unpack

24 the line because the board might get cross over on the

25 line, conveyor belt. It might get crossed over and jam

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01105

1 the line up. And then you might have problem with that
2 line. I remember one time they had stopped because the
3 board got up under the line and it hit a man when them
4 barrels or whatever that turns the belt, it had hit one
5 of those. And we were down for like an hour or two.
6 So that's when he got a young man to watch out for that
7 line, make sure nothing will get crossed over because
8 my dumpster, he had on the outside before then he
9 changed to the inside where I got to dump it on the
10 inside. Then my boards also can get crossed over. And
11 then that's when he had to get someone to put at the,
12 Uncle Dave, then it's a man standing right there to
13 make sure the board get crossed over on my line to go
14 to the dumpster. Okay. You get a cross over a whole
15 lot.

16 Q: Okay. But when you're talking about something getting
17 stopped up, you're talking about the conveyor line?

18 A: Yeah.

19 Q: Not the chipper machine getting stopped up?

20 A: No, sir.

21 Q: Did you ever have any problems with the 48-inch or the
22 58-inch machine as far as how they would chop up the
23 wood?

24 A: The 48, it does good, the 48 did good when we had it
25 working and stuff. And then when the 58-inch came in,

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1 I noticed one time where the sawdust, you know how on
2 the bouncer when the sawdust go inside the bouncer and
3 go down, that gets clogged up. And it goes inside the
4 chipper and it wears the chipper down. It will spin it
5 down and they will get jammed up. The boards will get
6 crossed over out there and stuff. And then we've got
7 to shut down and go straighten that out quick like and
8 then start up again.

9 Q: Okay. How often did that happen with the 58-inch
10 machine?

11 A: Probably once or twice a week.

12 Q: And who would fix it?

13 A: Like the, we had some workers in the back that make
14 boards out the logs and stuff. And he got two people
15 back there that, you know, it's the operator and the
16 guy that controls the logs from rolling off on the
17 floor or whatever, when he sees it get jams up then
18 he'll go straighten it out, you know what I'm saying,
19 before he have to stop. Because sometimes he be
20 yelling about oh, the chipper, the chipper, it clogged
21 up, it clogged up. Then we've got to stop the whole,
22 got to stop Uncle Dave and we'll fix that problem and
23 then we'll cut up, then we'll start cutting it again.

24 Q: But it would be somebody besides you who would go fix
25 the chipper when that would happen; right?

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1 A: Yeah. The line. Not the chipper. The line.
 2 Q: Okay.
 3 A: If the chipper gets clogged up, then he basically stops
 4 everybody.
 5 Q: Okay. But who would go unclog it then?
 6 A: Everybody. Like I said, me and Uncle Dave and
 7 Mr. Woodrow if Mr. Woodrow back there. Because see, he
 8 was running two mills. He was over two mills at the
 9 time, the small mill and the big mill.
 10 Q: When you started at A&K Mulch who trained you to do
 11 your job at the cut off line?
 12 A: The, I can't call him a young man. The man that was
 13 doing the job, had the job before I did. He taught me
 14 how to run the cut off saw.
 15 Q: Why was that guy leaving?
 16 A: Because of his age I guess.
 17 Q: Did anyone besides Uncle David teach you how to change
 18 the blades on the chipper machine?
 19 A: Leroy.
 20 Q: Anyone besides Leroy and David Wright?
 21 A: No, sir.
 22 Q: Did you ever read the manuals for the chipper machines?
 23 A: I never seen one.
 24 Q: Do you know if they had manuals for the chipper
 25 machines?

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1 A: I asked and Uncle Dave said it was somewhere. And I
 2 went looking but I didn't found it where he said it was
 3 at.
 4 Q: So you never read the manual then?
 5 A: No, sir.
 6 Q: Did you ever read anything as far as how to operate the
 7 chipper or how to change the blades on the chipper?
 8 A: I seen on the machine, on the chipper machine I seen
 9 some signs up there, you know, to beware of and stuff.
 10 And I was told by Mr. Jessie Brewer that, you know, how
 11 people can get hurt on the machine and stuff. And he
 12 came back there, he come back there sometimes to look
 13 at me to make sure I'm doing it right, to make sure I
 14 don't do nothing wrong.
 15 Q: Who is Jessie Brewer?
 16 A: That's the guy that sharpens the knives and Uncle
 17 Dave's saw, saw blade.
 18 Q: So he worked in the --
 19 A: Knife room.
 20 Q: -- shop?
 21 A: (Nods head affirmatively.)
 22 Q: Okay. And he would every day go and then sharpen the
 23 knives that were taken out of those two machines and
 24 the blade?
 25 A: Yes, sir. Well, the blades was my machine. And Uncle

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01109

1 Dave got a saw. It's like a chain, it's like a long
2 chain. But it's this wide with sharp edges on it.
3 Q: When the 58-inch machine was put in there, did you ever
4 read any manuals for the 58-inch machine?
5 A: No, sir.
6 Q: Do you know from where A&K or Mr. Witherspoon got that
7 58-inch machine?
8 A: Say that again.
9 Q: Do you know where Mr. Witherspoon or A&K Mulch got that
10 58-inch machine?
11 A: No, sir.
12 Q: Were you involved in its purchase?
13 A: No, sir.
14 Q: Were you involved in its installation once it was
15 placed where the 48-inch machine had been?
16 A: No, sir.
17 Q: You just showed up one day and there was a new machine?
18 A: Yes, sir.
19 Q: Did you even know it was a new machine or did someone
20 tell you?
21 A: I didn't know until the day was over with. Well,
22 basically lunchtime. Well, basically the end of the
23 day because Woodrow said the blades cutting good,
24 they're cutting good so don't worry about changing
25 them. You know, so I was like, okay, cool. So I

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1 didn't change them that day.

2 Q: Did someone supervise you for a period of time to make

3 sure that you were changing the blades the right way?

4 A: Yes, sir.

5 Q: And following the procedure?

6 A: Yes, sir.

7 Q: Did A&K have an established procedure for you to follow

8 when you were changing those knives?

9 A: Yes, sir.

10 Q: And was --

11 A: Well, not A&K Mulch. Well, there's a log for A&K

12 Mulch. But I was told from one of A&K Mulch workers

13 how to change the machine and stuff.

14 Q: Was it in writing or just passed along to you verbally?

15 A: Passed along verbally.

16 Q: And was there a period of time where someone watched

17 you before you could do it by yourself?

18 A: Somebody always watching me. I need a break.

19 Q: Sure.

20 **(Break - 12:26 p.m.-12:28 p.m.)**

21 Q: Are you ready to go back on?

22 A: Yes, sir.

23 Q: We were talking before our break about your training on

24 the 48-inch machine. And there was some period of time

25 where you were supervised in how you changed those

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01111

1 blades; correct?

2 A: Yes, sir.

3 Q: And then every time you changed them it was a

4 two-person job; correct?

5 A: Yes, sir.

6 Q: Did David Wright watch you for some period of time

7 change the blades before he let you do it on your own

8 with Mr. Frierson?

9 A: Yes, sir.

10 Q: How long was that?

11 A: He showed me one time. He demonstrated one time

12 because he was getting me to come at lunchtime for me

13 to see. And then time to go home he said I want you to

14 go ahead and try it one time, you know. So I followed

15 the procedure where he told me to go cut the main

16 button off and lock out switch and I cut everything

17 off. And I did leave the bouncer on to slow the

18 machine down. I go back to my station to clean my

19 station up because it takes about a good 10 to 15

20 minutes for the machine to stop. And I wait for a good

21 20, 25 minutes, to walk out my line, make sure my line

22 wheels straight and my barrels, you know, got greasing

23 and stuff. So I usually didn't go until about, I wait

24 until after Uncle Dave sometimes almost finished with

25 his machine to go start on the chipper because it takes

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01112

1 a while for the chipper to stop.

2 Q: Even after you cut off its power?

3 A: Yeah.

4 Q: And you knew that on the day of the accident; right?

5 A: Knew that the power was off?

6 Q: Knew that once you powered it off it would take 10 to

7 15 minutes before the wheel would stop turning inside

8 it?

9 A: Yes, sir.

10 Q: And that was something you were trained to wait for;

11 correct?

12 A: Yes, sir.

13 Q: And you knew not to open or try to open the hood until

14 the wheel was stopped completely; correct?

15 A: Yes, sir. Yes, sir.

16 Q: I mean, that had been taught to you from the first time

17 Uncle David taught you on that machine; right?

18 A: Yes, sir.

19 Q: And were you taught that if you didn't wait for that

20 wheel to stop that the wheel could hit the hood and

21 cause it to bounce off quickly?

22 A: I think that's what they told me. Yeah. Yes, sir.

23 Q: I mean, you understood it was for safety reasons --

24 A: Yes, sir.

25 Q: -- that you had to wait for that wheel to stop turning?

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01113

1 A: Yes, sir.

2 Q: And the danger associated with opening or trying to
3 open the hood too early before the wheel had stopped
4 turning was that the flanges on that wheel inside the
5 chipper could hit the hood and cause it to go flying
6 off; right?

7 A: Yes, sir.

8 Q: And you knew that on the day of this accident, didn't
9 you?

10 A: Knew that?

11 Q: You knew that if you didn't wait for that wheel to stop
12 that the flanges on the wheel could hit the hood and
13 cause the hood to come off really fast?

14 A: Yes, sir.

15 Q: And you knew that even before your accident?

16 A: Yes, sir.

17 Q: How were you taught to make sure that the wheel had
18 stopped completely before you attempted to open the
19 hood?

20 A: Get a length stick by a good, I done forgot how long it
21 was but Uncle Dave got a stick and trying to push the
22 wheel to make sure it's not turning like that before we
23 open the machine up. We always get wood and throw in
24 there and make sure it's not turning. Then we will
25 clean the wood back out and then open the door up.

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01114

- 1 Q: So are you telling me that from the time that you
2 locked out the machine, turned off its power and it's
3 coasting to a stop during that 10 to 15 minutes that to
4 check whether the wheel was stopped you would take a
5 stick or something and stick it in there?
- 6 A: No. No. No. No. This after I done cut the machine
7 off and go back to my station, I worked for another
8 good five or ten minutes to make sure the wheel had
9 stopped.
- 10 Q: Right.
- 11 A: Then I make sure for myself that I always, I was taught
12 to get something to tap the wheel to see if the wheel
13 turning. If the wheel ain't turning no more, then it's
14 good. Because see, I can't stick my hand in there, you
15 know. And he just said, well, because sometimes it
16 will jam up. But as long as the power's off and I
17 don't see the belt moving in there, then I know that
18 it's not turning no more.
- 19 Q: Well, were you taught to look at the belts to see if
20 they were moving before you tried to open the hood?
- 21 A: I was taught to look at everything.
- 22 Q: Okay. And were you shown where to look to see if the
23 belts were moving before you tried to open the hood?
- 24 A: Yes, sir.
- 25 Q: I mean, you could easily determine whether the wheel

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1 was moving or not before you tried to open the hood;
2 right?

3 A: Yes, sir.

4 Q: I mean, all it took was looking in the area you were
5 supposed to look to see if the belts were still moving;
6 right?

7 A: Yes, sir.

8 Q: And if the belts were stopped then you knew the wheel
9 was stopped; right?

10 A: Yes, sir.

11 Q: And if the belts were moving then you knew the wheel
12 was still moving and you needed to wait for it to come
13 to a complete stop; correct?

14 A: Yes, sir.

15 Q: And you understood that you were under no circumstances
16 to open that hood or try to open that hood until that
17 wheel had come to a complete stop; right?

18 A: Yes, sir.

19 Q: And you got injured on the day of this accident because
20 you didn't follow that procedure, isn't that right,
21 Mr. Holland?

22 MR. JONAS: Object to the form of the question.

23 Q: You still need to answer.

24 A: No, sir.

25 Q: Was the wheel moving when you tried to open the hood on

1 the day of the accident?

2 A: Well, to my opinion I, the wheel probably been turning

3 a little bit. If not, I mean, I didn't see nothing

4 moving at all. I went to go tell Mr., before I even

5 opened that machine like I said, I see the wheel wasn't

6 turning. Nothing wasn't turning or nothing. So I did

7 got a stick and tried to make the wheel turn and it

8 wouldn't turn. So I went to get Mr. Woodrow, the

9 foreman Mr. Woodrow Woods. And he said, well, go get

10 Mr. Levan, not Levain, Mr. Leroy to go see what's wrong

11 with the machine. So that's why I went back to my mill

12 and got Mr. Leroy. And Mr. Leroy told me, he said,

13 well, give me about five or ten minutes and I'll be

14 back there. We're on the clock. He's up there

15 tripping around so I couldn't get caught just laying

16 around waiting for somebody to show me something. So I

17 went back there and trying to see what was what with my

18 machine. And I looked at it. I kept looking at it. I

19 walked around. I came back. I said, well, ain't

20 nothing turning. And so I seen that a pin was missing

21 out the machine. And I turned around and I kept trying

22 to find the pin. And I wasn't going to open the

23 machine at all until I said, you know what, it's not

24 turning no more and the belt's not turning. So I'm

25 assuming it's stopped. So I was going to take the

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01117

1 other pin out. That pin wouldn't budge at all. The
2 pin wouldn't even move. So the only thing I knew was I
3 put a little bit of body force on it. And the pin came
4 out about this much and the door was coming along with
5 me, along with it.

6 Q: That's a lot of details for how this accident happened.

7 MR. JONAS: Object to the form of the question.

8 Q: Have you ever told the --

9 MR. OTT: I don't know that it was a question yet.

10 MR. JONAS: That's the problem.

11 Q: Have you ever told anyone these details about this
12 accident, Mr. Holland?

13 A: Repeat that again.

14 Q: Have you ever told anyone these details about how your
15 accident happened to anyone before today?

16 A: Yes, sir. I told my mom.

17 Q: When?

18 A: It been a while ago. I just --

19 Q: How come all these medical records say you don't
20 remember anything about your accident?

21 A: It been a while ago. I remember something. Some
22 things people tells me what they seen due to the
23 accident. And I was like wow, okay. And then I talked
24 to an old coworker and he was like, well, what I seen,
25 what I seen, Dreal, you know, I'm thinking more about

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01118

1 mentioned something about that, you know, not to open
2 the door when the wheels still turning. But him
3 fussing at me on the job, I ain't never knew he fussed
4 at me. But I know we go ride together or going home he
5 mentioned to me never do that because you can get hurt
6 by doing that. But I don't think he never caught me
7 opening it.

8 Q: And did you know that you could get hurt, that the way
9 that you would get hurt would be that that hood could
10 come down and hit you?

11 A: Yes, sir.

12 Q: And could hit you in the head?

13 A: Yes, sir.

14 Q: Just like it did on the day of this accident?

15 A: Yes, sir.

16 Q: What warnings do you remember being on the machine?

17 A: Huh?

18 Q: What warnings do you remember being on the machine?

19 A: Like a dude was opening the chipper up. That was the
20 only one I seen on there. And then I forgot how that
21 machine actually looked.

22 **(Defendant's Exhibit Number One was marked for**
23 **identification purposes.)**

24 Q: I'm going to hand you what's been marked as Exhibit One
25 and ask you if you recognize what's shown on Exhibit

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01119

1 One.

2 A: Looks like he's opening the machine up.

3 Q: Do you recognize that warning?

4 A: Yes, sir.

5 Q: Was that warning on the machine on the day of your

6 accident?

7 A: I didn't see that one. I seen some other ones. I

8 didn't see that picture but I seen some with a lot of,

9 a white one and one in all black.

10 Q: Are you --

11 A: It might have been on there.

12 Q: Do you remember this warning actually being in three

13 different places on the chipper hood on the day of your

14 accident?

15 A: No, sir.

16 Q: You deny that?

17 A: Huh?

18 Q: You don't remember it?

19 A: I don't remember seeing three, three of them things on

20 there.

21 Q: We have post-accident meaning after your accident

22 photographs of the hood. And all the witnesses have

23 said that this warning is on three different places on

24 the chipper hood. Do you have any reason to dispute

25 that?

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01126

1 A: No. I seen one on the hood and that was it. And the
2 other one was on, writing was somewhere else.
3 Q: Okay. Do you ever remember reading this warning before
4 your --
5 A: Yeah. I read this a couple of times on the machine.
6 Sometimes I sit there while the machine trying to stop,
7 I sit there and looked at it.
8 Q: Had you read this warning before your accident?
9 A: Yes, sir.
10 Q: And did you know never to operate the chipper with
11 missing hood bolts?
12 A: I guess they must have fallen off or something.
13 Q: I'm just reading from each of these.
14 A: Yeah. I see.
15 Q: Did you know never to operate the chipper without hood
16 locks secured?
17 A: Hood locks secured as in the cover over it?
18 Q: Right.
19 A: I ain't had one of those.
20 Q: Did you know never to open the hood while the disk is
21 turning?
22 A: Yes, sir.
23 Q: And that's what it says there in the third bullet
24 point; right?
25 A: Yes, sir.

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01121

1 Q: And the next one, did you know to confirm the disk had
2 stopped by visually checking the disk shaft or drive
3 wheel?
4 A: That's what I did, I thought I did that day.
5 Q: And this diagram shows somebody getting hit in the head
6 when they tried to open the hood before the disk had
7 stopped turning; right?
8 A: You just open it, you open it walking back.
9 Q: Doesn't it show the hood coming down and hitting
10 somebody in the head --
11 A: Yeah.
12 Q: -- because the wheel is still moving?
13 A: Yes, sir.
14 Q: And that's what happened to you on the day of this
15 accident, isn't it?
16 A: Yes, sir.
17 Q: There was no way for you to get hit by the hood as you
18 did unless the wheel was still moving; right?
19 A: That day I seen that wheel wasn't moving that day.
20 Q: Well, then how did you get hit?
21 A: I need a break, man.
22 Q: Answer my question and then we'll take a break. How
23 did you get hit?
24 A: I guess I got hit by the hood.
25 Q: And how did the hood move other than if the wheel was

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01122

1 moving?

2 A: It must be have been something break on this side of

3 the machine because I seen, it must be like I say, you

4 know, the wheel might have been turning and I seen from

5 my eyes and stuff, I didn't see nothing turning at all.

6 Now, when I went to do what I had to do, it was over

7 with.

8 Q: Take a break.

9 (Break - 12:54 p.m.-2:06 p.m.)

10 Q: Mr. Holland, we've taken our lunch break and just want

11 to make sure that you are okay to go forward.

12 A: Yes, sir.

13 Q: All right. Did you discuss this lawsuit or your

14 testimony with anyone during the lunch break?

15 A: No, sir.

16 Q: Have you been back to A&K Mulch since the date of your

17 accident?

18 A: No, sir.

19 Q: Have you talked to any employees of A&K Mulch since

20 your accident?

21 A: Hey and bye. That's about it. When I see them. Hey

22 and bye. As I be walking, they'll be driving by,

23 they'll bop the horn. But that was some of my walks.

24 Q: Have you talked to any of those employees about how

25 your accident happened?

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61123

- 1 A: No. They would come to tell me some, somewhat what
2 took place. But I haven't talked to no one like that.
- 3 Q: Well, who has come and told you what they have seen?
- 4 A: They said, they told me how they seen me down there.
5 That's about it, you know.
- 6 Q: Meaning they saw you on the ground after it happened?
- 7 A: Yeah. Yes, sir.
- 8 Q: Are you aware of anyone who actually saw you get hit or
9 whatever happened to cause your injuries?
- 10 A: No, sir.
- 11 Q: Was anyone around you when you got hurt?
- 12 A: No, sir.
- 13 Q: But since the accident happened you haven't sat down
14 and talked with anybody about how it happened or
15 anything like that?
- 16 A: No, sir.
- 17 Q: How have you learned anything about what other folks
18 might have saw or witnessed with your accident?
- 19 A: Repeat that again.
- 20 Q: Sure. How have you learned, what sources of
21 information do you have about filling in some gaps
22 about what happened?
- 23 MR. JONAS: Object to the question.
- 24 A: I don't understand.
- 25 Q: Okay. Have you learned any details of your accident

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01124

1 from anyone else?

2 A: No, sir.

3 Q: You haven't talked to, your mom hasn't told you

4 anything that other people have said?

5 A: Well, she's told me a whole lot, you know. But I don't

6 know who was telling her what took place or whatever.

7 Q: Okay. What's the first thing you remember after the

8 accident?

9 A: First thing I remember before the accident.

10 Q: After the accident.

11 A: Remember as in?

12 Q: Do you remember laying on the ground at A&K Mulch?

13 A: The only thing I know is when I got hit I was down.

14 And only thing I wanted to do was see my hand. When I

15 seen my hand that's when I had passed out. I didn't

16 know what was what since then.

17 Q: What did you see on your hand?

18 A: Blood.

19 Q: So after you got hit in the head you remember being on

20 the ground?

21 A: All I know I was shaking and I was blacking in and out.

22 The only thing I wanted to do, the good Lord let me see

23 my hand. And he said, Andreal Holland, I didn't call

24 you. I'll be back later to talk to you. I was out,

25 for like 14 or 16 days I was out. And from there

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01125

- 1 Q: Had you changed the blades on the chipper at lunchtime
2 earlier that same day?
- 3 A: No, sir.
- 4 Q: Why not?
- 5 A: Because Mr. Woodrow Woods told me, he always checked
6 the chipper before lunchtime to see if the chips
7 getting cut properly and, you know, if it's the kind of
8 chips he want. He told me that day, specific day, said
9 Andreal, the chipper cutting good all morning. It
10 hasn't got stopped up or nothing. So the blades will
11 pass until this afternoon.
- 12 Q: Do you remember going to turn off the power to the
13 machine at the end of the shift?
- 14 A: Yes, sir.
- 15 Q: Was anyone around when you did that?
- 16 A: Levain Brown and Mr. Pete Thompson.
- 17 Q: Where were they?
- 18 A: At the back of the mill where their machine is at.
- 19 Q: Did you actually turn off the power or did Levain do
20 that?
- 21 A: I cuts that off.
- 22 Q: Did you lock out the power?
- 23 A: Yes, sir.
- 24 Q: What did you do next?
- 25 A: Went back to my station to start cleaning up.

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C1126

1 Q: What do you remember cleaning up at your station?

2 A: My platform I walk on. And I cleaned some of my
3 rollers on my line out. And I picked up the, I got a
4 cut saw up there so I cut over 16-foot boards I got to
5 clean up under my saw where the sawdust and stuff at.
6 I clean all that up.

7 Q: How far is the place where you turn off the power from
8 the chipper itself?

9 A: I can't remember. You say the chipper and the chipper
10 buttons?

11 Q: Well, wherever you lock out and tag out.

12 A: At the back door. That's like ten feet from the
13 chipper.

14 Q: Ten feet from the chipper?

15 A: (Nods head affirmatively.)

16 Q: After you locked out the chipper did you go by the
17 chipper or did you go back to your station?

18 A: I went back to my station.

19 Q: How long do you think you were at your station?

20 A: About a good seven minutes to eight minutes until
21 someone told me it was a tapping noise at the machine.

22 Q: A tapping noise?

23 A: Yeah.

24 Q: At what machine?

25 A: The chipper.

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61127

- 1 Q: Who told you that?
- 2 A: Levain Brown.
- 3 Q: Did you go by the chipper?
- 4 A: No. I waited for another five minutes at my line, my
5 station. I said, well, that stopped too fast. So I
6 waited another three or four minutes and I walked back
7 there to proceed my duties to the chipper. And I see
8 where that, it was something wrong with it. I felt
9 like something wrong with it. Every time it cuts off
10 and stuff, you know, I always throw a board in there to
11 make sure it doesn't turn or move or whatever. But
12 when I throw the board in there it does move an inch or
13 whatever to let you know it's got some, how you say it,
14 got some play in it where, you know, there's, the wheel
15 can turn. Well, that day I put that stick in there the
16 wheel wouldn't move at all.
- 17 Q: So while you were cleaning up your station Mr. Brown
18 came up to you and said that he heard a tapping noise?
- 19 A: Yes, sir. Well, he ain't came up. He just screamed
20 because, you know, I could hear him from where I was
21 standing. All the machines were down. And from where
22 he was standing to I could, you know, hear him real
23 good. And he was like, I heard a tapping noise in your
24 machine, you know, because he was cleaning, he was
25 changing his blade on his machine. And I was still on

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1 my station. And I said, I'll go back there in a little
2 while and see what's what.

3 Q: Did he tell you to do anything in particular about that
4 tapping noise?

5 A: No. He just told me it was tapping. And I went and
6 looked at it. That's when I went to find a foreman.

7 Q: Well, did you go to find a foreman after you had waited
8 at your machine and then gone back to the chipper?

9 A: No. I went to my machine for my line. And I cleaned
10 my line up. And then I wait a couple more minutes
11 before I went back to the chipper to see what's
12 actually wrong with it. That's when I looked in it.
13 And I said, well, I still ain't going to mess with it.
14 By him saying that he heard a tapping noise I didn't
15 touch it. I went to find a foreman.

16 Q: When you went back to the chipper did you hear the
17 tapping noise?

18 A: I didn't hear nothing. The chipper wasn't making no
19 noise. It wasn't even moving. I didn't see nothing
20 moving.

21 Q: So you returned to the chipper, you didn't hear
22 anything. Did you inspect the wheel or the belts to
23 see if the wheel was turning?

24 A: I looked at all that and I still say that something was
25 wrong with it. So I went to find the foreman.

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01129

- 1 Q: What were the condition of the belts and wheels, and
- 2 the wheel? Were they moving?
- 3 A: Nothing wasn't turning. Nothing was turning.
- 4 Q: Why did you think something was wrong if you didn't
- 5 hear that tapping sound?
- 6 A: Because like I say, I had took a stick and throwed
- 7 inside of it and the wheel always move a half an inch
- 8 or you could see the move turn a little bit, you could
- 9 see the wheel turn a little bit. And the wheel didn't
- 10 move at all. So that's why I took place to go tell the
- 11 foreman what took place.
- 12 Q: Where would you put the stick into the chipper?
- 13 A: At the opening.
- 14 Q: Where all the wood goes in to get ground?
- 15 A: Yes, sir.
- 16 Q: And who taught you to do that?
- 17 A: Uncle Dave showed me, you know. He said, well, just to
- 18 make sure everything's safe just get a long stick and
- 19 just see if the wheel is still turning or whatever.
- 20 Q: And how was it different on that day versus all the
- 21 other days that you put a stick into the machine?
- 22 A: The wheel didn't move. The wheel always moved. When I
- 23 get a piece of stick and just make the wheel move, it
- 24 will move. That day the wheel didn't move. I took on
- 25 something was wrong with it.

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01136

1 Q: So it didn't have the play in it?

2 A: It didn't have no play.

3 Q: So because of that unusual occurrence you went to tell

4 somebody?

5 A: I went to tell the foreman.

6 Q: Which would be Mr. Woods?

7 A: Yes, sir.

8 Q: And did you find him?

9 A: Yes, sir.

10 Q: Where was he?

11 A: He was at the carriage, he was at the carriage at the

12 front of the mill welding something.

13 Q: What did you tell him?

14 A: I told him Levain heard a tapping noise at the machine

15 and I think something's wrong on the chipper. And so

16 he took his helmet, his welding helmet off. And he

17 said, well, go find Leroy and tell Leroy to go help you

18 find out what's wrong with it.

19 Q: So what did you do next?

20 A: I went to look for Mr. Leroy. And he was up top on the

21 inside of the mill where he keep his canteen at.

22 Q: And what was he doing there?

23 A: Putting his canteen up.

24 Q: And what did you tell him?

25 A: That what's going on with the chipper.

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01131

- 1 Q: What did he respond or how did he respond?
- 2 A: He said I'll be back there in about five or six
- 3 minutes.
- 4 Q: By back there you mean by the chipper?
- 5 A: Yes, sir.
- 6 Q: What did you do next?
- 7 A: I went back to my chipper and start cleaning around it
- 8 and --
- 9 Q: To the chipper or to your line?
- 10 A: I went back to the chipper, you know. It got boards
- 11 and stuff all around the chipper. So I went and start
- 12 throwing stuff on the line, you know, to make sure
- 13 around the chipper is clean. And that was about five
- 14 minutes. I waited for Leroy to come but he never
- 15 showed up.
- 16 Q: So five minutes pass, Leroy doesn't come. Did you go
- 17 to try to find Leroy?
- 18 A: I looked in the mill and I didn't see him. So I went
- 19 ahead and tried to find out what's what by myself.
- 20 Q: Who was the maintenance person back in June of 2006 if
- 21 something went wrong with a machine?
- 22 A: Mr. Woodrow.
- 23 Q: Did you go tell Mr. Woods that Leroy hadn't shown up
- 24 and somebody needed to look at the chipper?
- 25 A: Well, I told him before something was wrong with the

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01132

- 1 chipper. He told me to get Mr. Leroy to come help me
2 and Mr. Leroy never showed up.
- 3 Q: Well, when Mr. Leroy didn't show up did you go back to
4 Mr. Woods and say what do we need to do about this?
- 5 A: No, sir. Actually I did but I didn't find him. They
6 said he was in the office.
- 7 Q: So you couldn't find Mr. Leroy, you couldn't find
8 Mr. Woods. What did you decide to do next?
- 9 A: To see what's going on with the chipper.
- 10 Q: Now at this point were you thinking that you are
11 inspecting the machine to find out why it's not
12 operating or are you going in there to try to change
13 the blades?
- 14 A: Well, I was going to find out before I do anything what
15 was making that tapping noise and make sure that
16 everything was completely stopped which I did that
17 before I went to tell Mr. Woodrow. And I just was
18 doing my duty.
- 19 Q: Well, did your duties include actually repairing the
20 chipper?
- 21 A: Repairing as in?
- 22 Q: Doing maintenance work on the chipper?
- 23 A: That was just my job. The chipper was to change the
24 chipper.
- 25 Q: Change the chipper blades; right? Are you, do you have

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01133

1 any background in repairing machines like these?

2 A: No, sir.

3 Q: That was Mr. Woods' responsibility; right?

4 A: I guess so. Yes, sir.

5 Q: Well, who was responsible at A&K Mulch for repairing

6 the machines?

7 A: Well, basically Uncle Dave be welding. If he don't

8 weld, then you have another guy there that welds. And

9 whoever breaks down it's like we have handy mans around

10 all the time. In a wood mill if you can fix it they

11 will fix it.

12 Q: Well, were you one of those handy men?

13 A: No, sir.

14 Q: So if your machine broke down for instance on the line

15 what would you do? Go get somebody?

16 A: Well, they be coming up to, if we're running and my

17 line break down then they in there and they will come

18 see what's what.

19 Q: But the point is is if your machine is not working

20 properly you are going to go get somebody else to

21 inspect it; right?

22 A: Yes, sir.

23 Q: And that other person then would find out what's wrong

24 and determine what needed to be done to fix it; right?

25 A: Yes, sir.

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01134

- 1 Q: Well, isn't that also true for the chipper?
- 2 A: Say that again.
- 3 Q: Isn't that also going to be true for the chipper that
- 4 if it wasn't working right then you would get somebody
- 5 else to inspect it and let them make a decision about
- 6 what needed to be done?
- 7 A: That was my job, man. And my job was to make sure my
- 8 machine's running right and stuff. And that's what I
- 9 did.
- 10 Q: Well, that's what I'm trying to get an understanding
- 11 about, Mr. Holland. I thought we had clarified that
- 12 your only duty with respect to the chipper was to
- 13 change the knives.
- 14 A: Yeah. But you know, I mean, you got me lost.
- 15 Q: Well, where did I lose you and I'll back up?
- 16 A: All I know is that was my duty to change the chipper
- 17 and stuff. And I was told by a coworker that he heard
- 18 a tapping noise. And I did what I did. I did what I'm
- 19 supposed to do, go tell the foreman.
- 20 Q: Why did you think it was a good idea for you to be the
- 21 one to inspect the machine to see what was making that
- 22 noise or why it wasn't working right?
- 23 A: That was my machine.
- 24 Q: Had that ever happened before with this tapping noise?
- 25 A: I don't remember.

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01135

1 Q: Had it ever happened before where you stuck a stick in
2 through the opening to test the wheel and didn't have
3 any play in it?
4 A: Say that again.
5 Q: Had it ever happened before where you stuck a stick in
6 through the opening to see if it had any play in it and
7 it didn't have any play in it?
8 A: That ain't never happened. It always had play in it.
9 Q: So you had two things that had gone on with this
10 machine that you had never experienced before the day
11 of your accident?
12 A: Yes, sir.
13 Q: Did you know what was causing the tapping noise?
14 A: No, sir.
15 Q: But you never heard it; right?
16 A: I was up front and I had my ear plugs in. And that's
17 when the coworker came and told me.
18 Q: But when you went back to the machine did you ever hear
19 the tapping noise?
20 A: I didn't hear nothing. It was nothing moving. It was
21 nothing moving on the machine.
22 Q: Was anyone around when you decided to open the machine?
23 A: Not that I recall.
24 Q: Which side of the machine were you standing on?
25 MR. JONAS: How about clarify that.

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1 Q: When you went to touch the machine and I guess you were
2 trying -- well, let's clarify that. When you put your
3 hands on the machine after Mr. Brown didn't show up and
4 after Mr. Woods didn't show up, what were you intending
5 to do?

6 A: See what was wrong with it.

7 Q: And by seeing what was wrong with it, what were you
8 going to do to look inside?

9 A: Open it up.

10 Q: Open the hood?

11 A: Yes, sir.

12 Q: All right. So you went about your usual procedure of
13 pulling out the cotter pin and then loosening the bolt?

14 MR. JONAS: I object to the question.

15 A: Loosen what bolt?

16 Q: The bolt that holds down the hood; right?

17 A: Talking about them clips, the pins?

18 Q: Right.

19 MR. JONAS: Let's use the right word. It's not a
20 bolt. It's a pin. There's bolts in this thing and
21 there's pins in this thing. So let's find a --

22 A: That's where you was getting me lost at. You kept
23 saying bolts. And I ain't never seen no bolts holding
24 the door down. It had two pins up top.

25 Q: Okay. We used bolts earlier and you answered the

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01137

- 1 questions. But if you want to call them pins now --
- 2 A: No. I'm just saying that's what I think you was saying
- 3 as in pins you were saying bolts because the chipper we
- 4 had ain't had no bolts in it. It had pins. So I just
- 5 put the pins and the bolts together thinking it go up
- 6 there.
- 7 Q: Where was the cotter pin?
- 8 A: Up top.
- 9 Q: And did you, this is what we were talking about before
- 10 where one side would be hard to get out and one side
- 11 would be easy; right?
- 12 A: And you called them bolts.
- 13 Q: I called them bolts. But --
- 14 A: They are pins.
- 15 Q: All right. Pins. Is that what you went to do then was
- 16 to loosen one side of the pin?
- 17 A: Yes, sir.
- 18 Q: Or the pin on one side?
- 19 A: Yes, sir.
- 20 Q: And what happened?
- 21 A: The pin acted like it didn't want to come so I shook it
- 22 a little bit. And I put a little bit of body force to
- 23 it and it came up a little bit and the door was coming
- 24 with it.
- 25 Q: The whole hood you mean?

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01138

- 1 A: Yes, sir.
- 2 Q: And is that when something hit you in the head?
- 3 A: I don't know what happened after that. All I know was
- 4 the door was coming up.
- 5 Q: Were you able to get one of the pins loosened or were
- 6 you working on the first pin when the hood came off?
- 7 A: It was one pin.
- 8 MR. JONAS: Object to the question.
- 9 Q: So the first side that you tried to open or loosen the
- 10 pin that's when you got hit?
- 11 A: Yes, sir.
- 12 Q: Where were you standing when you were doing that or
- 13 when you got hit?
- 14 A: On the side of the pin where the pin was at.
- 15 Q: You weren't standing down near where that rest is for
- 16 the hood to come down?
- 17 A: I was on that side. I was on that side but I wasn't
- 18 -- I don't remember. I know I remember taking that pin
- 19 out and getting hit.
- 20 Q: Do you know where you were standing when you got hit?
- 21 A: No, sir.
- 22 Q: Do you remember where you were when you were on the
- 23 ground?
- 24 A: On the ground.
- 25 Q: Were you in front of the machine? On the side?

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01139

1 not?

2 A: It was a scar but as I said before, my auntie told me
3 to get some vitamin E and put on that spot. It was a
4 spot right here where it never cleared up. But I got
5 that vitamin E and that's when it start clearing it up.

6 Q: And has your hair grown back over it?

7 A: Yes, sir. It was over here somewhere on the right
8 side.

9 Q: I don't know what it feels like to have hair up there
10 any more. All right, Mr. Holland. That's all the
11 questions I have for you at this time unless your
12 attorney asks some that make me ask some more.

13 **EXAMINATION BY MR. JONAS:**

14 Q: Dreal, I've got a couple.

15 A: Yes, sir.

16 Q: I want to go back to this event when you went to the
17 machine after you talked to Woodrow and after you went
18 to find Leroy. Let's start from that point. You said
19 you found Leroy and he was someplace inside the big
20 mill. You said in a canteen or with a canteen?

21 A: He have a, I call it a bootleg canteen. It's a canteen
22 in the shop. But we can't leave our station to go and
23 get stuff from the canteen. So he provide his own
24 canteen to sell stuff in there.

25 Q: So he's got a little business on the side where he

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01146

- 1 sells drinks and things?
- 2 A: Yes, sir.
- 3 Q: So when you found Leroy he was in the business of
- 4 packing up for the day?
- 5 A: Yes, sir.
- 6 Q: So you went on. Where did you go next?
- 7 A: I went back to my chipper.
- 8 Q: And this is the part I was getting to. You said before
- 9 that when you walked up there one of the pins was
- 10 missing from the machine.
- 11 A: Yes, sir.
- 12 Q: Which side of the machine was it that the pin was
- 13 missing?
- 14 A: Well, it depends.
- 15 Q: If you're facing the machine from where the feed --
- 16 A: The left side.
- 17 Q: -- the feed is at.
- 18 A: The left side.
- 19 Q: All right. The left side. And I think you said that
- 20 you went looking for the pin?
- 21 A: Yes, sir.
- 22 Q: Was that, was that pin in there at lunch? Let me get
- 23 this clear. Did you or did you not change the blades
- 24 at lunch?
- 25 A: No. I did not change the blades at lunch.

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01141

1 Q: So the last time you saw this machine would have been
2 when?
3 A: The day before.
4 Q: But, and let me ask you, when you weren't changing
5 chipper blades who else, when you were out sick or
6 didn't show up on time or --
7 A: Say again now.
8 Q: When you were out sick who would change the chipper
9 blades?
10 A: Either Uncle Dave or Leroy would change them.
11 Q: So we're down to really three people changing chipper
12 blades --
13 A: Yes, sir.
14 Q: -- during the time you worked there?
15 A: Yes, sir.
16 Q: So when you looked at the machine, you came up to it,
17 is that the first time you noticed that the pin wasn't
18 in the left side?
19 A: Yes, sir.
20 Q: All right. So what did you do next?
21 A: I went to find the foreman.
22 Q: Now, when you got back to the machine and tried to open
23 it up, I think you've said a number of times how you
24 checked it and looked at it, but at the time that you
25 got into that position to take out the remaining pin,

- 1 you know the pin on the right, did you hear anything or
2 feel anything in the machine to indicate to you that it
3 was still turning?
- 4 A: No, sir.
- 5 Q: And describe if you can the best you can how you went
6 about taking out that pin on the right side.
- 7 A: See if I remember. It was kind of hard to get out.
8 And so I had to put a little bit of force to it to lift
9 the pin up. And when the pin came up a little bit
10 that's when the door was coming along with it.
- 11 Q: All right. At the time that you were learning how to
12 work this machine it was about three or four months
13 after you got to, started at A&K?
- 14 A: Yes, sir.
- 15 Q: All right. I understood that you had quite a bit of
16 time and experience with this 48-inch Morbark machine.
17 But you, I thought you recalled that it was even
18 another machine, maybe a green-colored machine?
- 19 A: Yeah. That's what we start at the big mill before he
20 built the smaller mill.
- 21 Q: All right.
- 22 A: And that's when he changed that big green chipper to
23 the small mill and he brought in another chipper more
24 smaller than the green chipper.
- 25 Q: Did you change the blades on this green machine?

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01143

- 1 A: Yes, sir.
- 2 Q: Was it more or less like the one that you got hurt on?
- 3 A: Huh-uh (negative response). It was more powerful.
- 4 More bigger. The wheel was more bigger.
- 5 Q: Did it work the same way with the hood that came back
- 6 and was secured by the pins?
- 7 A: Yes, sir.
- 8 Q: All right. Now, we're talking about a procedure that
- 9 you've learned that Uncle Dave taught you and he was
- 10 the first one to teach you anything?
- 11 A: Yes, sir.
- 12 Q: Was he teaching you when you had this other green
- 13 machine?
- 14 A: Yeah. That's when it take two people to hold that door
- 15 open. And that's when me and him be talking about, you
- 16 know, we're changing the blades in it, we'll talk
- 17 about, you know, what's what about the machine and
- 18 stuff.
- 19 Q: I see.
- 20 A: He was teaching me, you know, the routines how to do it
- 21 and stuff. And that's when that big green machine
- 22 where he was training me to change the chipper. And he
- 23 told me, it takes two people to change the chipper on
- 24 that one because the wheel is about bigger than me.
- 25 Q: All right. So sometime along after the green machine

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01144

1 got moved the smaller orange colored one got put in its
2 place?

3 A: Yes, sir.

4 Q: And sometime after that another orange machine got put
5 in its place?

6 A: Yes, sir.

7 Q: So that's three machines that apparently you had
8 some --

9 A: Training on.

10 Q: -- training on?

11 A: Yes, sir.

12 Q: Now, did changing the blades work about, was it about
13 the same for each of these machines?

14 A: No, sir. The blades was shaped different. Some were
15 light and some was heavy.

16 Q: Okay. When you went to change these blades, I want to
17 get it clear what your job really was. Once you got
18 the hood open, what did you do to change the blades?

19 A: I used a power drill to loosen the bolts in it. And
20 like he said, I got a stick to put it in so the wheel
21 won't turn unless somebody helping me turn it. That
22 way I had to put a stick in it. And that's what I did.

23 Q: All right. Now, because parts of the wheel are, have
24 got the bolts up at eye level where you put the power
25 drill you're calling it on, the power socket?

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01145

- 1 A: Yeah.
- 2 Q: Okay. And you unloosen it at the top. Do you have to
- 3 turn the wheel to get to the next bolt?
- 4 A: No. All the bolts are in a row.
- 5 Q: Uh-huh (affirmative response).
- 6 A: And you go like zoop, zoop, zoop, zoop, zoop. Loosen
- 7 up a little bit. Then a, you know, you hold your hand
- 8 to the bundle so the knife won't, like I say, he had
- 9 different, after, you know, the first machine I had it
- 10 had small blades in it. And you had to put your hand
- 11 to the bottom and make sure they won't drop inside the
- 12 machine. And that's why, you know, I slide them out
- 13 and then I put the new ones in and I just tap the
- 14 screws back in. And then I'll turn the wheel or either
- 15 somebody else will turn the wheel and go to the next
- 16 one and does the same thing.
- 17 Q: So turning the wheel was part of the process of getting
- 18 the power drill on it. I mean, you change one knife
- 19 blade and then you turn it a bit to get to the next
- 20 one?
- 21 A: Yes, sir.
- 22 Q: How many knife blades were on this machine where you
- 23 got hurt if you recall? Was it more than five or six?
- 24 A: About that many sections, yeah. About five or six.
- 25 Q: Now, when you had, and I take it that when you opened

- 1 this up that there's a lot of woodchips stuck in the
2 knife blades in along the wheel?
- 3 A: Well, yes, sir. Some of that stuff. Yes, sir.
- 4 Q: And before you put that power drill on what did you do
5 to clean behind or around it?
- 6 A: I have a screwdriver, a flat head screwdriver where I
7 cleaned around the screw. Each screw I cleaned around
8 and I power it out.
- 9 Q: Did you ever use the air hose to clean off around the
10 blades?
- 11 A: No.
- 12 Q: Okay. At the time that you recall, and you said it was
13 about a year before this accident happened that you had
14 this encounter with Mr. Witherspoon, do you remember
15 which machine it was that was involved?
- 16 A: That small mill been there a year after I was there.
17 So that had to be 2005 he confronted me about that.
18 Yeah. 2005.
- 19 Q: Can you recall whether it was the green machine or the
20 first orange machine?
- 21 A: The first orange machine.
- 22 Q: All right. Now, what were you doing when, what were
23 you doing when he came up?
- 24 A: I was in the process of opening the machine up. And
25 when I opened it up, I always spin it to make sure

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1 ain't nothing jammed in it so I can get a good, you
2 know, ready to start loosen the bolts and stuff I make
3 sure, you know, how you got bark and stuff inside the
4 bottom. I always clean that out and make sure it ain't
5 nothing in it. I'll spin it. And that's when he came
6 up. He pulled up and he thought that I had opened the
7 door right there and then while the wheel was still
8 turning. But I told him what took place. But he said
9 that don't look like, he said looked like the wheel
10 still was turning by itself. But I bolted it. And he
11 gave me a good blessing out about that.

12 Q: Let me understand this. Okay? So because the feed of
13 the material going into the chipper comes from the
14 bottom; right?

15 A: Yes, sir.

16 Q: All right. And so as the wheel is turning and it chops
17 that up, it always leaves a certain amount of trash in
18 the bottom when you open up the, you know, the hood --

19 A: Yes, sir.

20 Q: -- to clean it. So I understand this; okay? On that
21 occasion when you and Mr. Witherspoon spoke, the
22 machine had stopped, you had opened it and that's when
23 you spun the wheel to make sure that you could reach,
24 that it would turn I guess?

25 A: Yeah.

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01148

- 1 Q: All right. What, is that a procedure that you
2 followed? I mean, even after Mr. Witherspoon's
3 discussion with you?
- 4 A: Yes, sir. I just didn't open it up while, you know,
5 the wheel was turning or whatever because to be, if I'm
6 not mistaken he told Woodrow about it or either Uncle
7 Dave. And that way, you know, they kept coming in and
8 checking on me and make sure I didn't open it up or
9 whatever.
- 10 Q: Did Woodrow or anybody else ever write you up for any
11 safety violations for being unsafe around the chipper?
- 12 A: No, sir.
- 13 Q: All right. You were written up for other things?
- 14 A: Yes, sir.
- 15 Q: What?
- 16 A: Tardy to work.
- 17 Q: All right. At the time that this, you and Uncle Dave
18 you call him, not really your uncle but he's related
19 somehow, you said he's the cousin of your father?
- 20 A: Yes, sir.
- 21 Q: Okay. And as I understand Uncle Dave and Mr. Woods and
22 Leroy Friarson all had a lot of experience at Georgia
23 Pacific before they came to A&K Mulch?
- 24 A: Yes, sir.
- 25 Q: I mean, decades?

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01149

1 A: Yes, sir.

2 Q: They would have known your father over there,

3 Mr. Wright?

4 A: Yes, sir.

5 Q: Right?

6 A: Yes, sir.

7 Q: Yeah. And so the only guy that wasn't coming from

8 Georgia Pacific was you?

9 A: Yes, sir.

10 Q: Out of the bunch that changed the chipper blades?

11 A: Yes, sir.

12 Q: Now, at the time that you were learning from Uncle

13 Dave, you know, and we're talking about something that

14 I think we've been using the word procedure, but, you

15 know, was there ever any written document that they

16 gave you about a procedure?

17 A: No, sir.

18 Q: Okay. Did anybody at that mill ever instruct you that

19 about the order in which you were to turn off the feed

20 to the, the vibrating feeder to the machine, when it

21 was supposed to be turned off? And I mean in relation

22 to when you turned off the chipper?

23 A: Say that again.

24 Q: What came first? When you were learning from Uncle

25 Dave, did he ever teach you anything about turning off

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01156

1 the vibrating conveyor?

2 A: No, sir.

3 Q: Was it your, did you have any experience with other
4 people turning that you could watch and learn from
5 about the order in which to turn off the vibrating
6 conveyor, whether you turned it off before or after you
7 turned off the chipper?

8 A: No, sir.

9 Q: Well, what was the regular way it was done at A&K
10 Mulch?

11 A: Well, when I stepped foot on the ground, you know, I
12 did my job. But then Uncle Dave said, Andreal, come
13 here, let me show you something, you know. This is the
14 chipper. And I'm going to teach you how to change the
15 chipper. And so he showed me where the button to cut
16 it off and the cut off switch to lock it out, to make
17 sure you lock it out and everything. And he cut the
18 line off. But he always let the bouncer bounce. Then
19 he would go back to his station and change his saw
20 blade in his carriage or whatever. And I helped him
21 change his saw carriage thing. And we walked back
22 there together and start changing the chipper.

23 Q: Let me understand a little better about how the line
24 was set up from the front of the mill to the back of
25 the mill. Okay? Can you draw me a picture?

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01151

1 in the back where the logs go to. If it shipping I
2 send it to shipping.

3 Q: All right.

4 A: Then I always go and cut my line off. My buttons are
5 behind my, my line right here. So the buttons been on
6 this side right here where the controls and stuff was
7 at for a lot of machines. I'll just say a lot of
8 electricity things was over there. Mine was over there
9 too.

10 Q: This is the electricity and the controls for the line,
11 not for the chipper; right?

12 A: No, sir. No, sir. The chipper is, it's the opening.
13 It was right here by the door. So we're on that wall
14 right there by the door.

15 Q: And how many buttons are there at that wall?

16 A: I got two buttons and a cut off switch.

17 Q: What are the buttons for?

18 A: One button is to cut the chipper off and cut the line
19 off. And the main switch is to cut the chipper off
20 completely. That means if it cut all the way off, you
21 can't mash the green button to start it again.

22 Q: So Dave blows the whistle or the horn. What do you do
23 first?

24 A: I go to my line and cut my line off. And I go to the
25 chipper and cut the chipper off and everything and come

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01152

1 back to my line and start cleaning up.

2 Q: Now, when you're cutting the chipper off you're pulling

3 down the big handle?

4 A: I'm mashing the buttons first, mashing the buttons

5 first. And then I cut the, I'll cut the switch off.

6 Q: Now, is the line still moving?

7 A: My line or the --

8 Q: This trash line.

9 A: Yes, sir.

10 Q: So it's still running?

11 A: Yes, sir.

12 Q: And this vibrating feeder that goes all the way out to

13 the chipper, it's still running?

14 A: Yes, sir.

15 Q: And whatever's on that line is still going into the

16 chipper?

17 A: Well, I done cut the main belts off is what I'm saying.

18 But my line, my trash line I always let it run to the

19 main line to go to the chipper.

20 Q: All right.

21 A: Because he told me to make sure my trash thing is

22 cleaned out before we start the next day. And he told

23 me if it's stacked on the line right here then just let

24 it stay until we come back the next day or until the

25 clean up people come in.

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01153

1 Q: My question is real simple. There's stuff on the line
2 whether it's this line or this line that's still going
3 into the chipper after the chipper is shut off?
4 A: Yes, sir.
5 Q: How long does that go on?
6 A: Okay. You're saying --
7 Q: How long do you let the vibrating feeder continue to
8 run after you've cut off the chipper?
9 A: Until it stops.
10 Q: Until what stops?
11 A: The chipper.
12 Q: So until it is finally dead stopped, the vibrating
13 feeder is still running?
14 A: No. Sometimes if I don't cut it off, Levain go back
15 there and cut it off if he sees the chipper stopped
16 because he can see it better than I can see it where
17 he's working at. If it didn't stop either he'll cut it
18 off or either I'll go cut it off.
19 Q: All right. The day that this was happening, the day
20 you got hurt, was the vibrating feeder still running?
21 A: No, sir.
22 Q: Okay. What did you do that day that was different or
23 the same? However you want to answer the question you
24 went back, cut off the chipper power, went back to your
25 workstation, what did you do next?

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01154

- 1 A: I start cleaning up on my workstation. I did that
2 every time I cut it off I'll go back and clean my
3 station up.
- 4 Q: All right. And I understood that somehow you got the
5 information and you said it was Levain?
- 6 A: Yes, sir.
- 7 Q: You call him Levan. I think it's spelled Levain, isn't
8 it?
- 9 A: Levain.
- 10 Q: Are you sure it was Levain or was it Mr. Pete or could
11 it have been either?
- 12 A: It be either one of them. One of them told me that the
13 chipper was making a funny noise.
- 14 Q: All right. Now, how long had you been at your station
15 cleaning up since the time you came back from turning
16 off the power to the chipper?
- 17 A: A good full, about a good seven minutes until I got a
18 call, not a call about it. Somebody told me that they
19 heard a tapping noise to the machine. And I stayed
20 another good five minutes on my machine to finish
21 cleaning up to make sure that the, that my line, not
22 the machine, but my line is straight clean because
23 sometimes, you know, if I don't clean my line and start
24 the next morning, first thing I know my line jam up.
- 25 Q: All right. During that time that you were back at the,

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01155

1 at your cleaning station or cleaning your station, was
 2 the vibrating feeder still running?
 3 A: Yes, sir.
 4 Q: So when you went back out and took a look at the
 5 machine and tried to test it with the stick, you know,
 6 was the vibrating feeder still running then?
 7 A: No, sir.
 8 Q: Why wasn't it?
 9 A: Because I cut it off when I was going out the door. I
 10 had cut it off.
 11 Q: Was there anything left on the vibrating feeder still
 12 going into the machine?
 13 A: No, sir.
 14 Q: All right. When you went to find Woodrow, you had to
 15 go from one end of the mill to the other?
 16 A: Yes, sir.
 17 Q: You remember he was doing some kind of work you thought
 18 he was welding?
 19 A: Yes, sir.
 20 Q: At the time you got up there, I mean, did you have any
 21 long conversation with him?
 22 A: No, sir. It was not quick and not long. He was like,
 23 you know, well, go find Leroy to see what's what and
 24 come back and tell me what's going on. So I told him
 25 and everything, you know --

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01156

- 1 Q: When you went to find Leroy did you tell him any part
2 of what you said about Mr. Woodrow said you need to
3 come help me?
- 4 A: Uh-huh (affirmative response). Yes, sir. Yes, sir.
- 5 Q: All right. Now, at that point did you already, had you
6 already seen that the pin was out of the left side of
7 the machine?
- 8 A: Yes, sir.
- 9 Q: So you already knew that?
- 10 A: Well, as I went back to inspect it I didn't see the pin
11 in there.
- 12 Q: All right. Well, it wasn't there one way or the other?
- 13 A: No, sir.
- 14 Q: Okay. All right. This training that you had, you were
15 asked some questions about the things you were warned
16 about on this machine, things that were dangerous about
17 being around that machine. Okay. As far as opening
18 the hood and anything, you were shown a diagram, I
19 think they called it a pictogram, a decal that was
20 supposedly on the machine, certainly it looks like it
21 was in a number of places. Did you ever inspect that
22 decal? I mean, did you notice the decal at all? Was
23 it different in some way than what was on the other
24 machine?
- 25 A: Uh-huh (affirmative response).

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01157

1 MR. OTT: Objection to the form of the questions.

2 Q: It was a bad question. But, you know, at the time that

3 you went to realize that this new Morbark machine was

4 there, how was it different than the one that was there

5 before?

6 A: The one there before had more stickers on it.

7 Q: But one of the stickers that was on the new machine was

8 the thing that Mr. Ott shows you?

9 A: Say that again.

10 Q: Well, that sticker that --

11 MR. JONAS: Thank you, Curtis.

12 Q: This thing that is marked as an exhibit, you knew that

13 was there on the machine, on this new machine?

14 A: Yes, sir.

15 Q: Okay. How closely did you inspect it? Did you read

16 that language before today or before the accident?

17 A: I read it on the old one. I kept seeing it on the old

18 one.

19 Q: Something like that you recall?

20 A: Yes, sir. Something like this.

21 Q: So as far as the information there, it's not new

22 information to you, whether you had the same sticker or

23 not?

24 A: Yes, sir.

25 Q: All right. Now --

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01158

1 MR. OTT: I just want to put on the record that
2 we're referring to Exhibit Number One, Defendant's
3 Exhibit Number One.

4 Q: But now that this is blown up for us in this exhibit,
5 do you notice anything different about that picture
6 than, does that look like the machine you were working
7 on?

8 A: Yes, sir.

9 Q: How does it look the same? It's got a hood?

10 A: It don't have that right there on there.

11 Q: You're referring to this thing at the top, looks I
12 think we're calling it --

13 A: That lock out switch.

14 Q: Some kind of device at the top. That's different?

15 A: (Nods head affirmatively.)

16 Q: And the way you interpret this with this little man
17 behind the hood, what does that mean to you? What
18 message do you get out of that?

19 A: That he got cut up or something. You can get hurt.

20 Q: All right. Now, as to the specific problem of getting
21 hit in the head, did Uncle Dave ever tell you that that
22 was one of the things that could happen on the machine?

23 A: No, sir.

24 Q: Did Leroy ever say that was one of the specific things
25 that could happen?

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01159

- 1 A: No, sir.
- 2 Q: Did they tell you that getting caught or getting cut on
- 3 this machine is one of the things that could happen?
- 4 A: That's all he was talking about, getting cut up.
- 5 Q: There's no question that you knew how to check the
- 6 machine to see if it was stopped?
- 7 A: (Nods head affirmatively.)
- 8 Q: You talked to, answered the question about looking at
- 9 different places on the machine?
- 10 A: Yes, sir.
- 11 Q: Who told you those things?
- 12 A: Mr. Woodrow and Uncle Dave told me to inspect the
- 13 machine before you open it to make sure the belts ain't
- 14 turning and everything is off.
- 15 Q: And this business about using the stick, how long had
- 16 you been using the stick to check the machine?
- 17 A: Since I started.
- 18 Q: So all 2004 sometime?
- 19 A: Yes, sir.
- 20 Q: What type of stick would you use?
- 21 A: A stick came off the line. It could be long, it can be
- 22 short.
- 23 Q: Uh-huh (affirmative response).
- 24 A: But I always used a long one, a nice thick size.
- 25 Q: At the time that you went to, first realized what had

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01160

1 questions that you can honestly say under oath sworn to
2 God that your recollection is reliable about those
3 things?

4 MR. OTT: Objection to the form.

5 A: Yes, sir.

6 Q: All right. And on the occasions that you've said you
7 can't remember, are those occasions that there's no way
8 you can remember or is there any way you can help
9 remember those things, any writings or pictures or
10 documents? I mean, do you have any other material that
11 will help you remember?

12 A: No, sir.

13 Q: All right. That's all I've got. I'm sure Mr. Ott will
14 have some more.

15 **RE-EXAMINATION BY MR. OTT:**

16 Q: Just a couple, Mr. Holland, if you're ready to go. Or
17 if you need to take a break, just holler.

18 A: Go ahead.

19 Q: Had you ever seen one of the pins missing that held
20 down the hood before the day of this accident?

21 A: Say that again.

22 Q: You said that one of the pins that held down the hood
23 was missing on the day of the accident; right?

24 A: Uh-huh (affirmative response).

25 Q: Is that a yes?

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01161

- 1 A: Yes, sir.
- 2 Q: Had you ever seen that before during the entire time
- 3 where you were in charge of changing the knives?
- 4 A: No, sir.
- 5 Q: So that was something else that was completely out of
- 6 ordinary from this particular day?
- 7 A: Yes, sir.
- 8 Q: Did you see the pin?
- 9 A: I looked for it but I didn't see it.
- 10 Q: It wasn't on the ground?
- 11 A: I looked around the chipper area and stuff and I did
- 12 not see it.
- 13 Q: Do you know where it was?
- 14 A: No, sir. See, what I do, I change the chipper in the
- 15 afternoon. And he have a clean up crew come in. They
- 16 also use the chipper. They also change the blades.
- 17 When I get through changing my blades and they come and
- 18 work and stuff and they got to change the blades
- 19 theirself. And some mornings I crank the chipper up
- 20 and some mornings I don't. Woodrow will come in and he
- 21 will go straight back there and crank the chipper up.
- 22 He want to make sure it runs right, make sure it sounds
- 23 right.
- 24 Q: Do you know how long that pin had been missing?
- 25 A: Huh-uh (negative response).

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01162

- 1 Q: Is that a no?
- 2 A: No, sir. No, sir.
- 3 Q: You're saying that there's a clean up crew that would
- 4 come in after you had changed the knives at the end of
- 5 the shift?
- 6 A: Yes, sir.
- 7 Q: Why would they need to change the knives again if you
- 8 just had done that?
- 9 A: No. They clean the mill up. We have a lot of
- 10 unnecessary boards we don't need they chips up inside
- 11 the chipper. Now, if they don't change the blades when
- 12 they get through cleaning the mill up, then I start my
- 13 morning up, you know, I crank the chipper up, the
- 14 blades going to get dull within two hours. If the
- 15 blades get dull, within two hours that's cutting our
- 16 production down. That's going up against production.
- 17 I'm going to get write up and blamed for that.
- 18 Q: So would you have to change blades then in the morning
- 19 even before lunch on some times?
- 20 A: Yes, sir.
- 21 Q: Would you still follow the same procedure?
- 22 A: Say that again.
- 23 Q: Would you still follow the same procedure for changing
- 24 the blades? Turn it off, lock it out, wait for the
- 25 wheel to stop?

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01163

- 1 A: Yeah.
- 2 Q: Loosen one pin, loosen the other pin, open the hood?
- 3 A: Everything stop, I mean, you know, I would do my
- 4 routine like that. And everything goes good when I do
- 5 the routine like that..
- 6 Q: Okay. Whether we call it a routine or a procedure or
- 7 some other word, clearly there was a set order for the
- 8 way you would go about changing the knives; correct?
- 9 A: Yes, sir.
- 10 Q: And that order was the same whether it was the green
- 11 machine, the first 48-inch chipper or the 58-inch
- 12 chipper --
- 13 A: Yes, sir.
- 14 Q: -- from the date of the accident?
- 15 A: Yes, sir.
- 16 Q: To this day do you know why that pin was missing?
- 17 A: No, sir.
- 18 Q: That's all I've got.

19 MR. JONAS: Let's get this marked.

20 **(Plaintiff's Exhibit Number One was marked for**

21 **identification purposes.)**

22 Further deponent sayeth not.

23 **(There being no further questions, the deposition concluded**

24 **at 3:30 p.m.)**

25

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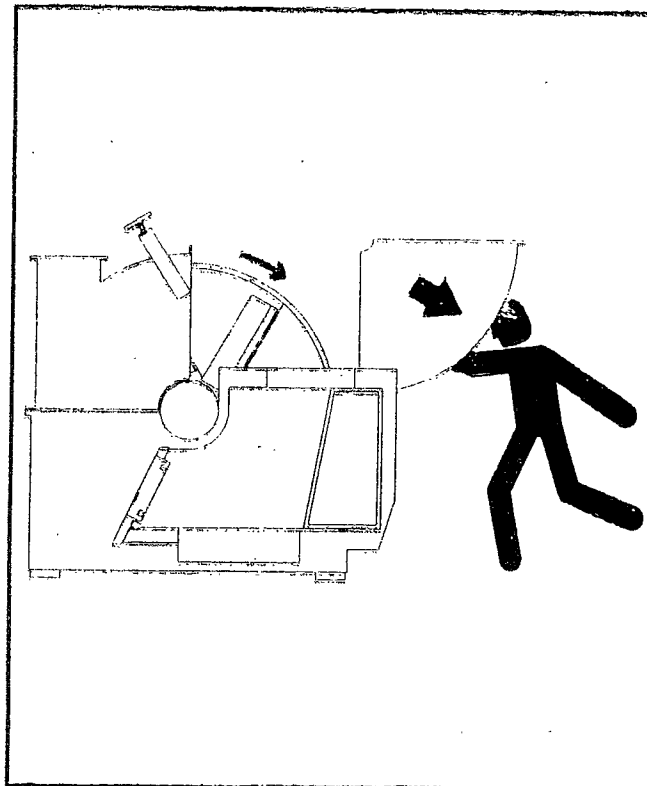
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01164



⚠ DANGER

- Never operate chipper with missing hood bolts.
- Never operate chipper without hood lock secured.
- Never open hood while disc is turning.
- To confirm disc is stopped, visually check disc shaft or drive wheel.

97-4263



PH 0003

01165

STATE OF SOUTH CAROLINA) IN THE COURT OF COMMON PLEAS
COUNTY OF CLARENDON)
Andreal Holland by his)
Guardian Ad Litem)
Peggy Knox,)
Plaintiff,) C/A NO. 2008-CP-14-00461
vs.)
Morbark, Inc., Precision)
Husky Corporation, A & K)
Mulch, LLC, and Watford)
Industry, Inc.,)
Defendants..)

DEPOSITION OF

PEGGY KNOX

Friday, January 28, 2011
10:00 a.m.-12:11 p.m.

The deposition of PEGGY KNOX, taken on behalf of the Defendant at the offices of Turner Padgett Graham & Laney, P.A., 1901 Main Street, 17th Floor, Bank of America Building, Columbia, South Carolina, on the 28th day of January, 2011, before Lyn Allen, Court Reporter and Notary Public in and for the State of South Carolina, pursuant to Notice of Deposition and/or agreement of counsel.

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01166

1 **PEGGY KNOX**, being duly sworn, deposes and testifies as
2 follows:

3 **MS. KNOX - EXAMINATION BY MR. OTT:**

4 Q: Tell us your full name please.

5 A: Peggy Taylor Holland Knox.

6 Q: Ms. Knox, we've obviously met before throughout the
7 depositions in this case. As you know I represent
8 Morbark in the lawsuit you have brought against them
9 along with your son. We're here today to take your
10 deposition. Have you ever given a deposition before?

11 A: Yes.

12 Q: Most people have an easier time answering that question
13 than that.

14 A: The reason being is that I have to think back because
15 when he worked at workers' comp whether or not I was
16 there supporting him or whether or not I actually had
17 to give a deposition.

18 Q: Are you talking about the workers' comp deposition that
19 your son gave in connection with this June 1st 2006
20 accident?

21 A: That's correct.

22 Q: And I've seen the transcript of that. And you
23 obviously actively participated during that deposition;
24 correct?

25 A: That is correct.

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01167

1 A: That's fine.

2 Q: One thing our Supreme Court requires us to tell all
3 witnesses is that now that the deposition has begun if
4 you have any questions at all about anything that
5 occurs during the deposition, anything that I ask of
6 you, what the court reporter is doing or anything else,
7 you need to to direct your questions towards me rather
8 than your own lawyer. Do you understand that?

9 A: Yes.

10 Q: And do you understand also that if we do take a break
11 you're not allowed to have any substantive
12 conversations with your lawyer concerning the details
13 of this case? Do you understand that?

14 A: Yes.

15 Q: And if you do then I'm allowed to ask about that
16 conversation when normally that's prohibited by the
17 attorney client privilege. Do you understand that?

18 A: Yes.

19 Q: Do you understand the importance of testifying
20 truthfully under oath?

21 A: Yes.

22 Q: Do you understand what perjury is?

23 A: Yes.

24 Q: Okay. Have you been present for nearly every
25 deposition in this case?

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01168

1 A: No.

2 Q: Was Andreal ever diagnosed with any learning
3 difficulties or disabilities?

4 A: Yes.

5 Q: Tell me about that.

6 A: Andreal was diagnosed with dyslexia.

7 Q: At what age?

8 A: I think he was at Alcolu Elementary School during that
9 time. Maybe fourth grade. Noted that he could do the
10 work. But when you start reading he had difficulties
11 when you talk about looking at it and understanding it.
12 And he would skip words and stuff like that. So
13 because he was falling behind that was the thing we
14 needed to do. Figure out what was going on.

15 Q: Who actually diagnosed him with dyslexia?

16 A: The school psychologist.

17 Q: Did they offer a treatment program?

18 A: They offer accommodations. They offered additional
19 help. Sounded like resources accommodations.

20 Q: Was he ever diagnosed with any other learning problems,
21 disabilities or the like?

22 A: No.

23 Q: Did you ever have to hold him back or was he ever held
24 back a grade while he was in school?

25 A: Yes.

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01169

1 Q: How many times?

2 A: Twice.

3 Q: Tell me about the most recent, well, I guess the first
4 one.

5 A: Well, he was not progressing. And he was just not
6 academically ready for the next grade.

7 Q: Well --

8 A: And a lot of time it is maturity level. When I say
9 maturity level, being able to read, understand and not
10 knowing that there was dyslexia. But the fact that he
11 was just not up to grade level with other children.
12 His sister. And that was that decision. It was hard.
13 But I mean that was the decision in hopes that he would
14 be able to understand if it was repeated. And that was
15 why that occurred. The second one was more or less his
16 grades. I mean, he just didn't do, I mean, you have to
17 pass so many classes in order to go to the next grade.

18 Q: How old was Andreal when he was first held back a
19 grade?

20 A: I'm thinking first grade. And the next may have been
21 seventh or eighth grade.

22 Q: Whose decision was it to hold him back when he was in
23 first grade?

24 A: Mine along with his teacher. Well, his teacher
25 recommended it. It was my decision whether or not I

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1 wanted him to go to second grade or not.

2 Q: And in seventh or eighth grade why was he held back?

3 A: Well, you have to pass, during that time I think you
4 had to do, pass, score certain on the BSAP as well as
5 the classes. And that was, he just didn't meet the
6 standards.

7 Q: So correct me if I'm wrong then. So when he got to
8 seventh or eighth grade he was unable to complete the
9 requirements to go to the next grade?

10 A: That is correct.

11 Q: So that wasn't a decision to be made, that was simply
12 this is what's happened?

13 A: Well, you know, they always call you in for a parent's
14 conference. And it's more or less a choice but --

15 Q: Did his twin ever have any learning difficulties or
16 problems?

17 A: No.

18 Q: Did any of his other siblings?

19 A: No.

20 Q: Did you ever get a sense for why that was, what made
21 Andreal have these problems whereas your other children
22 didn't?

23 A: No. It was just based on the testing scores, his
24 abilities and monitoring. I was one of those parents
25 that stayed on top of the children, you know, academics

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1 or whatever it was that was going on. And the reality
2 is if you need some additional help you need it.

3 Q: But as far as a medical reason or anything like that,
4 have you ever gotten an explanation, you know, his twin
5 has done well in school, progressed, why didn't
6 Andreal, those type of questions?

7 A: When I took him to his care providers they did the
8 milestones and he was on point. When it came to the
9 physical, when it came to the cognitive, when it came
10 to actual doing things, when it came to like the
11 reading, that was where it was the difficulty. You
12 know, they do those milestones throughout the life
13 period. And as he progressed through each one of those
14 stages his physical development and the doctors had no
15 concerns about the differences between the height and
16 the sizing. His body dispositions. None of that was a
17 concern. And I'm thinking the last time, since you
18 mentioned the differences in the body size, he had a
19 concern and this was when he was in high school and
20 when he went to the physician at that time, the
21 physician just recommended us to go Wal-Mart and buy
22 one of those things you put in your shoe, an insert in
23 your shoe. So they really had no concerns with his
24 development.

25 Q: You mentioned he went to Alcolu Elementary?

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- 1 lump sum.
- 2 Q: Who is the attorney for the insurance company and the
3 employer?
- 4 A: It was Southeastern. Yeah. Southeastern.
- 5 Q: Southeastern Claims Services?
- 6 A: Yes.
- 7 Q: I think that's probably a claims manager. Do you know
8 who the attorney is actually involved?
- 9 A: No.
- 10 Q: It would have been probably the one who took Andreal's
11 deposition?
- 12 A: That is correct.
- 13 Q: Do you remember who that was?
- 14 A: No. I don't.
- 15 Q: Who was Andreal's attorney in that?
- 16 A: Peake and Fowler.
- 17 Q: When was the last time that Andreal worked?
- 18 A: June 1st 2006.
- 19 Q: Has he applied for any jobs since that date?
- 20 A: No.
- 21 Q: Has he made any attempt to work since that date?
- 22 A: When you say work, he went through vocational rehab to
23 assess his abilities and his skills to see whether or
24 not he could work.
- 25 Q: When was that?

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1 didn't have to worry. Now, and I'm going to give you
2 an example, I operate the food pantry. And we come to
3 Harvest Hope once a week. And I bring him with me to
4 help. And he's had a couple of incidents there. And
5 in one a verbal altercation with another agent on site
6 because he felt that that person should have shared
7 something that we needed as well. Not understanding
8 the fact that that person had it first. And he was
9 trying to argue and, with this person. And when you
10 talk to him you can give him directions. When you look
11 you actually have to go and do it again. Another
12 incident is a lot of times the bread and the food
13 produce that comes to Harvest Hope, you have to monitor
14 it because some of it is rotten. The bread is really
15 outdated. And I told him, I said, go get some. And
16 I'd tell him, a couple of times i got back to the
17 church because I told him to get it and put it here.
18 Have to check it. The bread was mold and way outdated.
19 Some of the fruits were actually just, we could, we
20 would have seen it. We would have known, you know,
21 it's not, you just need to leave that and get, sort
22 through and get the good ones. He just, that thought
23 process. Decisions, he really have right now when it
24 comes to problem solving and decisions, that's a lot
25 different. Most recently he had complained to me about

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1 with anybody who will ask him, he looks forward to
2 going on Fridays to the food pantry because that's the
3 only outlet he really have for doing anything he feels,
4 he feels is productive. And that requires me doing
5 three jobs along with somebody else.

6 Q: All right. Let's take a short break.

7 A: Okay.

8 (Break - 11:57 a.m. - 12:03 p.m.)

9 Q: Ms. Knox, you will be happy to know those are all the
10 questions I have for you.

11 A: Really?

12 MR. JONAS: Peggy, this gentleman may have some.

13 A: Okay.

14 MR. TYLER: No.

15 **EXAMINATION BY MR. JONAS:**

16 Q: Okay. I do. Just a couple of things to clarify.
17 After Curtis asked you some questions about when you
18 first had a chance to communicate with Andreal and I
19 just wanted to be a little more specific. When could
20 he speak with you for the first time?

21 A: He spoke with me the first time after he had his mouth
22 unwired. And that would have been October, probably
23 October, September or October. It was a while because
24 the healing process. Exact dates I'm not sure.

25 Q: Okay.

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1 A: But it was after the wiring.

2 Q: Let me understand. You went from Richland Memorial
3 after he was, and was transferred to the Charlotte
4 rehab facility, you were with him during that period of
5 time?

6 A: That is correct.

7 Q: All right. How long was he in Charlotte and where were
8 you at while he was in Charlotte?

9 A: When they told me they were going to transport him from
10 Richland Memorial to Charlotte Rehab, I was immediately
11 behind the ambulance. When we arrived there they had a
12 bed in his room for me. And I stayed in the room with
13 him until they discharged him. When they discharged
14 him he was outpatient in Charlotte.

15 Q: Did, during that time did he still have the wires in
16 place?

17 A: The wires. Yes. That is correct. He was still wired.

18 Q: At some point who was it that removed the wires?

19 A: Dr. Cross removed those wires.

20 Q: So then you would have come back to Columbia at
21 Richland Memorial at sometime after the discharge from
22 Charlotte?

23 A: After the discharge from Charlotte we met, we went to
24 Dr. Cross's office. And he removed those wires. He
25 sedated him and removed those wires from his mouth.

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1 Q: All right. And it was sometime after that that you
2 spoke with Andreal?

3 A: Yes. That is correct.

4 Q: Was he able to speak to you after that?

5 A: Yes. He had difficulties but he spoke. Yes, he did.

6 Q: When you say he had difficulty, was it in forming
7 words?

8 A: Forming words. Basically trying to get his words and
9 his thoughts together to actually form a sentence and
10 talk.

11 Q: All right. The other question I had was Mr. Ott asked
12 you about speaking with employees of A&K Mulch. And I
13 think we left it at, and you clarified it about
14 speaking with those employees at various times. And I
15 think we missed that interim period between the date of
16 the accident and when those employees were deposed.
17 Was there an occasion during, before the depositions
18 were conducted particularly of David Wright that you
19 spoke with David Wright about this accident?

20 A: That is correct.

21 Q: And did you arrange an interview with David Wright at
22 your house?

23 A: That is correct.

24 Q: A media interview?

25 A: Yes. That is correct.

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1 Q: Do you recall Mr. Wright denied having that interview
2 at the time of his deposition?

3 A: That is correct.

4 Q: Is there any reason that you know of that David Wright
5 wouldn't have made an answer directly in response to
6 the question of whether he had had any such a
7 discussion with me? I mean, has David Wright told you
8 why --

9 A: No, he did not.

10 Q: -- he didn't disclose that?

11 A: No. He did not.

12 Q: Why did you arrange that meeting with me and David
13 Wright?

14 A: Because I wanted to find out just what had happened so
15 we could get some clarification surrounding Andrean's
16 accident. Plus he was telling Drean he knew what
17 happened and just different things like that.

18 Q: That's all the questions I have.

19 A: Okay.

20 **RE-EXAMINATION BY MR. OTT:**

21 Q: Were you present when Mr. Jonas met with Mr. Wright?

22 A: Initially, yes.

23 Q: Explain what you mean by that?

24 A: We located him, set it up, introduction, listened to
25 part of the conversation as to what happened. And I

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1 just left.

2 Q: What part do you remember?

3 A: He talked about Dreal, the incident. He talked about
4 how he saw it happen, how he think it happened. And he
5 was just sorry. And he talked about stickers. He
6 talked about stickers not being on the machine. I do
7 remember that. He looked at, it was just a lot that he
8 talked about that he just didn't mention at all at that
9 deposition.

10 Q: What was different than he told you or that you heard
11 him say with your lawyer than how he testified under
12 oath?

13 A: Well, under oath he testified that he told Dreal, don't
14 open the hood or something like that, that he would get
15 hit in the head. I think that was his statement. And
16 at that time he never mentioned that at our house, at
17 my house. He never mentioned anything about warning
18 Dreal or anything. And when you said that, I'm
19 thinking back. When during that interview he led me to
20 believe, and I'm not an engineer, that it was a faulty
21 machine. But then at that day he had the deposition,
22 it was something totally different. If we're talking
23 about prior to the hearing, those depositions, that's
24 it.

25 Q: Have you spoken with David Wright since his deposition?

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA

CHARLESTON DIVISION

CIVIL ACTION NO.: 2:09-cv-00898-PMD

Andreal Holland by his Guardian Ad Litem)
Peggy Knox,)

Plaintiff,)

vs.)

Morbark, Inc., Precision Husky)
Corporation, A & K Mulch, LLC, and)
Watford Industry, Inc.,)

Defendants.)

**DEFENDANT MORBARK, INC.'S
ANSWERS TO PLAINTIFF'S
INTERROGATORIES**

Defendant Morbark, Inc. ("Morbark") answers Plaintiff's Interrogatories, pursuant to Rule 33 of the Federal Rules of Civil Procedure, as follows:

1. Give the names and addresses of persons known to the parties or counsel to be witnesses concerning the facts of the case and indicate whether or not written or recorded statements have been taken from the witnesses and indicate who has possession of such statements.

ANSWER:

At this time, Morbark is unaware of any specific witnesses besides Andreal Holland concerning the facts of this case, but anticipates that the employees, agents, contractors, or representatives of the various parties to this action may be witnesses. As discovery into Plaintiff's allegations is ongoing, Morbark reserves the right to supplement this answer as individual witnesses are identified. Likewise, Morbark reserves the right to call as witnesses at

trial any individuals or witnesses identified by the various parties in this action in their discovery answers.

2. Set forth a list of photographs, plats, sketches or other prepared documents in possession of the party that relate to the claim or defense in this case.

ANSWER:

Morbark objects to this Interrogatory to the extent that it seeks information protected from disclosure by the attorney client privilege, Fed. R. Civ. P. 26(b)(3), and/or the work product doctrine. Notwithstanding said objections, and without waiving the same, Morbark states that it is in possession of the following:

- Purchase order, final inspection reports, quality control inspection reports, equipment load completion report, and chipper check sheet for a Model 58" chipper with serial number 914 that Morbark sold on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000001-000010];
- Documentation regarding Morbark Model 58" chipper with serial number 109 that Morbark sold to Pioneer Logging Machinery Company on or about August 13, 1969 [Morbark-000011];
- Morbark Model 48" and 58" Stationary R.H. Chipper Parts Manual [Morbark-000012-000022];
- Part No. 30160-580 Heavy Duty Fan Blade diagram [Morbark-000023];
- Morbark Model 48" and 58" Stationary R.H. Chipper Safety and Operators Manual [Morbark-000024-000061];
- Decals that were attached to and included on the Model 58" chipper with serial number 914 when Morbark sold it on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000062-000085];
- Exit photos of the Model 58" chipper with serial number 914 when Morbark sold it on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000086-000091];

- Decal kits for Morbark Model 58" wood chippers with serial numbers 799, 835, 894, 913, 914 [Morbark-000092-000096];
- Morbark Bark Bulletins [Morbark-000097-000108];
- Insurance declaration pages [Morbark-000109-000111].

Morbark states that it is also in possession of the various documents and photographs produced by the parties in this case.

3. Set forth the names and addresses of all insurance companies which have liability insurance coverage relating to the claim and set forth the number or numbers of the policies involved and the amount or amounts of liability coverage provided in each policy.

ANSWER:

Lexington Insurance Company
100 Summer Street
Boston, MA 02110-2103

Policy No. 6761918
Limit: \$1,000,000

Axis Surplus Insurance Company
11680 Great Oaks Way
Suite 500
Alpharetta, GA 30022

Policy No. EAU701377/01/2006
Limit: \$5,000,000

Arch Specialty Insurance Company
One Liberty Plaza
53rd Floor
New York, NY 10006

Policy No. UXP00643501
Limit: \$10,000,000

4. List the names and addresses of any expert witnesses whom the party proposes to use as a witness at the trial of the case.

ANSWER:

Morbark has not yet identified what expert witnesses it may use to testify at the trial of this case. This answer will be supplemented if and when appropriate, and in accordance with any scheduling order issued by the Court.

5. For each person known to the parties or counsel to be a witness concerning the facts of the case, set forth either a summary sufficient to inform the other party of the important facts known to or observed by such witness, or provide a copy of any written or recorded statements taken from such witnesses.

ANSWER:

See answer to Interrogatory No. 1.

6. For each expert whom the party proposes to use as a witness at the trial of the case, set forth a summary of his anticipated testimony sufficient to advise the undersigned party of the evidence, information and documents utilized by such expert in his review of this matter, the opinion reached by such expert on the basis thereof and the theory which such opinion is based.

ANSWER:

See answer to Interrogatory No. 4.

7. Identify the date of manufacture and distribution of the machine.

ANSWER:

At this time, Morbark has not confirmed that the product Plaintiff describes ("Morbark Model 58, 150 h.p. Wood Chipper Machine, Serial #914") was actually involved in the incident referred to in Plaintiff's Complaint. Notwithstanding, Morbark states that it did manufacture and sell a Model 58" chipper with serial number 914 on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530.

8. Identify each and every assembly, subassembly, part(s), disposable part(s) and/or renewable part(s) that was/were included and/or attached to the machine as it was finally manufactured and distributed.

ANSWER:

Morbark objects to this Interrogatory as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Interrogatory is not limited to the specific part or assembly of the product that Plaintiff alleges to be defective in this case. If Plaintiff limits the information sought in this Interrogatory, or clarifies what specific information is sought, Morbark will reconsider its answer and attempt to respond further. Notwithstanding said objections, and without waiving the same, Morbark identifies the following:

- Morbark Model 48" and 58" Stationary R.H. Chipper Parts Manual [Morbark-000012-000022];
- Part No. 30160-580 Heavy Duty Fan Blade diagram [Morbark-000023].

9. State the name, address of the purchaser of the machine and date of delivery.

ANSWER:

See answer to Interrogatory No. 7.

10. Identify in detail all markings, warnings and operator instructions that were attached to, or incorporated in/on, the machine and/or machine components.

ANSWER:

Morbark objects to this Interrogatory as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Interrogatory is not limited to any relevant time period or to the specific part or assembly of the product that Plaintiff alleges to be defective in this case. If Plaintiff limits the information sought in this Interrogatory, or clarifies what specific information is sought, Morbark will reconsider its answer and attempt to respond further. Notwithstanding said objections, and without waiving the same, Morbark identifies the following:

- Decals that were attached to and included on the Model 58" chipper with serial number 914 when Morbark sold it on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000062-000085];
- Exit photos of the Model 58" chipper with serial number 914 when Morbark sold it on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000086-000091].

11. Identify in detail all markings, warnings, operator instructions, parts manual(s), maintenance manual(s), notices, revisions, that were originally distributed with the machine and/or sent after the machine was shipped.

ANSWER:

Morbark objects to this Interrogatory as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Interrogatory is not limited to any relevant time period or to the specific part or assembly of the product that Plaintiff alleges to be defective in this case. If Plaintiff limits the information sought in this Interrogatory, or clarifies what specific information is sought, Morbark will reconsider its answer and attempt to respond further. Notwithstanding said objections, and without waiving the same, Morbark identifies the following:

- Morbark Model 48" and 58" Stationary R.H. Chipper Parts Manual [Morbark-000012-000022];
- Morbark Model 48" and 58" Stationary R.H. Chipper Safety and Operators Manual [Morbark-000024-000061];
- Decals that were attached to and included on the Model 58" chipper with serial number 914 when Morbark sold it on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000062-000085];
- Exit photos of the Model 58" chipper with serial number 914 when Morbark sold it on or about March 29, 1996 to Johnson Sherman

Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000086-000091].

12. Identify (including name, address and available contact information) the person(s) that designed and approved the design of the machine.

ANSWER:

Norval Morey (deceased) originally designed the Model 58" wood chipper.

13. If any changes, revisions or modifications were made in the design of the machine, components, disposable items, or warnings, identify what modifications or repairs were made, including the nature of repair/modification and date of such activity and who requested the changes.

ANSWER:

Morbark objects to this Interrogatory as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Interrogatory is not limited to any relevant time period or to the specific part or assembly of the product that Plaintiff alleges to be defective in this case. To the extent this Interrogatory seeks information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint, Morbark objects because such information constitutes post-manufacture evidence and/or subsequent remedial measures. If Plaintiff limits the information sought in this Interrogatory, or clarifies what specific information is sought, Morbark will reconsider its answer and attempt to respond further.

Notwithstanding said objections, and without waiving the same, Morbark states that the Model 58" wood chipper has undergone engineering/design changes since the first machine was designed, manufactured, and sold in 1969. However, none of the engineering/design changes relate to any of the alleged defects identified in Plaintiff's Complaint. Morbark specifically

objects to production of any information or documents regarding engineering/design changes unrelated to the alleged defects in this case. Notwithstanding said objections, and without waiving the same, Morbark identifies the following:

- Decal kits for Morbark Model 58" wood chippers with serial numbers 799, 835, 894, 913, 914 [Morbark-000092-000096];
- Morbark Bark Bulletins [Morbark-000097-000108].

14. What design or control features of the machine are intended to address operator safety and protection of the operator from injury?

ANSWER:

Morbark objects to this Interrogatory as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Interrogatory is not limited to any relevant time period or to the specific part or assembly of the product that Plaintiff alleges to be defective in this case. If Plaintiff limits the information sought in this Interrogatory, or clarifies what specific information is sought, Morbark will reconsider its answer and attempt to respond further.

15. What, if any, consideration was made during the design of the machine to equipping the machine with an interlock to prevent the hood/cutter access door from opening until the rotating cutting wheel stopped turning?

ANSWER:

Morbark objects to this Interrogatory as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Interrogatory is not limited to any relevant time period. Notwithstanding and without waving said objections, Morbark states that Norval Morey, deceased, was the original designer of the Morbark Model 58" chipper. It was originally designed and began as a

production unit around 1969. Norval Morey died in 1997. There are no notes, files or other documentation available today indicating what was or was not considered by Norval Morey at that time with regard to design considerations.

16. What, if any, consideration was made during the design of the machine to equipping the machine with a motion detector when the rotating cutting wheel had stopped turning?

ANSWER:

See answer to Interrogatory No. 15.

17. Please describe all written standards (including codes and regulations) which you or your designer consulted in your design of the machine.

ANSWER:

See answer to Interrogatory No. 15. Notwithstanding said objections, and without waving the same, Morbark refers Plaintiff to Michigan OSHA General Industry Safety Standard R 408.15231 (Part 52 Sawmills) regarding chippers and hogs, which Morbark considers in the design and manufacture of wood chippers similar to the machine identified in Plaintiff's Complaint.

18. Identify any and all machines that were/are manufactured by Morbark, Inc., with either an interlock device and/or motion detector.

ANSWER:

Morbark objects to this Interrogatory as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Interrogatory is not limited to any relevant time period or to the machine or product that Plaintiff alleges to be defective in this case. To the extent this Interrogatory seeks

information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint, Morbark objects because such information constitutes post-manufacture evidence and/or subsequent remedial measures.

19. Identify the number, date of manufacture and serial number of all Morbark Model 58 machines manufactured.

ANSWER:

Morbark objects to this Interrogatory as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Interrogatory is not limited to any relevant time period or to the machine or product that Plaintiff alleges to be defective in this case. To the extent this Interrogatory seeks information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint, Morbark objects because such information constitutes post-manufacture evidence and/or subsequent remedial measures.

20. Identify (by providing name, address and model) of any known competitors who manufacture(ed) and/or distribute(ed) a wood chipper machine incorporating either an interlock to prevent the hood/cutter access door from opening until the rotating cutting wheel stopped turning and/or a motion detector to determine when the rotating cutting wheel had stopped turning.

ANSWER:

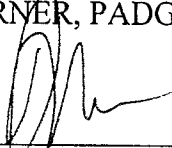
Morbark objects to this Interrogatory as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Interrogatory is not limited to any relevant time period or to the machine or product that Plaintiff alleges to be defective in this case. Further, this Interrogatory seeks

information that is in the public domain and, thus, equally available to Plaintiff. To the extent this Interrogatory seeks information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint, Morbark objects because such information constitutes post-manufacture evidence and/or subsequent remedial measures.

May 26, 2009

TURNER, PADGET, GRAHAM & LANEY, P.A.

By:


Curtis L. Ott (Fed. I.D. No. 5939)
David C. Marshall (Fed. I.D. No. 9854)
Post Office Box 1473
Columbia, SC 29202
Phone: (803) 254-2200
Fax: (803) 799-3957

**ATTORNEYS FOR DEFENDANT
MORBARK, INC.**

STATE OF SOUTH CAROLINA

COUNTY OF CLARENDON

IN THE COURT OF COMMON PLEAS

Civil Action No.: 2008-CP-14-0461

Andreal Holland by his Guardian Ad Litem
Peggy Knox,

Plaintiff,

vs.

Morbark, Inc., Precision Husky
Corporation, A & K Mulch, LLC, and
Watford Industry, Inc.,

Defendants.

CERTIFIED TRUE AND CORRECT
OF ORIGINAL FILED ANSWERS TO PLAINTIFF'S
DATE 9/7/10 CONTINUING INTERROGATORIES
Beverly S. Roberts
CLERK OF COURT
CLARENDON COUNTY, SC

2010 SEP-7 PM 1:21

Defendant Morbark, Inc. ("Morbark") answers Plaintiff's Continuing Interrogatories, pursuant to Rule 33 of the South Carolina Rules of Civil Procedure, as follows:

21. Identify in detail all parts, materials, decal kits, operator instructions, parts manual(s), maintenance manual(s), notices, revisions, that were shipped to J.C. Witherspoon, Inc. and/or A.K. [sic] Mulch, from Jan. 1, 2004 through December 31, 2006 regarding Mobark [sic] Model 48" and 58" chipper machines owned by J.C. Witherspoon, Inc. and/or A&K Mulch, LLC.

ANSWER:

After a duly diligent search, Morbark is unable to locate any sales or shipments of the above-referenced items to either of the entities identified in this interrogatory.

22. Identify (including name, address and available contact information) the person(s) that designed, wrote, produced, approved and distributed the "Mobark [sic] Model 48" and 58" Stationary R.H. Chipper Safety and Operators Manual" [Mobark [sic] 000024-000061] referred to in Mobark's [sic] Answers to Plaintiff [sic] Interrogatories #11 and Mobark's [sic] Response

machine design and/or safety engineering firm within the State of Michigan to review any design or change of design of any Mobark [sic] machine? If so, identify the firm, engineer, date and machine involved.

ANSWER:

Morbark objects to this Interrogatory as overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Interrogatory is not limited to the specific product at issue or to a reasonably relevant time period. Notwithstanding said objections, see Morbark's objections and answer to Interrogatory No. 15.

31. Did Mobark [sic] sell used chipper equipment of other manufacturers prior to March 1996? If so, how was the used equipment prepared for sale and advertised. [sic]

ANSWER:

Morbark objects to this Interrogatory as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Interrogatory is not limited to the specific product at issue or to a reasonably relevant time period.

32. Identify the person(s) responsible for compliance with machine design standards and regulations at Mobark [sic] from 1990-2006.

ANSWER:

Morbark objects to this Interrogatory as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Interrogatory is not limited to the specific product at issue or to a reasonably relevant time period. Notwithstanding said objections, Morbark states that

its design process takes into consideration standards that may be applicable to the design of its products, and this task is not designated to one specific person.

33. Identify any changes, revisions or modifications that were made in the design and manufacture of the Mobark [sic] Model 48" and 58" series chippers, as referred to in Mobark's [sic] Answers To Plaintiff [sic] Interrogatories #13, between 1969 and February, 1996.

ANSWER:

See Morbark's objections and answer to Interrogatory No. 13. Notwithstanding said objections, and without waiving the same, Morbark produces the following:

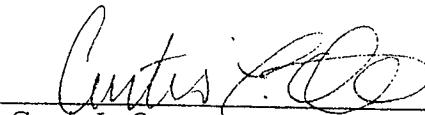
- a. Engineering change notices applicable to 58" Morbark chippers [Morbark-000112-000151]; and
- b. Drawings [Morbark-000152-000163].

Please note that these documents are being produced pursuant to the terms of the agreed upon Protective Order.

TURNER, PADGET, GRAHAM & LANEY, P.A.

August 26, 2010

By:



Curtis L. Ott
David C. Marshall
Post Office Box 1473
Columbia, SC 29202
Phone: (803) 254-2200
Fax: (803) 799-3957

**ATTORNEYS FOR DEFENDANT
MORBARK, INC.**

STATE OF SOUTH CAROLINA

COUNTY OF CLARENDON

Andreal Holland by his Guardian Ad Litem
Peggy Knox,

Plaintiff,

vs.

Morbark, Inc.,

Defendant.

IN THE COURT OF COMMON PLEAS

Civil Action No.: 2008-CP-14-0461

**DEFENDANT MORBARK, INC.'S
SUPPLEMENTAL ANSWERS TO
PLAINTIFF'S INTERROGATORY
NUMBERS 1, 5, & 32**

Defendant Morbark, Inc. ("Morbark") hereby supplements its answers Plaintiff's Interrogatories, pursuant to Rule 33 of the Federal Rules of Civil Procedure, as follows:

OMIT RESPONSES TO REQUEST TO

#1 AND #5

32. Identify the person(s) responsible for compliance with machine design standards and regulations at Mobark [sic] from 1990-2006.

ANSWER:

Morbark objects to this Interrogatory as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Interrogatory is not limited to the specific product at issue or to a reasonably relevant time period. Notwithstanding said objections, Morbark states that its design process takes into consideration standards that may be applicable to the design of its products, and this task is not designated to one specific person.

SUPPLEMENTAL ANSWER:

Morbark stands by and reiterates its original objections and response to this Interrogatory, and further objects to the extent this Interrogatory seeks information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint because such information constitutes post-manufacture evidence and/or subsequent remedial measures.

Notwithstanding said objections, and without waiving the same, Morbark states that there are no particular "design standards or regulations" specifically applicable to stationary wood chippers like the Morbark Model 58" stationary wood chipper at issue in this case. Further responding, and with respect to the Morbark Model 58" stationary wood chipper only, Morbark states that Norval Morey, as the original designer of the machine, was the person most responsible for the approval of any design changes until his death in 1997, including consideration of and compliance with all applicable standards and regulations, if any. Since then, any applicable "design standards and regulations" are considered by Morbark if there are any engineering changes to the 58" chipper that may implicate any such standards, and that such task is not designated to any one specific person. However, for the time period between 1997 and 2006, Morbark identifies Jim Strong as the person at Morbark that is most knowledgeable

about Morbark's process in evaluating design changes and considering and complying with any applicable standards and regulations for the 58" chipper.

TURNER, PADGET, GRAHAM & LANEY, P.A.

10-15, 2010

By:



Curtis L. Ott

David C. Marshall

Post Office Box 1473

Columbia, SC 29202

Phone: (803) 254-2200

Fax: (803) 799-3957

**ATTORNEYS FOR DEFENDANT
MORBARK, INC.**

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA

CHARLESTON DIVISION

CIVIL ACTION NO.: 2:09-cv-00898-PMD

Andreal Holland by his Guardian Ad Litem)
Peggy Knox,)

Plaintiff,)

vs.)

Morbark, Inc., Precision Husky)
Corporation, A & K Mulch, LLC, and)
Watford Industry, Inc.,)

Defendants.)

**DEFENDANT MORBARK, INC.'S
RESPONSES TO PLAINTIFF'S
REQUEST FOR PRODUCTION**

Defendant Morbark, Inc. ("Morbark") responds to Plaintiff's Request for Production pursuant to Rule 34 of the Federal Rules of Civil Procedure, as follows:

1. Any item, tangible object, documents, summary, sketch, photograph, electronic media or recording identified in Defendant's Answers to Plaintiff's Interrogatories.

RESPONSE:

Morbark objects to this Request to the extent that it seeks information protected from disclosure by the attorney client privilege, Fed. R. Civ. P. 26(b)(3), and/or the work product doctrine. Notwithstanding said objections, and without waiving the same, Morbark produces the following:

- Purchase order, final inspection reports, quality control inspection reports, equipment load completion report, and chipper check sheet for a Model 58" chipper with serial number 914 that Morbark sold on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000001-000010];

- Documentation regarding Morbark Model 58" chipper with serial number 109 that Morbark sold to Pioneer Logging Machinery Company on or about August 13, 1969 [Morbark-000011];
- Morbark Model 48" and 58" Stationary R.H. Chipper Parts Manual [Morbark-000012-000022];
- Part No. 30160-580 Heavy Duty Fan Blade diagram [Morbark-000023];
- Morbark Model 48" and 58" Stationary R.H. Chipper Safety and Operators Manual [Morbark-000024-000061];
- Decals that were attached to and included on the Model 58" chipper with serial number 914 when Morbark sold it on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000062-000085];
- Exit photos of the Model 58" chipper with serial number 914 when Morbark sold it on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000086-000091];
- Decal kits for Morbark Model 58" wood chippers with serial numbers 799, 835, 894, 913, 914 [Morbark-000092-000096];
- Morbark Bark Bulletins [Morbark-000097-000108];
- Insurance declaration pages [Morbark-000109-000111].

Morbark states that it is also in possession of the various documents and photographs produced by the parties in this case.

2. All witness statements, emails, party statements, summaries, photographs, recording (audio, video, electronic) regarding the Plaintiff's claim.

RESPONSE:

At this time, Morbark is unaware of the identity of any specific witnesses concerning the facts of this case and does not have any documents responsive to this Request.

3. A complete copy of all liability insurance policies, current declarations page and indemnity agreements(s) referring to such policy/policies, covering the Defendant Morbark, Inc. for the claim by Plaintiff resulting from his injury on June 1, 2006.

RESPONSE:

Morbark produces the following:

- Insurance declaration pages [Morbark-000109-000111].

4. A copy of all reports and related correspondence of any expert witness retained on behalf of the Defendant.

RESPONSE:

Morbark has not yet identified what expert witnesses it may use to testify at the trial of this case. This response will be supplemented if and when appropriate, and in accordance with any scheduling order issued by the Court.

5. Copies of any exhibit Defendant intends to introduce at the trial of the case or in support of any motion filed by the Defendant.

RESPONSE:

Morbark objects to this Request to the extent that it seeks information protected from disclosure by the attorney client privilege, Fed. R. Civ. P. 26(b)(3), and/or the work product doctrine. Notwithstanding said objections, and without waiving the same, this response will be supplemented if and when appropriate, and in accordance with any scheduling order issued by the Court.

6. Copies of any and all purchase order(s), drawings, quality inspection reports, shipping lists, records, instructions, manuals, drawings, memorandum, e-mails, correspondence,

) concerning the design, production and distribution of Morbark Model 58, 150 h.p. Wood Chipper Machine, (Serial # 914) here Involved [sic].

RESPONSE:

✓ Morbark objects to this Request as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark also objects to this Request to the extent that it seeks information protected from disclosure by the attorney client privilege, Fed. R. Civ. P. 26(b)(3), and/or the work product doctrine. Morbark further objects because this Request is not limited to any relevant time period or to the specific part or assembly of the product that Plaintiff alleges to be defective in this case. Notwithstanding said objections, and without waiving the same, Morbark produces the following:

- Purchase order, final inspection reports, quality control inspection reports, equipment load completion report, and chipper check sheet for a Model 58" chipper with serial number 914 that Morbark sold on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000001-000010];
- Morbark Model 48" and 58" Stationary R.H. Chipper Parts Manual [Morbark-000012-000022];
- Part No. 30160-580 Heavy Duty Fan Blade diagram [Morbark-000023];
- Morbark Model 48" and 58" Stationary R.H. Chipper Safety and Operators Manual [Morbark-000024-000061].

) 7. Copies of any and all purchase order(s), drawings, quality inspection reports, shipping lists, records, instructions, manuals, drawings, memorandum, e-mails, correspondence, concerning any changes, revisions or modifications made to the design of the machine, components, disposable items, or warnings of the Morbark Model 58, 150 h.p. Wood Chipper Machine, (Serial # 914) here involved.

RESPONSE:

Morbark objects to this Request as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark also objects to this Request to the extent that it seeks information protected from disclosure by the attorney client privilege and/or work product doctrine. Morbark further objects because this Request is not limited to any relevant time period or to the specific part or assembly of the product that Plaintiff alleges to be defective in this case. To the extent this Request seeks information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint, Morbark objects because such information constitutes post-manufacture evidence and/or subsequent remedial measures. If Plaintiff limits the information sought in this Request, or clarifies what specific information is sought, Morbark will reconsider its answer and attempt to respond further.

Notwithstanding said objections, and without waiving the same, Morbark produces the following:

- Decal kits for Morbark Model 58" wood chippers with serial numbers 799, 835, 894, 913, 914 [Morbark-000092-000096];
- Morbark Bark Bulletins [Morbark-000097-000108].

8. Copies of any records, memorandum, correspondence, e-mails, drawings, [sic] concerning the testing of the the [sic] Morbark Model 58, 150 h.p. Wood Chipper Machine, (Serial # 914) here involved.

RESPONSE:

Morbark does not have any documents responsive to this Request.

9. Copies of all written instructions and/or warnings that were attached to the Morbark Model 58, 150 h.p. Wood Chipper Machine, (Serial # 914) here involved, when it was manufactured and distributed.

RESPONSE:

Morbark produces the following:

- Decals that were attached to and included on the Model 58" chipper with serial number 914 when Morbark sold it on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000062-000085];
- Exit photos of the Model 58" chipper with serial number 914 when Morbark sold it on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000086-000091].

10. Copies of all incidents, claims and lawsuits in which any Morbark Model 58, Wood Chipper Machine, was involved.

RESPONSE:

Morbark objects to this Request as overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Request is not limited to any relevant time period or to the specific part or assembly of the product that Plaintiff alleges to be defective in this case. Notwithstanding said objections, and without waiving the same, Morbark states that it is unaware of any other incidents in which a user or operator of a Model 58" chipper was injured under similar circumstances as alleged in Plaintiff's Complaint.

11. Copies of all certifications and approvals of the Morbark Model 58, Wood Chipper Machine, by any testing or consulting authority.

RESPONSE:

Morbark does not have any documents responsive to this Request.

May 26, 2009

TURNER, PADGET, GRAHAM & LANEY, P.A.

By: 

Curtis L. Ott (Fed. I.D. No. 5939)
David C. Marshall (Fed. I.D. No. 9854)
Post Office Box 1473
Columbia, SC 29202
Phone: (803) 254-2200
Fax: (803) 799-3957

**ATTORNEYS FOR DEFENDANT
MORBARK, INC.**

STATE OF SOUTH CAROLINA

COUNTY OF CLARENDON

Andreal Holland by his Guardian Ad Litem
Peggy Knox,

Plaintiff,

vs.

Morbark, Inc.,

Defendant.

IN THE COURT OF COMMON PLEAS

Civil Action No.: 2008-CP-14-0461

**DEFENDANT MORBARK, INC.'S
RESPONSES TO PLAINTIFF'S
CONTINUING REQUEST FOR
PRODUCTION
(9/9/10)**

Defendant Morbark, Inc. ("Morbark") responds to Plaintiff's Continuing Request for Production (9/9/10), pursuant to Rule 34 of the South Carolina Rules of Civil Procedure, as follows:

17. Engineering drawing of "Infeed Hood-R.H.-Top Discharge Ass'y" # 40045-580 prior to March 1996, as generally referred to at Morbark 000152.

RESPONSE:

Morbark objects to this Request as overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Notwithstanding said objections, and without waiving the same, Morbark produces herewith Assembly Drawing No. 40045-580 [Morbark-000175].

18. Engineering drawing of "T-1 Hood Liner" prior to March 1996, as generally referred to at Morbark #00001.

RESPONSE:

Morbark objects to this Request as overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Notwithstanding said

objections, and without waiving the same, Morbark produces herewith Assembly Drawing No. 30303-580 [Morbark-000176].

18. [sic] Engineering drawing of "R/H Fan Blade" #30301 and "R/H Fan Blade Ass'y", #40293-580 prior to March 1996, as generally referred to at Morbark 000150.

RESPONSE:

Morbark objects to this Request as overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Notwithstanding said objections, and without waiving the same, Morbark produces herewith Assembly Drawing Nos. 30301-580 [Morbark-000177] and 40293-580 [Morbark-000178].

19. Engineering drawing of "Heavy Duty Fan Blades with T-1 Inserts", prior to March 1996, as generally referred to at Morbark #00001.

RESPONSE:

Morbark objects to this Request as overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Notwithstanding said objections, and without waiving the same, Morbark produces herewith Assembly Drawing No. 30302-580 [Morbark-000179].

20. Engineering drawing of "Fan Blade Box" # 30160, prior to March 1996, as generally referred to at Morbark # 00020.

RESPONSE:

Morbark objects to this Request as overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Notwithstanding said objections, and without waiving the same, Morbark produces herewith Assembly Drawing No. 30160-580 [Morbark-000180].

21. All correspondence, applications, certifications, citations involving and/or referring to “mill chipper” “stationary chipper” or “brush chipper” machinery manufactured [sic] by Defendnat [sic] Morbark that was/were directed to/from WorksafeBC or other regulatory authority(ies) of the Province of British Columbia regarding compliance of such Morbark machinery with the general and specific industry standards of the BC Occupational Health and Safety Regulations including the General Hazard Requirements of Parts 5-19 addressing machine guarding and Part 27.42 addressing Hogs, chippers and cutting heads.

RESPONSE:

Morbark objects to this Request as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Request is not limited to any relevant time period or to the machine or product that Plaintiff alleges to be defective in this case. To the extent this Request seeks information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint, Morbark objects because such information constitutes post-manufacture evidence and/or subsequent remedial measures. Notwithstanding said objections, and without waiving the same, Morbark states that it does not have any documents responsive to this Request related to the Morbark Model 58” stationary chipper at issue.

22. All correspondence, applications, certifications, citations, contributions, replies by and/or between Defendant Morbark or its various corporate forms and the American Society of Safety Engineers regarding the Safety Signs, Labels & Messages requirements of ANSI Z535 or its predecessors Z35 and/or Z53.

RESPONSE:

Morbark objects to this Request as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Request is not limited to any relevant time period or to the machine or product that Plaintiff alleges to be defective in this case. To the extent this Request seeks information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint, Morbark objects because such information constitutes post-manufacture evidence and/or subsequent remedial measures. Notwithstanding said objections, and without waiving the same, Morbark states that it does not have any documents responsive to this Request related to the Morbark Model 58" stationary chipper at issue.

23. All designs, memorandum, correspondence, engineering changes, directives and approvals of any safety signs, warning label and/or messages regarding those warnings affixed to the Morbark Model 58, horizontal feed, vertical discharge wood chipper machine, Serial #914, generally referred to as Morbark # 87-96.

RESPONSE:

Morbark objects to this Request as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Notwithstanding said objections, and without waiving the same, Morbark refers Plaintiff to the following documents already produced in discovery in this case:

- Purchase order, final inspection reports, quality control inspection reports, equipment load completion report, and chipper check sheet for a Model 58" chipper with serial number 914 that Morbark sold on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000001-000010];
- Morbark Model 48" and 58" Stationary R.H. Chipper Parts Manual [Morbark-000012-000022];
- Morbark Model 48" and 58" Stationary R.H. Chipper Safety and Operators Manual [Morbark-000024-000061];

- Decals that were attached to and included on the Model 58" chipper with serial number 914 when Morbark sold it on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000062-000085]; and
- Exit photos of the Model 58" chipper with serial number 914 when Morbark sold it on or about March 29, 1996 to Johnson Sherman Company, 410 W. Walnut Street, Goldsboro, NC 27530 [Morbark-000086-000091];

Morbark does not have any additional documents responsive to this request.

24. Copies of all correspondence, notes, memorandum, orders, documents regarding any item, part, subpart, label(s), instructions sent to/from/on behalf of Defendant Morbark by J.C. Witherspoon, Jr., Inc. or J.C. Witherspoon, Jr.

RESPONSE:

Morbark objects to this Request as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Request is not limited to any relevant time period or to the machine or product that Plaintiff alleges to be defective in this case. Notwithstanding said objections, and without waiving the same, see Morbark's response to Interrogatory No. 21. Morbark does not have any documents responsive to this request.

25. Copies of all correspondence, notes, memorandum, orders, documents regarding any matter involving or relating to the injury of the Plaintiff on June 1, 2006 and/or the Morbark Wood Chipper, Serial 914, sent to/from Defendant Morbark and J.C. Witherspoon, Jr., Inc., or J.C. Witherspoon, Jr.

RESPONSE:

Morbark objects to this Request to the extent that it seeks information protected from disclosure by the attorney client privilege, Rule 26(b)(3), SCRCP, and/or the work product doctrine. Notwithstanding said objections, and without waiving the same,

Morbark states that it does not have any documents responsive to this request beyond those already exchanged between the parties in this litigation.

26. Copies of all advertisements, catalogs, flyers, listings or inventory of new chipper equipment offered for sale by Defendant Morbark from 1990-2000.

RESPONSE:

Morbark objects to this Request as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Request is not limited to any relevant time period or to the machine or product that Plaintiff alleges to be defective in this case. To the extent this Request seeks information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint, Morbark objects because such information constitutes post-manufacture evidence and/or subsequent remedial measures.

27. Copies of all correspondence, catalogs, flyers, listings or inventory of used chipper equipment offered for sale by Defendant Morbark from 1990-2000.

RESPONSE:

Morbark objects to this Request as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Request is not limited to any relevant time period or to the machine or product that Plaintiff alleges to be defective in this case. To the extent this Request seeks information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint, Morbark objects because such information constitutes post-manufacture evidence and/or subsequent remedial measures.

28. All designs, memorandum, correspondence, engineering changes, directives, approvals, patent applications, patents or licenses and actual chipper machine applications of any safety switches incorporated on Morbark chipper hoods that will shut down the chipper if the pin that secures the chipper hood is removed or displaced during operation.

RESPONSE:

Morbark objects to this Request as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Request is not limited to any relevant time period or to the machine or product that Plaintiff alleges to be defective in this case. To the extent this Request seeks information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint, Morbark objects because such information constitutes post-manufacture evidence and/or subsequent remedial measures. Notwithstanding said objections, and without waiving the same, Morbark states that it does not utilize "any safety switches" described in this Request in any of its stationary chippers.

October 1, 2010

By: _____

TURNER, PADGET, GRAHAM & LANEY, P.A.

Curtis L. Ott
David C. Marshall
Post Office Box 1473
Columbia, SC 29202
Phone: (803) 254-2200
Fax: (803) 799-3957

ATTORNEYS FOR DEFENDANT

01210

STATE OF SOUTH CAROLINA

COUNTY OF CLARENDON

Andreal Holland by his Guardian Ad Litem
Peggy Knox,

Plaintiff,

vs.

Morbark, Inc.,

Defendant.

IN THE COURT OF COMMON PLEAS

Civil Action No.: 2008-CP-14-0461

**DEFENDANT MORBARK, INC.'S
RESPONSES TO PLAINTIFF'S
CONTINUING REQUEST FOR
PRODUCTION
(11/19/10)**

Defendant Morbark, Inc. ("Morbark") responds to Plaintiff's Continuing Request for Production (11/19/10), pursuant to Rule 34 of the South Carolina Rules of Civil Procedure, as follows:

29. "R/H Fan Blade" #30301 and "R/H Fan Blade Ass'y", #40293-580 prior to March 1996, as generally referred to at Morbark 000150, 000177 and 000178.

RESPONSE:

Morbark objects to this Request as overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Notwithstanding said objections, and without waiving the same, Morbark states that Part No. 40293-580 is not a stocked part, however, Plaintiff can acquire the part by ordering one. The part costs \$112.86 plus freight and tax. Upon written request and advance agreement to pay all costs for such production, Morbark will sell the requested part to Plaintiff.

30. "Heavy Duty Fan Blades with T-1 Inserts", prior to March 1996, as generally referred to at Morbark #00001, 000179.

RESPONSE:

Morbark objects to this Request as overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Notwithstanding said objections, and without waiving the same, Morbark states that Part No. 30302-580 is not a stocked part, however, Plaintiff can acquire the part by ordering one. The part costs \$25.75 plus freight and tax. Upon written request and advance agreement to pay all costs for such production, Morbark will sell the requested part to Plaintiff.

31. "Fan Blade Box" #30160, prior to March 1996, as generally referred to at Morbark # 00020, 000180.

RESPONSE:

Morbark objects to this Request as overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Notwithstanding said objections, and without waiving the same, Morbark states that Part No. 30160-580 is not a stocked part, however, Plaintiff can acquire the part by ordering one. The part costs \$69.77 plus freight and tax. Upon written request and advance agreement to pay all costs for such production, Morbark will sell the requested part to Plaintiff.

32. All invoices, correspondence, notices, records of ownership, records of updates changes, parts bulletins referring to Morbark 58" chipper Serial No. 914.

RESPONSE:

Morbark objects to this Request as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Request is not limited to any relevant time period or to the specific part or assembly of the product that Plaintiff alleges to be defective in this case. To the

} extent this Request seeks information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint, Morbark objects because such information constitutes post-manufacture evidence and/or subsequent remedial measures. Notwithstanding said objections, and without waiving the same, Morbark refers Plaintiff to its responses to Request Nos. 6, 7, 9, 13, and 25.

33. Reiterating Prior Request # 24 and previous [sic] questions addressed to Larry Noch at the 30 (b)(6) deposition of Defendant Morbark, You [sic] are requested to produce all invoices, parts and equipment shipments, correspondence, notices, records of ownership, records of updates, changes, parts bulletins, parts shipment to Customer # 15624, a/k/a "J.C. Witherspoon".

RESPONSE:

} Morbark refers Plaintiff to its response to Request No. 24.

34. All invoices, parts and equipment shipments, correspondence, notices, records of ownership, records of updates, changes, parts bulletins, parts shipment to Precision Husky Corporation.

RESPONSE:

} Morbark objects to this Request as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Request is not limited to any relevant time period or to the machine or product that Plaintiff alleges to be defective in this case. Notwithstanding said objections, and without waiving the same, Morbark states that, after a duly diligent search of records dating back to 2000, it cannot locate any documents responsive to this Request.

35. All product illustrations, product references, representations of performance relating to a chipper disc brake adaptable to installation on the Morbark 48 "and/or 58" Stationary R.H. Chipper during the period from 1970 through 1996.

RESPONSE:

Morbark objects to this Request as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Request is not limited to any relevant time period or to the machine or product that Plaintiff alleges to be defective in this case. To the extent this Request seeks information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint, Morbark objects because such information constitutes post-manufacture evidence and/or subsequent remedial measures. Notwithstanding said objections, and without waiving the same, Morbark states that, after a duly diligent search, it cannot locate any documents responsive to this Request.

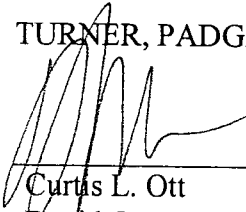
36. Any product illustrations, product references and engineering drawings of any chipper disc brake manufactured and/or installed by Morbark on any chipper manufactured by Defendant Morbark at any time.

RESPONSE:

Morbark objects to this Request as vague, overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Morbark further objects because this Request is not limited to any relevant time period or to the machine or product that Plaintiff alleges to be defective in this case. To the extent this Request seeks information that post-dates the manufacture and sale of the product identified in Plaintiff's Complaint, Morbark objects because such information constitutes post-manufacture

evidence and/or subsequent remedial measures. Notwithstanding said objections, and without waiving the same, Morbark states that, after a duly diligent search, it cannot locate any documents responsive to this Request.

December 17, 2010

By: 

Curtis L. Ott
David C. Marshall
Post Office Box 1473
Columbia, SC 29202
Phone: (803) 254-2200
Fax: (803) 799-3957

ATTORNEYS FOR DEFENDANT

STATE OF SOUTH CAROLINA

COUNTY OF CLARENDON

Andreal Holland by his Guardian Ad Litem
Peggy Knox,

Plaintiff,

vs.

Morbark, Inc., Precision Husky
Corporation, A & K Mulch, LLC, and
Watford Industry, Inc.,

Defendants.

IN THE COURT OF COMMON PLEAS

Civil Action No.: 2008-CP-14-0461

**DEFENDANT MORBARK, INC.'S
RESPONSES TO PLAINTIFF'S
CONTINUING REQUEST FOR
ADMISSIONS**

Defendant Morbark, Inc. ("Morbark") responds to Plaintiff's Request for Admissions, pursuant to Rule 36 of the South Carolina Rules of Civil Procedure, as follows:

**OMIT RESPONSES TO
REQUEST TO ADMT #1 THROUGH #6**

7. That the Mobark [sic] Model 48" and 58" chipper machine series was designed by Mobark [sic] employee, now deceased, Norval Morey, prior to 1969.

RESPONSE:

Morbark admits that Norval Morey, deceased, was the original designer of the Morbark Model 58" chipper, and that it was originally designed and began as a production unit around 1969.

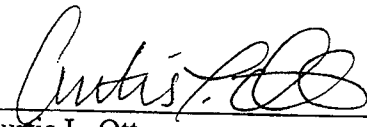
11. The Defendant Mobark [sic] did consider Michigan OSHA General Industry Standard R408.15231 (Part 52 Sawmills) in the design and manufacture of the Mobark [sic] 58" Chipper Machine, Serial # 914.

RESPONSE:

Pursuant to a reasonable inquiry, Morbark lacks sufficient information or knowledge to admit or deny this request because the original designer of the machine, Norval Morey, is deceased and there are no notes, files or other documentation available today indicating what was or was not considered by him at that time with regard to design considerations.

August 26, 2010

TURNER, PADGET, GRAHAM & LANEY, P.A.

By: 

Curtis L. Ott
David C. Marshall
Post Office Box 1473
Columbia, SC 29202
Phone: (803) 254-2200
Fax: (803) 799-3957

**ATTORNEYS FOR DEFENDANT
MORBARK, INC.**

STATE OF SOUTH CAROLINA

COUNTY OF CLARENDON

Andreal Holland by his Guardian Ad Litem
Peggy Knox,

Plaintiff,

vs.

Morbark, Inc.,

Defendant.

IN THE COURT OF COMMON PLEAS

Civil Action No.: 2008-CP-14-0461

**DEFENDANT MORBARK, INC.'S
RESPONSES TO PLAINTIFF'S
CONTINUING REQUEST FOR
ADMISSIONS
(9/9/10)**

Defendant Morbark, Inc. ("Morbark") responds to Plaintiff's Request for Admissions, pursuant to Rule 36 of the South Carolina Rules of Civil Procedure, as follows:

17. The attached copies (pages 1-169) are accurate copies of each patent referred to in Morbark document 000077.

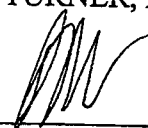
RESPONSE:

Morbark admits only that the patents listed on the document labeled Morbark-000077 appear to be represented in pages 1-169 of Plaintiff's attachment to this request for admission; however, Morbark is without sufficient knowledge or information to admit that pages 1-169 are a full, complete and accurate copy of each patent listed.

**OMIT RESPONSES TO
REQUEST TO ADMIT #18 AND #19**

TURNER, PADGET, GRAHAM & LANEY, P.A.

October 11, 2010

By: 

Curtis L. Ott
David C. Marshall
Post Office Box 1473
Columbia, SC 29202
Phone: (803) 254-2200
Fax: (803) 799-3957

01218

ATTORNEYS FOR DEFENDANT

**THIS PRODUCT MAY BE COVERED BY
ONE OR MORE OF THE FOLLOWING
UNITED STATES PATENTS OR OTHER
PATENTS PENDING:**

4,736,781	5,148,844
4,771,953	5,191,754
4,787,431	5,261,306
5,005,620	5,322,104
5,054,703	5,419,502
5,070,920	5,713,525
5,137,219	5,820,042
5,138,957	

39512-803

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United States Patent [19]

Morey et al.

[11] Patent Number: 4,736,781

[45] Date of Patent: Apr. 12, 1988

[54] STUMP DISINTEGRATOR

[75] Inventors: Norval K. Morey, Weidman; Ivor Bateman, Mt. Pleasant, both of Mich.

[73] Assignee: Morbark Industries, Inc., Winn, Mich.

[21] Appl. No.: 900,448

[22] Filed: Aug. 26, 1986

[51] Int. Cl.⁴ B02C 7/12; B27C 1/14

[52] U.S. Cl. 144/176; 144/162 R;
144/241; 144/242 R; 241/92; 241/298; 407/41;
407/46

[58] Field of Search 241/92, 298; 407/41,
407/46, 49; 144/162 R, 176, 172, 174, 241, 242
R

[56] References Cited

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Re. 31,048	10/1982	Smith	241/281
384,763	6/1888	Hayes	
2,034,951	3/1936	McArdle et al.	83/62
2,712,842	7/1955	Fahrni	144/162
2,936,008	4/1957	Brown	144/162
3,144,995	8/1964	Fontaine	241/298
3,524,485	8/1970	Smith	144/176
3,542,302	11/1970	Salzmann, Jr.	241/92
3,559,898	2/1971	Rinke	241/101
3,570,773	3/1971	Schneider et al.	241/81
3,661,333	5/1972	Smith	241/281
3,861,602	1/1975	Smith	241/92
3,863,848	2/1975	Mashuda	241/101
3,913,643	10/1975	Lambert	144/172
3,955,765	5/1976	Gaitten	241/28
4,057,192	11/1977	Smith	241/92
4,078,590	3/1978	Smith	144/176

4,184,526	1/1980	Hanaya	144/235
4,254,874	3/1981	Arnoldsson et al.	209/3
4,346,744	8/1982	Beer et al.	241/92

FOREIGN PATENT DOCUMENTS

829043	10/1977	U.S.S.R.
654214	10/1977	U.S.S.R.
729056	12/1977	U.S.S.R.

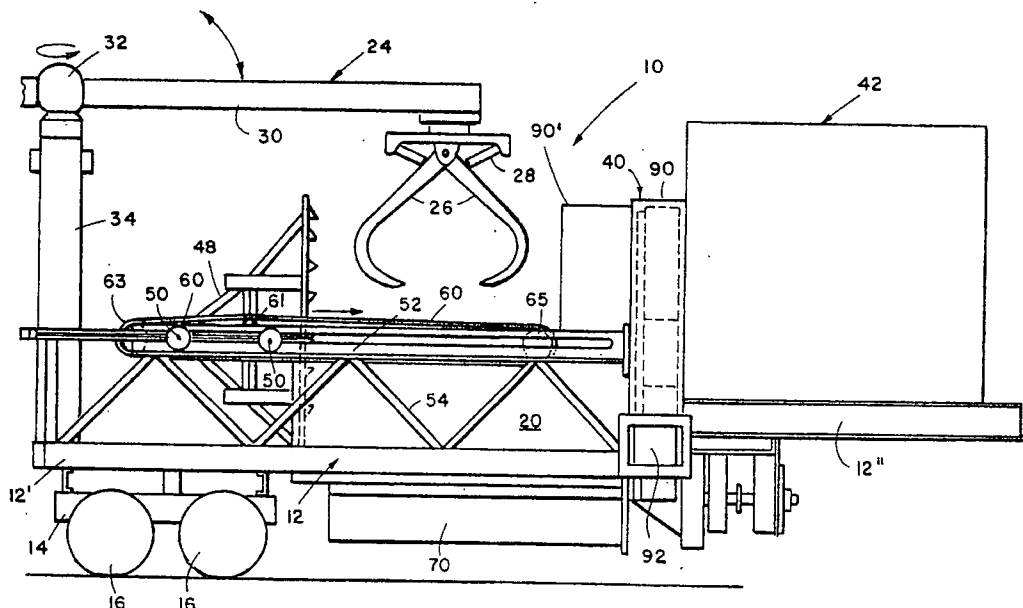
Primary Examiner—W. Donald Bray

Attorney, Agent, or Firm—Price, Heneveld, Cooper, DeWitt & Litton

[57] ABSTRACT

The specification describes a stump chipping disintegrator wherein stumps are received in a trough having a rotatable chipping disc at one end and a powered ram plate at the other, the ram plate having diagonally extending penetrators. A stump stabilizer anvil adjacent the disc projects radially inwardly of the trough. The disc has steel, wood slicing blades at the radially inner portion thereof, mounted at a small acute angle to the face of the disc toward the direction of rotation, and carbide chopping blades at the radially outer portion thereof, mounted at a large acute angle to the face of the disc toward the direction of rotation. At least the carbide blades are mounted in special holders removable from the disc. The carbide blades have backup wedge elements that extend substantially the width of the blade at its outer end and extend substantially to the radial outer edge of the blade. Wood chips sliced off by the steel blades and chips chopped off by the carbide blades all pass through the disc to be propelled from the apparatus.

45 Claims, 8 Drawing Sheets



United States Patent [19]
Morey

[11] **Patent Number:** **4,771,953**
[45] **Date of Patent:** **Sep. 20, 1988**

[54] **RETRACTABLE ANVIL CHIPPER**

[75] **Inventor:** Norval K. Morey, Weidman, Mich.

[73] **Assignee:** Morbark Industries, Inc., Winn, Mich.

[21] **Appl. No.:** 15,681

[22] **Filed:** Feb. 17, 1987

[51] **Int. Cl.:** B02C 13/02

[52] **U.S. Cl.:** 241/101.7; 241/186 R;
241/222; 241/239; 241/286

[58] **Field of Search:** 144/176; 241/101.7,
241/186 R, 222, 223, 239, 240, 241, 280, 281,
286

[56] **References Cited**

U.S. PATENT DOCUMENTS

Re. 31,048	10/1982	Smith	241/281
384,763	6/1888	Hayes	
2,034,951	3/1936	McArdle et al.	83/62
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2,712,842	7/1955	Fahrni	144/162
2,936,008	4/1957	Brown	144/162
3,524,485	8/1970	Smith	144/176
3,559,898	2/1971	Rinke	241/101
3,570,773	3/1971	Schneider et al.	241/81
3,661,333	5/1972	Smith	241/281
3,861,602	1/1975	Smith	241/92
3,863,848	2/1975	Mashuda	241/101
3,913,643	10/1975	Lambert	144/172
3,955,765	5/1976	Gaitten	241/28
4,057,192	11/1977	Smith	241/92

4,078,590	3/1978	Smith	144/176
4,184,526	1/1980	Hanaya	144/235
4,254,874	3/1981	Arnoldsson et al.	209/3

FOREIGN PATENT DOCUMENTS

829043	10/1977	U.S.S.R.
654214	10/1977	U.S.S.R.
729056	12/1977	U.S.S.R.

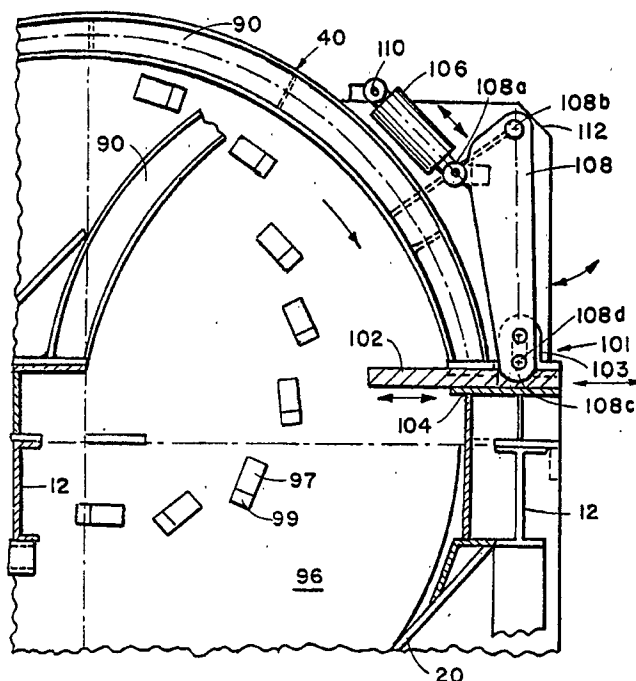
Primary Examiner—Timothy V. Eley

Attorney, Agent, or Firm—Price, Heneveld, Cooper, DeWitt & Litton

[57] **ABSTRACT**

A wood and stump chipper having a rotational chipper disc with protruding blade means for chipping wood advanced thereto; a support trough for wood; a ram for advancing wood along the support trough to the disc; power means for shifting said ram from a position spaced from said disc to a position adjacent said disc and return; and an anvil positionable adjacent the disc for cooperation therewith in chipping wood; the anvil being shiftable in a support between an extended position adjacent the disc and a retracted position away from the disc in a dimension transverse to the dimension of ram movement so as to move out of the path of the ram; and power means for shifting the anvil adjacent the disc when the ram is spaced from the disc and for shifting the anvil away from the disc and out of the path of the ram when the ram approaches the disc.

14 Claims, 2 Drawing Sheets



United States Patent [19]

Demlow

[11] Patent Number: 4,787,431

[45] Date of Patent: Nov. 29, 1988

[54] FLAIL APPARATUS

[76] Inventor: Ronald D. Demlow, 6600 S. Shore Dr., Weidman, Mich. 48893

[21] Appl. No.: 212,296

[22] Filed: Jun. 27, 1988

[51] Int. Cl.⁴ B27L 3/00

[52] U.S. Cl. 144/341; 144/2 Z; 144/208 J; 144/343

[58] Field of Search 144/208 R, 208 J, 2 Z, 144/341, 343

[56] References Cited

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4,023,604	5/1977	Stadnick	144/2 Z
4,061,166	12/1977	Larson	144/2 Z

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4,572,258	2/1986	Mischel	144/208 J
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4,719,950	1/1988	Peterson et al.	144/208 J
4,738,292	4/1988	Turpeinen	144/208 J

Primary Examiner—W. Donald Bray

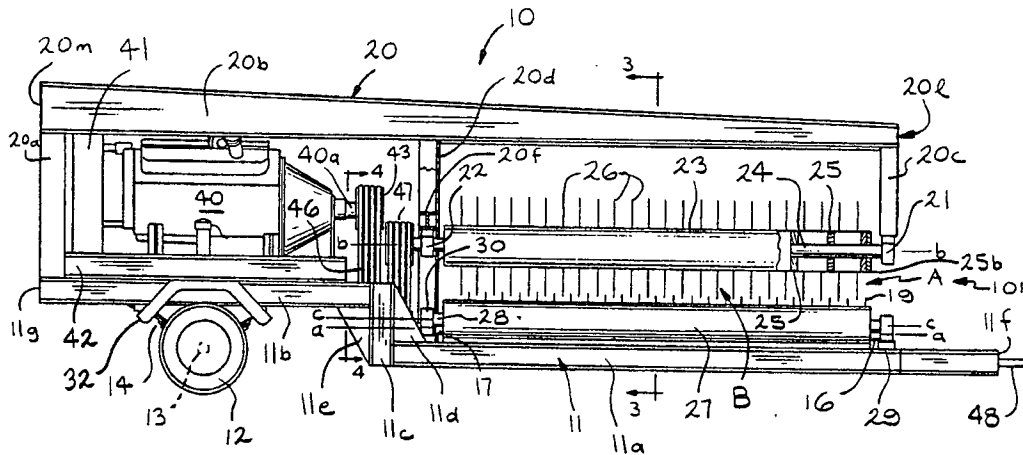
Attorney, Agent, or Firm—Ian C. McLeod

[57]

ABSTRACT

A flail type apparatus (10) for removing limbs and/or bark from trees (101) by dragging the trees through the apparatus with a skidder (100) is described. In particular, drum 15 and 23 are mounted on the apparatus such that there is an opening A leading to space B between the drums allowing rotating chain flails 19 and 26 mounted on the drums to remove the bark and/or limbs.

19 Claims, 4 Drawing Sheets



United States Patent [19]
Morey

[11] **Patent Number:** 5,005,620
[45] **Date of Patent:** Apr. 9, 1991

[54] **DRUM-TYPE WOOD CHIPPER**

[75] **Inventor:** Norval Morey, Winn, Mich.

[73] **Assignee:** Morbark Industries, Inc., Winn, Mich.

[21] **Appl. No.:** 510,086

[22] **Filed:** Apr. 17, 1990

[51] **Int. Cl.⁵** B27L 11/00

[52] **U.S. Cl.** 144/373; 144/162 R;
144/174; 241/92; 241/101.7

[58] **Field of Search** 144/162 R, 172, 173,
144/174, 373; 241/37.5, 60, 92, 101.7, 189 R,
278 R, 298

[56] **References Cited**

U.S. PATENT DOCUMENTS

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3,661,192 5/1972 Nicholson et al. 144/172
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3,944,147 3/1976 Fletcher .

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4,057,192 11/1977 Smith .
4,135,563 1/1979 Maucher 144/172
4,162,769 7/1979 Lapointe 144/174
4,260,114 4/1981 Herder .

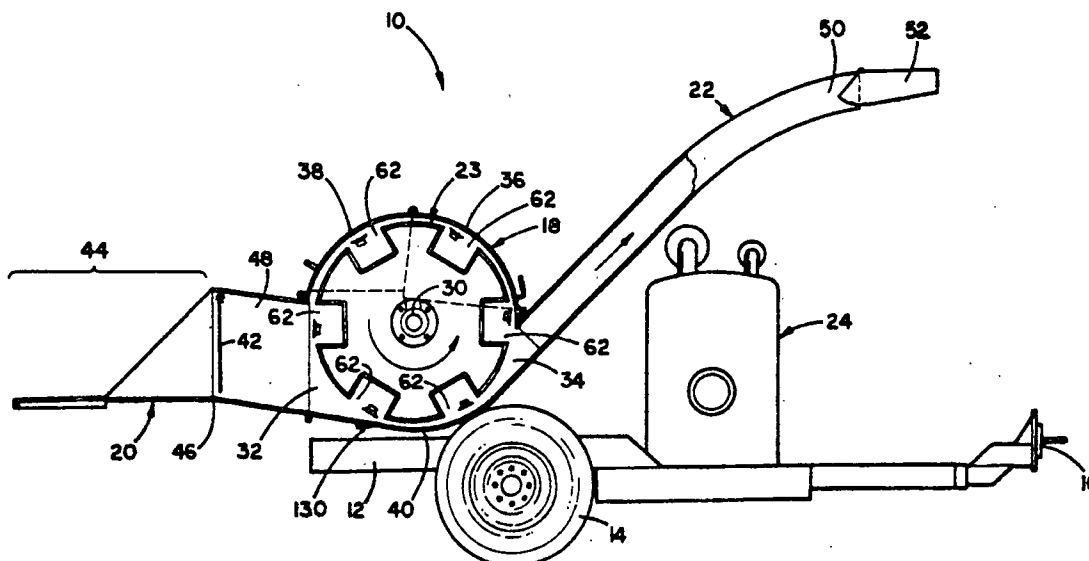
Primary Examiner—W. Donald Bray

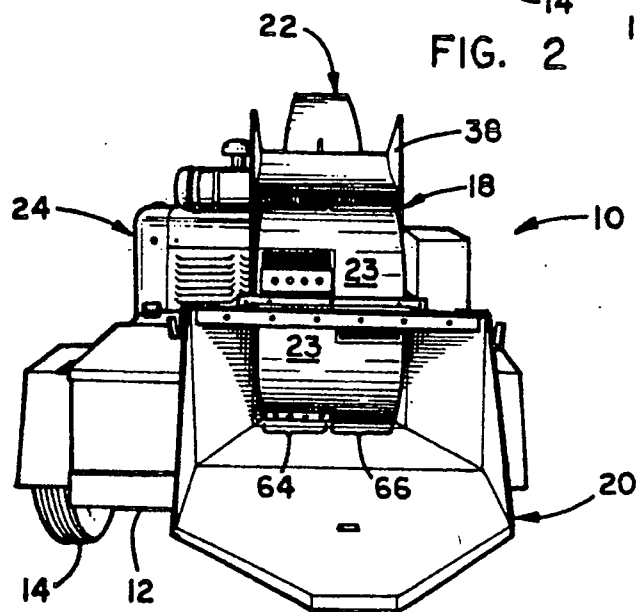
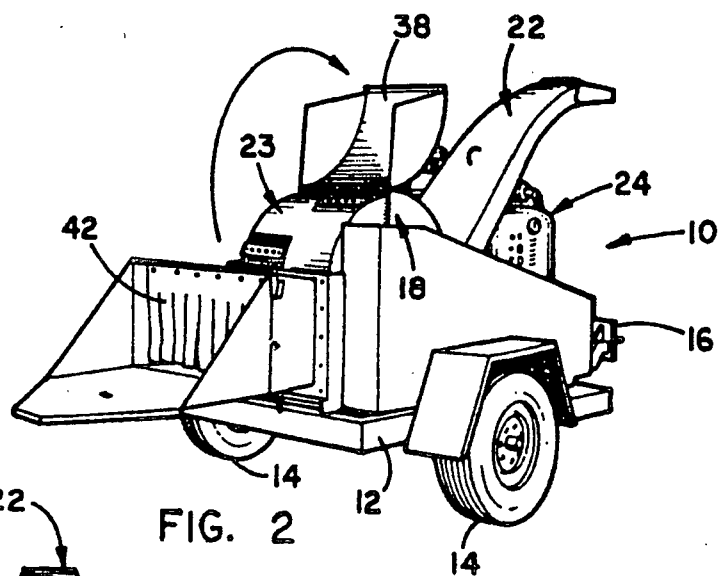
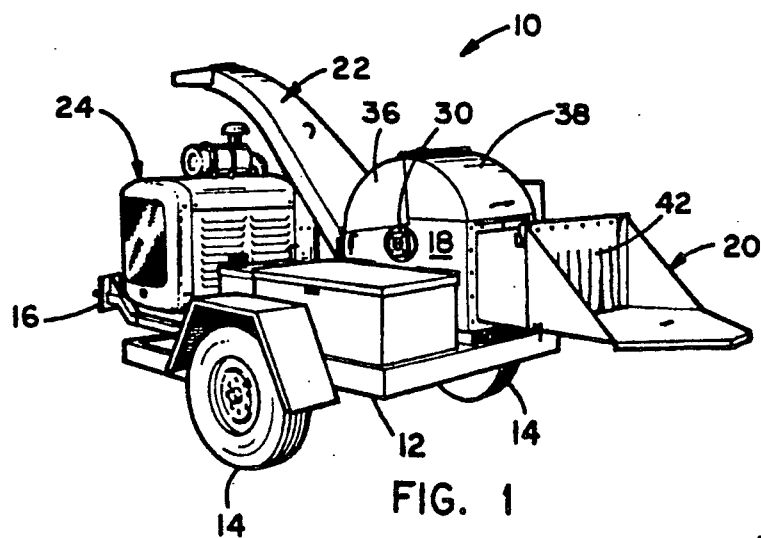
Attorney, Agent, or Firm—Warner, Norcross & Judd

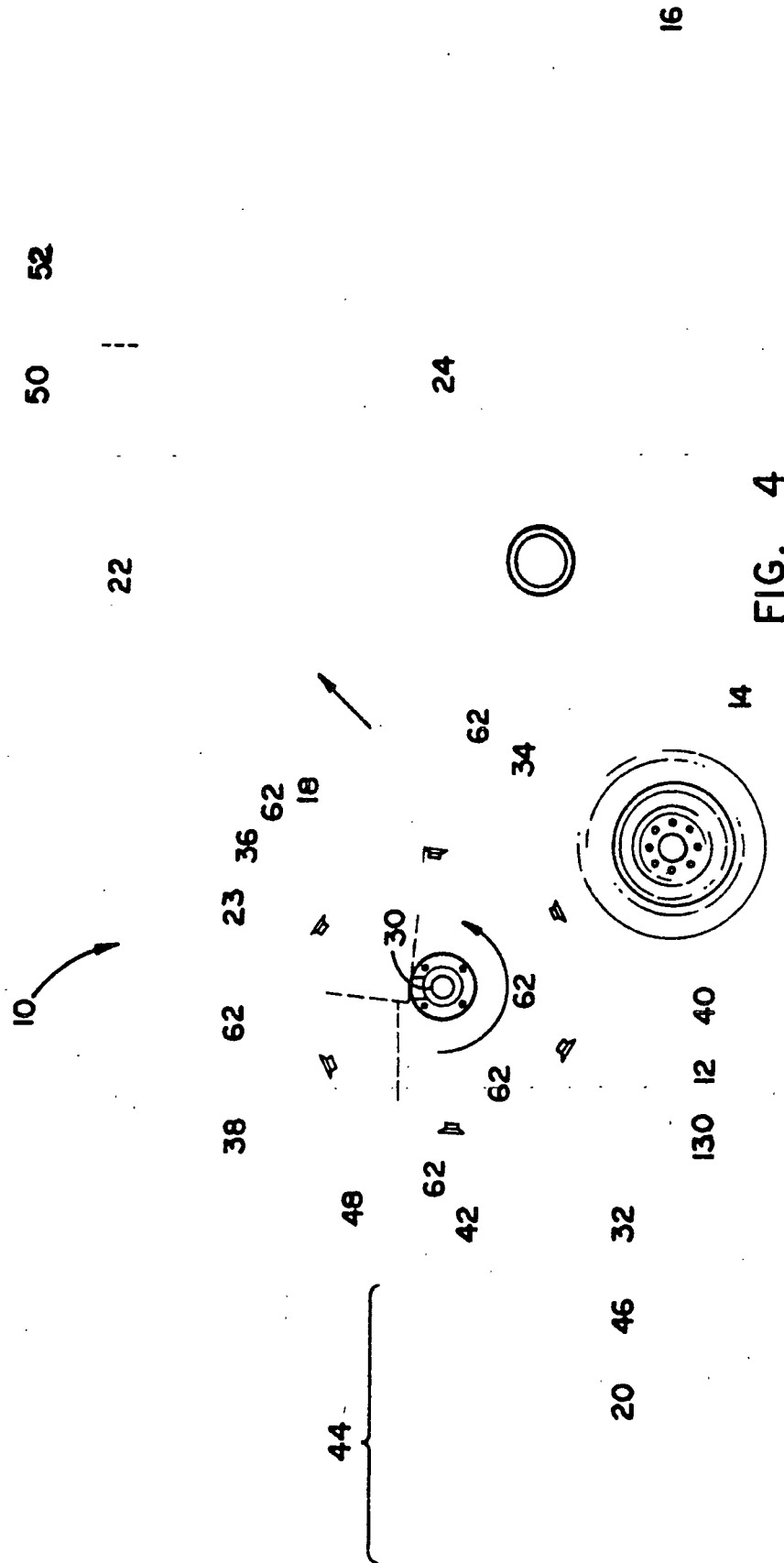
[57] **ABSTRACT**

A drum-type wood chipper having a chipper drum with knives mounted in openings with the drum wall. A chip basket is mounted within the drum behind each knife opening. The chipper knife is spaced from the drum wall at both the leading and trailing edges of the knife to define chip ingress and egress openings for the chip box. Cut chips pass into the chip box as the leading edge of the knife chips the infeed material; and the chips are carried by the box for subsequent discharge through the egress opening into a discharge chute.

22 Claims, 5 Drawing Sheets







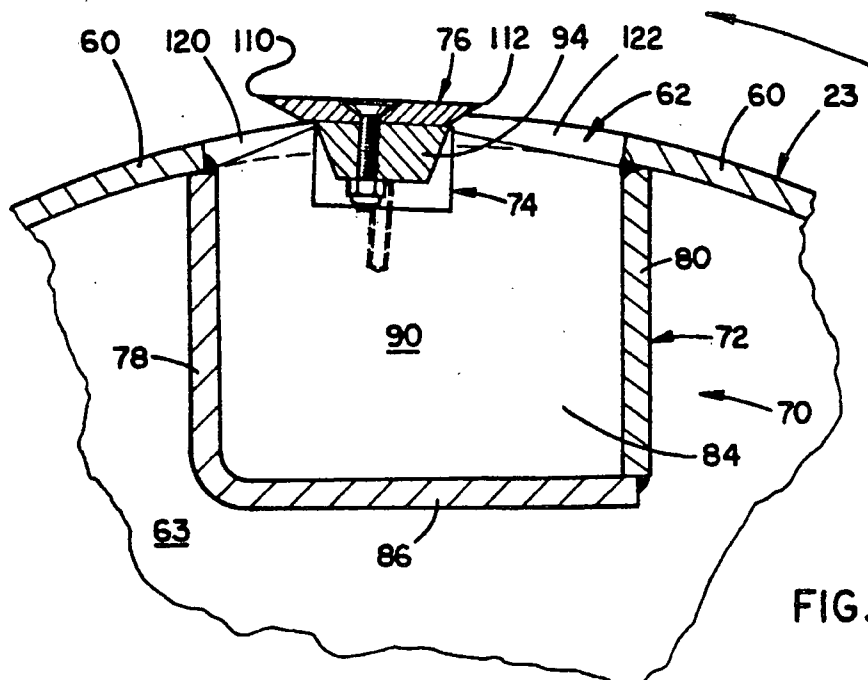
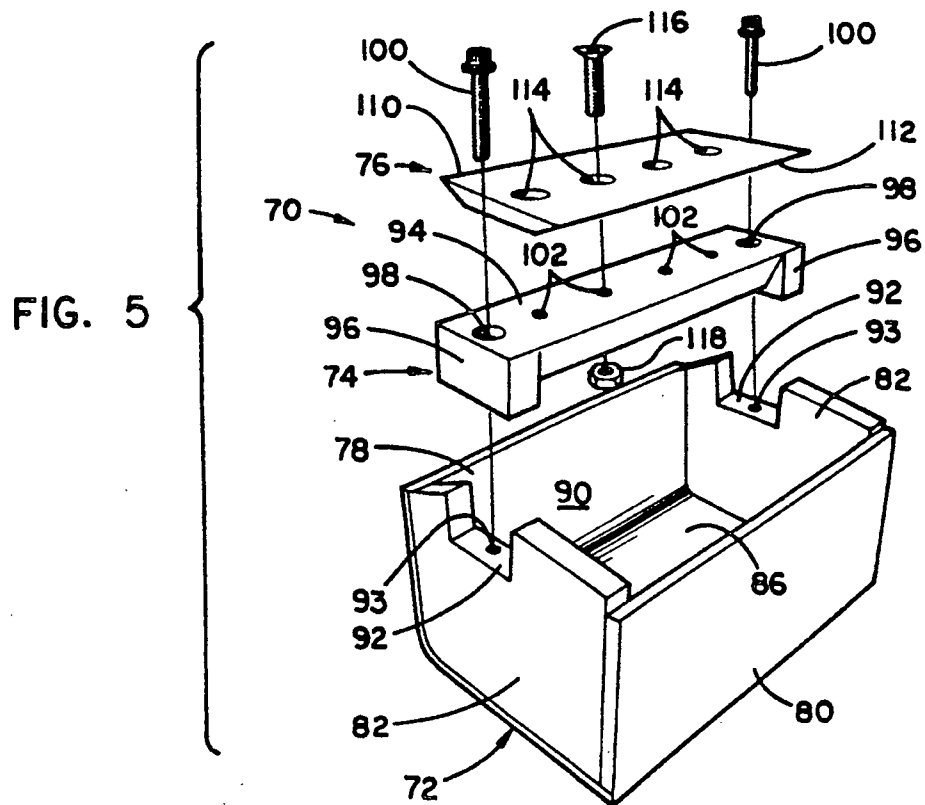
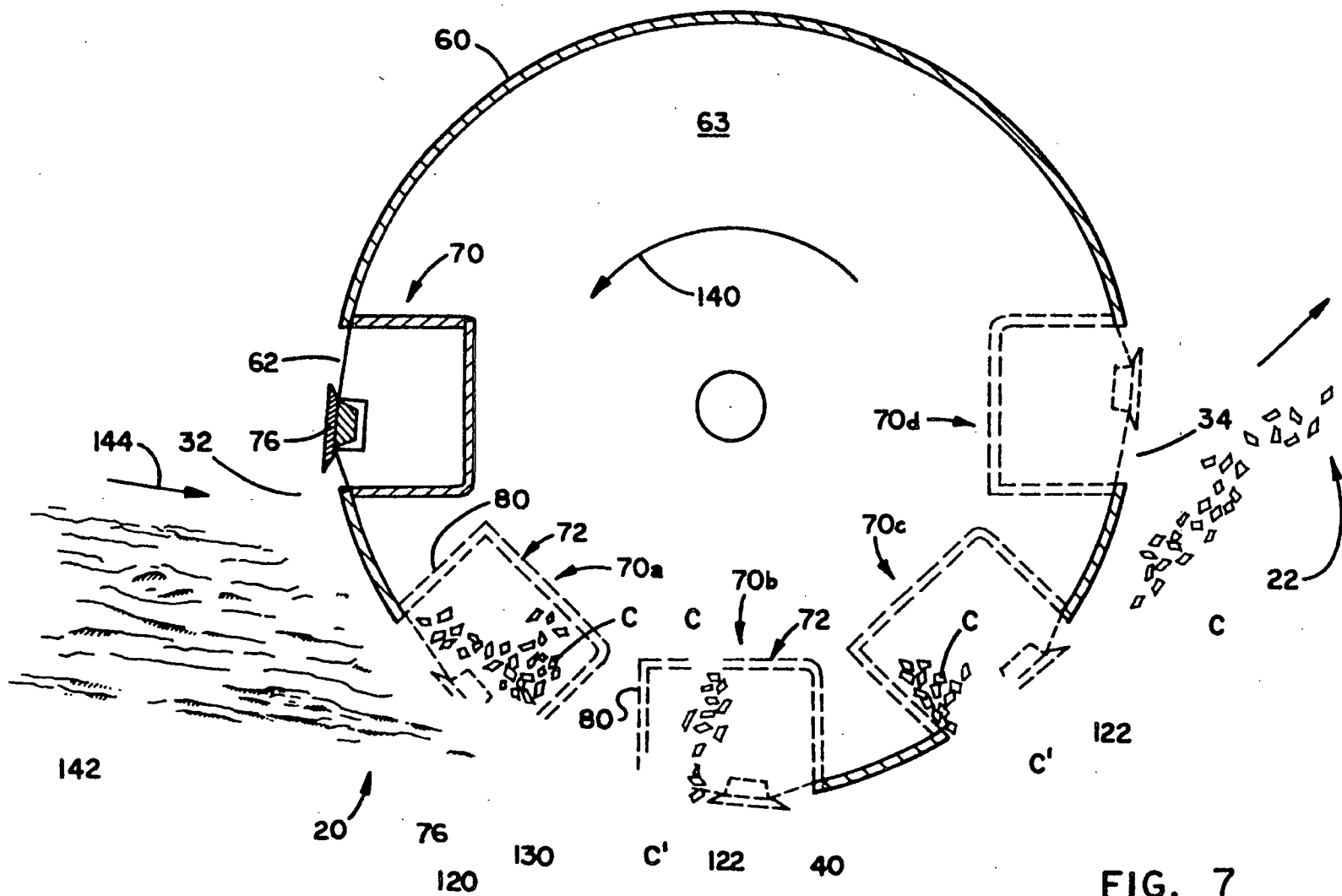


FIG. 6



01228

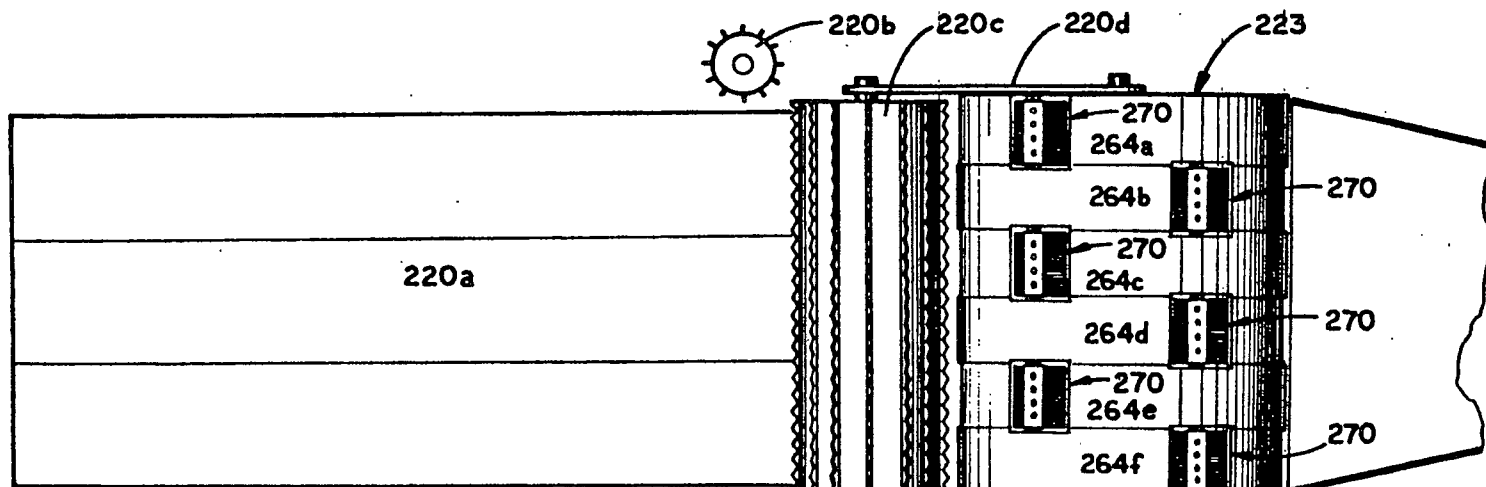


FIG. 8
220
210

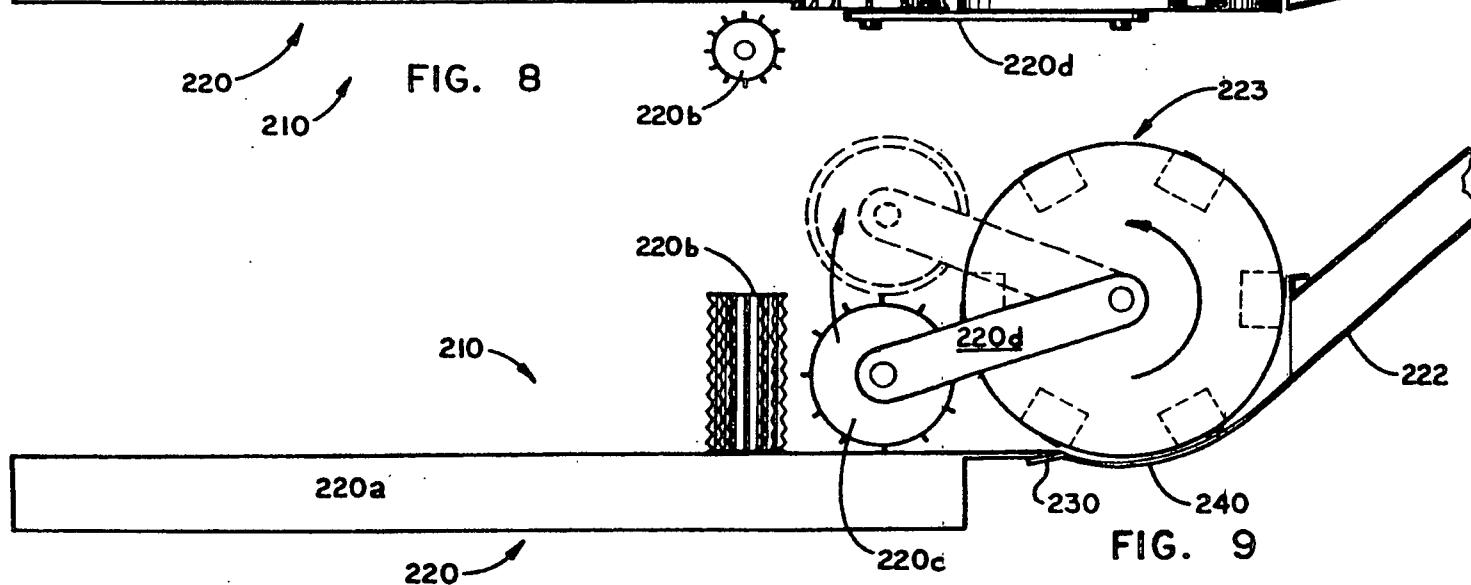


FIG. 9

01229

DRUM-TYPE WOOD CHIPPER

BACKGROUND OF THE INVENTION

The present invention relates to wood chippers and more particularly to wood chippers having a rotatable drum carrying knives angularly spaced about its circumferential wall.

Wood chippers have been developed to reduce trees, limbs, branches, and the like to wood chips. Such chippers are typically used by municipalities and tree services. Chipping eliminates environmental problems associated with burning; and the chips can be used in a wide variety of applications such as mulch and fuel. Basically, the chippers are of two broad types.

The first and oldest style of chipper is the "drum-type" wherein the chipper knives are carried on the circumferential wall of a cylindrical drum. Typically, the drum is approximately 12 inches in diameter and carries 4 equally spaced knives about its perimeter. The drum is driven at 2500 to 3500 revolutions per minute (rpm) so that the machines make approximately 10,000 to 14,000 cuts per minute. With an average chip thickness of $\frac{1}{4}$ inch, the feed rate is 625 to 875 feet per minute. Such speeds are relatively fast and can be dangerous to operators feeding the chipper because, as the branches are pulled into the chipper, limbs can strike the workers. Further, the drum is typically a solid head with the knives clamped thereto. No space is provided for the chips. Accordingly, blowers or augers are included both to release the chips from the knives and to propel the chips through the chute. Engines with large horsepower (i.e. in the range of 100 h.p. to 125 h.p.) are required to drive these chippers. Even with such engines, the drum chippers often stall. Further, the large engines require complicated and expensive emissions control equipment, especially in states such as California.

The second style of chipper is the "disc-type" wherein the knives are carried radially on the face of a spinning disc. An example of such a chipper is illustrated in U.S. Pat. No. 3,861,602 issued Jan. 21, 1975 to Smith and entitled Brush Chipper. The feed rates of disc-style chippers are significantly lower than those of drum-style chippers; and therefore the feed-speed problems are greatly alleviated. The distal end of the radially disposed knife travels at approximately 10,000 feet per minute, while the blade is traveling significantly slower towards the center of the disc. Consequently, chips removed at these different ends of the knife are traveling at different speeds and collide behind the disc and in the discharge chute to generally slow all of the chips down. Accordingly, the disc must be rotated faster than necessary to chip the wood to insure that the chips are properly discharged from the unit.

SUMMARY OF THE INVENTION

The aforementioned problems are overcome in the present invention wherein a drum-type chipper includes improved means for receiving wood chips from the chipper knives and propelling the chips into the discharge chute. Specifically, the peripheral wall of the drum defines a spaced pocket behind each knife. Both the leading and trailing edges of the knife are spaced from the peripheral wall to define ingress and egress openings for the pocket. As the drum rotates, the wood chips cut by the knife pass through the ingress opening and into the pocket behind the knife. The wood chip

remains in the pocket until the drum rotates to the discharge chute. Under the influence of centrifugal force, the chip is expelled from the pocket through the egress opening and into the discharge chute.

The structure of the present invention maintains the speed and therefore momentum of the chip from the initial cut to the discharge chute. The chip is accelerated to the peripheral speed of the drum as the chip is cut from the infeed material. The drum of the present invention maintains the chip at that speed and releases the chip at that speed into the discharge chute. The cut chip never changes speed. By maintaining the momentum of all chips, the present chipper can operate with a significantly smaller power source than previous drum-style and even disc-style chippers.

These and other objects, advantages, and features of the invention will be more readily understood and appreciated by reference to the detailed description of the preferred embodiment and the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the left side of the wood chipper;

FIG. 2 is a perspective view of the right side of the wood chipper with the access door open;

FIG. 3 is a perspective view of the rear of the wood chipper;

FIG. 4 is a schematic diagram, partially in section, of the wood chipper;

FIG. 5 is an exploded perspective view of the knife and chip pocket assembly;

FIG. 6 is a sectional view of the knife and chip pocket assembly mounted in the drum;

FIG. 7 is a sectional view of the chipper drum, with various stages of the knife pocket shown in phantom;

FIG. 8 is a top plan view of an alternate embodiment of the invention showing a wide chipper drum and a powered infeed assembly; and

FIG. 9 is a side elevational view of the alternate embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The wood chipper of the present invention is generally illustrated in FIGS. 1-4 and designated 10. The chipper includes a frame 12 supported by a pair of wheels 14 and having a conventional hitch 16 for attachment to a vehicle. Supported on the frame 12 are a chipper housing 18, an infeed chute 20, and a discharge chute 22. A chipper drum 23 is rotatably supported within the housing 18 between the infeed and outfeed chutes 20 and 22. A power source 24, such as an internal combustion engine, is also mounted on the frame 12 to rotatably drive the chipper drum 23 using one or more v-belts (not shown).

The frame 12, wheels 14, and hitch 16 are of conventional construction. A tool box 25 is mounted on the frame 12 for storage of items such as chain saws and highway signs. The power plant 24 is a gasoline engine manufactured by Ford Motor Company of Dearborn, Mich. providing 60 h.p. In view of the relatively small power requirements of the chipper, the engine is smaller than is necessary with comparable capacity disc and drum chippers. For example, the present chipper requires only 50% of the power of a comparable capacity disc chipper and only 20% of the power of a comparable capacity drum chipper.

The housing 18, infeed chute 20, and outfeed chute 22 are also generally of conventional structure. The housing 18 encloses the chipper drum 23 to prevent people and objects from contacting the moving drum during chipping. The housing defines an infeed opening 32 and an outfeed opening 34 (see FIG. 4) and includes an upper stationary portion 36, an access door 38, and a belly-band 40. The stationary portion 36 and the access door 38 together cover the upper portion of the chipper drum between the infeed and outfeed openings. Similarly, the belly-band 40 extends under the lower portion of the chipper drum between the infeed and outfeed openings 32 and 34. The access door 38 extends the full length of the chipper drum 23 (see FIGS. 1-3) to provide full width access to the chipper drum when the door is open (see FIGS. 2 and 3).

The infeed chute 20 includes a curtain 42 of rubber flaps to catch chips and other debris possibly kicked back out of the infeed chute by the rotating chipper drum. The end portion 44 (see FIG. 4) of the infeed chute is hinged at point 46 to be pivotable upwardly into a travelling position, again as is conventional in the art. The infeed chute 20 further includes a stationary portion 48 which communicates with the infeed opening 32 to introduce material to be chipped to the chipper drum. Preferably, the infeed opening 32 extends only about the lower half of the chipper drum (i.e. below a horizontal plane through the axis) so that the knives are moving downwardly and/or forwardly (with respect to the trailer) as material is introduced into the chute. Such arrangement reduces the likelihood that chips will be propelled rearwardly out of the infeed chute 20.

The discharge chute 22 communicates with the outfeed opening 34 of the drum housing 18 to receive chips to be discharged from the unit. The chute tapers in width from the discharge opening 34 to the spout 50 as perhaps best seen in Figs. 1 and 2. A pivotal deflector 52 is adjustable to direct chips into a vehicle.

The chipper drum 23 is rotatably supported within bearings 30 (FIG. 1) in conventional fashion for rotation about a generally horizontal axis as is generally well-known to those having ordinary skill in the art.

Whereas the components described thus far are generally conventional in the art, the chipper drum and its cooperation with the belly-band 40 are entirely novel with the present invention.

As illustrated in FIGS. 4 and 7, the chipper drum includes a cylindrical or peripheral wall 60 which defines a plurality of spaced openings 62 about its circumference. In the preferred embodiment, the drum is 36 inches in diameter and fabricated of $\frac{1}{2}$ -inch steel pipe. A pair of end plates 63 are secured to and close the opposite ends of the drum. The bearings 30 support the end plates and drum for rotation. The drum includes two conceptual halves 64 and 66 (see FIG. 3) separated by an imaginary diametrical plane. Each half includes three equiangularly spaced pockets oriented 120° apart about the circumference. The pockets on the drum halves are not longitudinally aligned, but rather each pocket is equally spaced from the nearest pockets on the adjacent drum half.

The basket and knife assembly 70 mounted within each opening in the drum is illustrated in FIGS. 5 and 6 and generally designated 70. The assembly includes a basket or chip box 72, a knife holder 74, and a knife 76.

The chip box 72 (FIGS. 5 and 6) includes a front wall 78, a rear wall 80, and a pair of opposite side walls 82. A floor 86 is integral with and perpendicular to the

front wall 78. The walls 78, 80, and 82 and the floor 86 together define a chip-receiving chamber 90 aligned with the drum opening 62. The front wall/floor 78/86 is fabricated of $\frac{3}{4}$ -inch steel. The side walls 82 are 1-inch steel, and the rear wall 80 is $\frac{3}{4}$ -inch T-1 steel. All of the chip box components are welded together to form a rigid structure.

The upper edges (as viewed in FIGS. 5 and 6) of the walls 78, 80, and 82 define an open end for the chip chamber 90 which generally coincides with the drum opening 62. A generally rectangular knife holder pocket 92 opens through the upper edge of each of the side walls 82 and 84 to receive the knife holder as will be described. A threaded bore 93 is positioned in the bottom of each pocket 92. The upper edges of the side walls 82 and 84 slope downwardly (again as viewed in FIGS. 5 and 6) from the knife holder pockets 92 to accommodate the curvature of the drum 23.

The upper edges of the chip box walls 78, 80, and 82 coincide with and are welded to the perimeter of the drum opening 2. Accordingly, the chip box forms an enclosure for chips so that all chips entering and leaving the box must pass through the drum opening.

The knife holder 74 extends the full width of the chip box 72. The holder includes a central body portion 94 having a pair of opposite ends or feet 96. The knife holder body 94 is generally trapezoidal in cross-section (see particularly FIG. 6) to facilitate the movement of chips into and out of the chip box as will be described. The feet 96 at the opposite ends of the knife holder are generally rectangular in cross-section and are dimensioned to be closely received within the knife holder pockets 92 in the side walls 82 and 84. The feet 96 each define a throughbore 98 generally aligned with the threaded bore 93 in the pockets 92. Bolts 100 extend through the bores 98 and into the threaded bores 93 to secure the knife holder in position. A plurality, preferably four, of through bores 102 also extend through the knife holder body for attachment of the knife as will be described.

The chipper knife 76 is generally well-known to those having ordinary skill in the chipper art. Specifically, the knife is a generally planar member having a pair of opposite edges 110 and 112. The chipper knife 76 defines a plurality of counter-sunk bores 114 aligned with the through bores 102 in the knife holder 74. Bolts 116 (only one shown) extend through the aligned bores 102 and 114 and are secured using nuts 118 to retain the knife on the knife holder. The edge 110 of the knife so mounted is referred to as the cutting or leading edge; while the edge 112 is referred to as the trailing edge. In actuality, both of edges 110 and 112 are sharpened to provide cutting edges. After the knife has been used in one orientation, the edge will become dull; and the knife can be removed and turned end-for-end so that the opposite edge may be used. However, for clarity in discussing the remainder of the structure, the edges 110 and 112 will be referred to as cutting and trailing edges, respectively.

When mounted as described, the leading edge 110 of the knife 76 is positioned $\frac{1}{4}$ inch above the drum wall 60 to cut $\frac{3}{4}$ -inch chips. Shims (not shown) can be placed in pockets 92 under feet 96 to increase the height of the knives and thereby increase the size of the chips. Such structure greatly facilitates and simplifies adjustment of the knives.

As perhaps best illustrated in FIG. 6, the leading and trailing edges 110 and 112 are spaced from the drum

wall 60. Specifically, the trailing edge 110 is spaced from the drum wall 60 to define a chip ingress opening 120; and the trailing edge 112 is spaced from the drum wall 60 to define a chip egress opening 122. As will be described, cut chips enter the chip box 90 through the ingress opening 120; and the chips are subsequently expelled through the chip egress opening 122 into the discharge chute 22.

An anvil 130 (see particularly FIG. 7) is mounted intermediate the infeed chute 20 and the belly-band 40. Anvil 130 extends the full length of the chipper drum and is generally well known to those having ordinary skill in the chipper art. The clearance between the knives and the chipper drum in the preferred embodiment is in the range of 10 to 20 thousandths of an inch. The spacing between the knives and the belly-band 40 immediately adjacent the anvil 130 is on the order of $\frac{1}{4}$ inch; and the spacing of the belly-band from the chipper knives in the area of the discharge chute 22 is approximately one inch. This enlarging space between the anvil and the discharge chute insures that chips will not be caught, wedged, or otherwise lodged between the chipper drum and the belly-band.

OPERATION

The chipper is connected to a service vehicle using the hitch 16 for towing to the work site. As is conventional in the art, the towing vehicle will typically include a compartment for receiving the chips from the discharge chute 22.

At the site, the power plant or engine 24 is started and preferably brought to a warm idle speed. A conventional clutch (not shown) is then engaged to begin driving the drum 23. When the clutch is fully engaged, the speed of the engine 24 is increased to bring the drum 23 to approximately 600 r.p.m. This speed will produce an infeed rate of 112.5 feet per minute and a chip velocity of 5650 feet per minute. At this point, the chipper 10 is ready to receive material to be chipped.

FIG. 7 best illustrates the operation of the chipper. A single chip basket and knife assembly 70 is illustrated in a first position and in four subsequent positions 70a, 70b, 70c, and 70d. The drum rotates in the direction of arrow 140 so that the knife 76 is moving downwardly and forwardly in the area of the infeed opening 32. This orientation reduces chip kick-back and pulls the material forwardly so that additional feed mechanisms are unnecessary.

The material 142 to be chipped is introduced to the drum chipper through the chute 20. The material 142 lifts the rubber flap curtain 42 (see FIG. 4) as the material is forced through the chute. The feed direction of the material is indicated by the arrow 144.

The chipper knife 76 is illustrated in a position just prior to engaging the material 142. The chipper knife 76 then moves downwardly through and along the material 142 as illustrated in position 70a. As the chips C are cut by the knife 76, the chips pass through the ingress opening 120 into the chip box 72. In view of the relatively high velocity of the chipper drum, the chips tend to travel to the rear wall 80 and accumulate there. At the end of the cutting area, the knife 76 passes the anvil 130 to complete the cutting action.

The position 70b of the knife assembly shows the orientation of the chips C upon the completion of the cutting stroke. Specifically, the chips C accumulate against the rear wall 80 of the pocket. Because the cut chips travel with the rotating drum, the chips are accel-

erated to the linear speed of the peripheral portion of the drum as they are carried by the pockets. As also seen in position 70b, the centrifugal force of the rotating drum begins expelling the chips radially outwardly; and some chips C' will begin riding along the belly-band 40.

The next position 70c of the assembly illustrates the position of the chips C as they continue to move under the influence of the centrifugal force. A greater proportion of the chips C' now rides along the belly-band 40 as they are expelled through the egress or discharge opening 122.

As the assembly 70 continues to rotate past the discharge opening 34, the chips C are propelled into the discharge chute 22 under the centrifugal force. The chips have more than enough velocity and momentum to be easily carried along the length of the chute 22 and into the collective vehicle. Blowers and/or augers are unnecessary. Finally, the assembly rotates to the position 70d wherein all chips have been expelled therefrom.

As previously described, three chip pocket and knife assemblies 70 are equiangularly spaced about each drum segment 64 and 66 (see also FIG. 3). By staggering the knives in the two-drum segments, the chipping force is more evenly distributed about the periphery of the drum. Stated another way, six half-cuts distribute the forces more evenly than would three full cuts.

As most clearly seen in FIG. 7, the drum chipper of the present invention immediately accelerates the cut chips to the tangential speed of the drum and maintains the chip speed into the discharge chute. Consequently, the momentum of the chips need not be changed or redirected during the chipping and expulsion sequence. This eliminates the need for fans, augers, and other prior art chip-moving devices.

ALTERNATE EMBODIMENT

An alternate embodiment of the invention is illustrated in FIGS. 8 and 9 and generally designated 210. The alternate chipper is only schematically illustrated since it has not yet been prototyped. Generally speaking, the alternate chipper 210 includes an infeed system 122, a discharge chute 222, and a chipper drum 223.

The infeed system 220 includes a chain conveyor 220a, a pair of powered side rollers 220b and a powered top roller 220c. All of these components are powered in a direction to feed brushy material to the drum 223. The powered top roller 220c is swingably mounted on arms 220d to accommodate the varying heights of the brushy material to be introduced to the chipper drum.

The chipper drum 223 is the logical extension of the previously described chipper drum 23. The only difference is that the chipper drum 223 is longer than the chipper drum 23 and includes six segments 264a, 264b, 264c, 264d, 264e, and 264f. Each of the drum segments includes three knife and pocket assemblies 270 mounted about its periphery. The assemblies 270 and adjacent drum segments 264 are staggered so that the assemblies of any drum segment 264 are not longitudinally aligned with the assemblies 270 of either adjacent segment. The drum construction technique of the present invention can be used to fabricate a drum of any desired length.

The anvil 230, belly-band 240, and discharge chute 222 are generally identical to those described in the previous embodiment with the exception of the increased width to accommodate the drum length. The chipping and discharge functions are exactly as previously described.

The above descriptions are those of preferred embodiments of the invention. Various alterations and changes can be made without departing from the spirit and broader aspects of the invention as defined in the appended claims which are to be interpreted in accordance with the principles of patent law, including the doctrine of equivalents.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A wood chipper for reducing trees, limbs, branches, and the like to wood chips, and chipper comprising:

a rotatable drum including a circumferential wall portion carrying at least one knife, said knife including a cutting edge and a trailing edge, said circumferential wall portion defining cutting and trailing openings adjacent said cutting and trailing edges through which wood chips may freely pass, said drum further including chip retainer means under said knife and spanning said cutter and trailing openings for receiving wood chips passing through said cutting openings and for temporarily retaining and carrying the chips for discharge through said trailing opening under centrifugal force;

an infeed chute for guiding materials to be chipped to said circumferential portion of said drum to be chipped by said knife;

a discharge chute for guiding chips from said drum following discharge from said chip retainer means.

2. A wood chipper as defined in claim 1 further comprising a housing between said infeed chute and said discharge chute for preventing chips from leaving said basket prior to arrival at said discharge chute.

3. A wood chipper as defined in claim 1 wherein said circumferential wall portion is uninterrupted except for said cutting and trailing openings.

4. A wood chipper as defined in claim 1 wherein said drum carries a plurality of said knives and defines a cutting and trailing opening associated with each said knife.

5. A wood chipper as defined in claim 4 wherein said drum includes two drum segments separated by a diametrical plane, each of said drum segments including a plurality of knives spaced around its periphery, said knives in adjacent drum segments being angularly offset so as to be unaligned longitudinally.

6. A wood chipper as defined in claim 1 further comprising a housing enclosing said chipper drum, said housing including an access door extending the full length of said drum adjacent an upper portion of said drum to permit ready access to said drum for servicing of said knives.

7. A wood chipper as defined in claim 1 wherein said infeed chute includes powered conveyor means for carrying material to be chipped to said drum.

8. An improved drum-type wood chipper including an infeed chute, a rotating drum assembly carrying knives, and an outfeed chute, wherein the improvement comprises said drum assembly comprising:

a drum having a circumferential wall defining at least one opening;

a knife supported by said drum over said opening; and a basket means spanning said opening for receiving wood chips passing through said opening and for holding the wood chips for subsequent passage of

the wood chips through said opening under centrifugal force.

9. An improved chipper as defined in claim 8 wherein said assembly further comprises a housing closely adjacent said circumferential wall of said drum between said infeed chute and said outfeed chute to prevent chips from exiting said basket means between said chutes.

10. An improved chipper as defined in claim 8 further comprising a plurality of knives angularly spaced about said circumferential drum wall.

11. A wood chipper comprising:

a frame;

a chipper drum rotatably supported on said frame for rotation about a horizontal axis, said chipper drum including a circumferential wall defining a plurality of angularly spaced openings, said chipper drum further including a knife mounted within each of said openings and having a cutting edge oriented in the direction of rotation of the drum and a trailing edge, said knife being narrower than the opening and located within the opening to define spaces between each of said cutting and trailing edges and said circumferential wall through which wood chips may pass, said chipper drum further including a basket extending from said circumferential wall into said drum about said opening, whereby chips cut by said knife cutting edge pass through said space adjacent said cutting edge and into said basket for subsequent expulsion from said basket through said space adjacent said trailing edge;

motive means for rotating said chipper drum;

infeed chute means for directing material to be chipped to said chipper drum;

outfeed chute means for guiding chips away from said drum; and

a housing including retention means between said infeed chute means and said outfeed chute means for retaining chips within baskets between said infeed and outfeed chute means.

12. A wood chipper as defined in claim 11 wherein said circumferential wall is uninterrupted except for said openings.

13. A wood chipper as defined in claim 11 wherein: each of said openings and knives extends less than the full length of said drum; and

knives in adjacent longitudinal segments of said drum are unaligned so as to be angularly staggered.

14. A wood chipper as defined in claim 11 wherein said housing further includes a hinged access door extending the full length of said drum providing access to the upper portion of said drum for knife maintenance.

15. A knife assembly for a drum-type wood chipper comprising:

a chip box including forward, rear, and two side walls and a bottom defining a chip chamber, said walls having upper edges together defining an open top for said chip chamber, said side walls further defining two pockets opening through said upper edges of said side walls;

a knife holder including a body portion for supporting a knife and a pair of feet closely received within said pockets to support said knife holder on said chip box, said body portion being spaced from both said forward and rear box walls; and

a knife secured to said knife holder body portion, said knife having a leading edge spaced from said for-

ward box side and a trailing edge spaced from said rear box side.

16. A wood chipper for reducing trees, limbs, branches, and the like to wood chips, and chipper comprising:

a rotatable drum including a circumferential portion carrying a plurality of knives, said knives each including a cutting edge and a trailing edge, said circumferential portion defining cutting and trailing openings adjacent said cutting and trailing edges through which wood chips may freely pass, said drum further including chip retainer means under said knife and spanning said cutting and trailing openings for receiving wood chips passing through said cutting opening and for retaining the chips for discharge through said trailing opening under centrifugal force, said drum further including two drum segments separated by a diametrical plane, each of said drum segments including a plurality of knives spaced around its periphery, said knives in adjacent drum segments being angularly offset so as to be unaligned longitudinally;

an infeed chute for guiding materials to be chipped to said circumferential portion of said drum to be chipped by said knife;

a discharge chute for guiding chips from said drum following discharge from said chip retainer means.

17. In a wood chipper for reducing wood products to wood chips, said chipper comprising:

a. A chipper housing having an inlet for receiving material to be chipped and an outlet for chips;

b. A chipper drum mounted within said housing between said inlet and outlet and having a perimetral portion;

c. means mounting said drum for rotation in said housing in a wood chipping direction of travel about an axis;

d. said drum having at least one knife mounted on said perimetral portion of the drum, the knife having a generally tangential portion with a cutting edge, disposed forwardly with respect to said direction of rotation at a spaced radial distance outwardly from the said perimetral portion;

e. means for driving the drum and knife in said rotary direction of travel;

f. an anvil mounted by the housing radially adjacent the rotary path of travel of said cutting edge of said knife to cooperate with said knife in cutting chips;

g. said perimetral portion of the drum having a chip inlet opening forwardly of the adjacent said knife cutting edge for passing chips cut by said knife, and a chip retention basket radially inward of the knife in communication with said drum inlet opening for receiving and circumferentially transporting the chips cut;

h. said drum also having a chip outlet opening rearwardly of said knife cutting edge and communicating with said basket; and

said housing having a curvilinear belly band means between said anvil and chipper housing outlet conforming in shape generally to the path of rotation of said cutting edge and spaced radially outwardly thereof and said basket a distance to retain chips in said basket as the basket travels forwardly of the anvil along said belly band means toward said chipper housing outlet so as to accelerate the chips to the speed of rotation of said drum and hurl them through said chipper housing outlet.

18. A wood chipper as defined in claim 17 wherein an upwardly directed chip discharge chute extends from

said chipper housing outlet to direct and discharge chips hurled through said outlet.

19. A wood chipper as defined in claim 17 wherein a wood material infeed support member leads to said chipper housing inlet and said anvil is generally in planar alignment therewith.

20. A wood chipper as defined in claim 17 wherein a generally horizontal wood material infeed support member leads toward said chipper housing inlet and a powered feed roller is provided above said infeed support member, said means mounting said drum for rotation including a shaft having an axis of rotation and said feed roller being supported for up and down swinging movement adjacent said chipper housing on arms pivotally supported to swing substantially about said shaft axis of rotation.

21. A chipper as defined in claim 17 wherein said perimetral portion comprises a cylindrical wall portion mounting a plurality of circumferentially spaced knives with a chip retention basket for each knife, said cylindrical wall portion being uninterrupted except for chip inlet openings leading to each basket and chip outlet openings communicating with each basket, and said baskets being closed except for communication with said chip inlet and chip outlet openings.

22. In a method of using a wood chipper for reducing wood products to wood chips, the chipper having:

a chipper housing with an inlet for receiving material to be chipped and an outlet for chips, a chipper drum mounted within the housing between the inlet and outlet and having a perimetral portion, at least one knife mounted on the perimetral portion of the drum, mechanism mounting the drum and knife for rotation in the housing and driving it in a chipping direction of rotation, the knife having a generally tangential portion with a cutting edge disposed forwardly with respect to said direction of drum and knife rotation, an anvil mounted by the housing radially adjacent the rotary path of travel of the knife cutting edge to cooperate with the knife in cutting chips, the perimetral portion of the drum having a chip inlet opening forwardly of and adjacent the knife cutting edge for passing chips cut by the knife and a chip retention basket radially inward of the knife in communication with the drum chip inlet opening for receiving and circumferentially transporting the chips cut, the drum also having a chip outlet opening rearwardly of the knife cutting edge and communicating with the basket, and the housing having a curvilinear belly band between the anvil and chipper housing outlet conforming in shape generally to the path of rotation of the cutting edge and spaced radially outwardly thereof and the basket a distance to retain chips in the basket, the steps of:

a. feeding wood material to said chipper housing inlet and into the path of rotation of said knife to chip the inner end portions of said wood materials;

b. collecting the chips cut by said knife in said basket and retaining them therein against the operation of centrifugal force by substantially blocking their free outward egress through said drum outlet opening by passing said basket along said retaining belly band in its path to said chipper housing outlet to cause the chips to accelerate to the speed of rotation of said drum; and

c. hurling them through said chipper housing outlet.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 5,005,620
DATED : April 9, 1991
INVENTOR(S) : Morey

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 7, Claim 1, Line 12:
second "and" should be --said--

Column 7, Claim 1, Line 23:
"openings" should be --opening--

Column 9, Claim 16, Line 4:
second "and" should be --said--

Column 9, Claim 17, Line 40:
"sasid" should be --said--

Column 9, Claim 17, Line 48:
"the" should be --and--

Column 9, Claim 17, Line 57:
before "said" insert --i.--

Column 10, Claim 22, Line 61:
"sasid" should be --said--

Signed and Sealed this
Second Day of February, 1993

Attest:

STEPHEN G. KUNIN

Attesting Officer

Acting Commissioner of Patents and Trademarks

United States Patent [19]
Morey

[11] **Patent Number:** **5,054,703**
[45] **Date of Patent:** **Oct. 8, 1991**

[54] **STUMP CHIPPER KNIFE ASSEMBLY**

[75] **Inventor:** Norval Morey, Winn, Mich.
[73] **Assignee:** Wood Technology, Inc., Winn, Mich.
[21] **Appl. No.:** 597,548
[22] **Filed:** Oct. 12, 1990
[51] **Int. Cl.⁵** B02C 7/12; B27C 1/00
[52] **U.S. Cl.** 241/296; 144/176;
144/241; 241/92; 241/291; 407/39; 407/47
[58] **Field of Search** 241/92, 101.7, 278 R,
241/278 A, 291, 296, 298; 144/176, 102 R, 241

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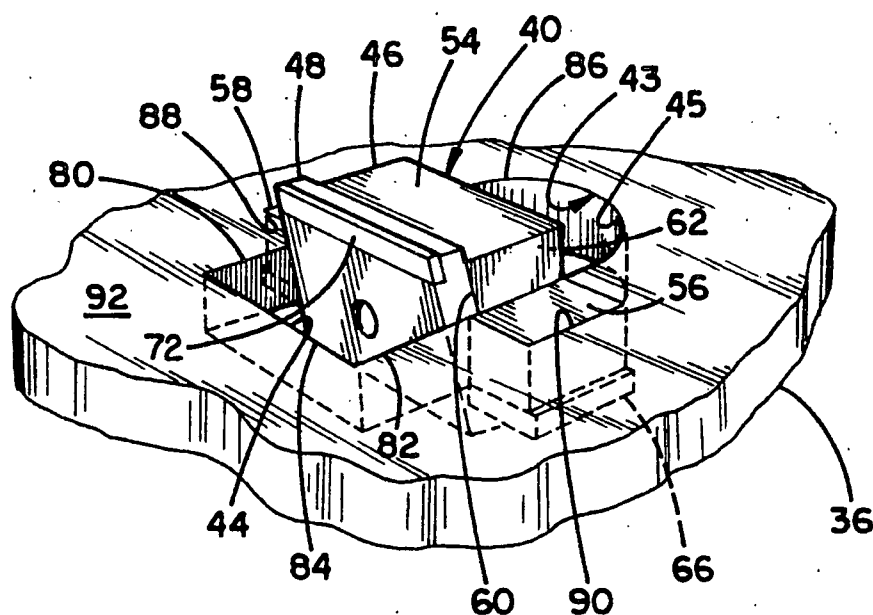
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Primary Examiner—W. Donald Bray
Attorney, Agent, or Firm—Warner, Norcross & Judd

[57] **ABSTRACT**

A chipper knife assembly for a stump disintegrator is disclosed in which knife holder bodies radially span across pockets or openings formed in a rotating chipper disk. A reversible and replaceable blade insert with a plurality of selectable carbide edges is carried on the leading face of the holder body and fixed thereon by means of a threaded fastener inserted from the trailing face of the holder body through a hole formed between the trailing face and the leading face. The end of the fastener engages a threaded recess in the blade insert. The chipper knife assembly divides the chipper disk opening into a leading opening through which wood chips and other debris may pass for subsequent discharge and a leading opening which provides clearance and access to the threaded fastener for its removal and installation.

16 Claims, 3 Drawing Sheets



United States Patent [19]
Morey

[11] **Patent Number:** 5,070,920
[45] **Date of Patent:** Dec. 10, 1991

[54] **DEBARKER KNIFE ASSEMBLY**

[75] **Inventor:** Norval Morey, Winn, Mich.
[73] **Assignee:** Wood Technology, Inc., Winn, Mich.
[21] **Appl. No.:** 586,902
[22] **Filed:** Sep. 24, 1990

[51] **Int. Cl.⁵** B27G 13/00
[52] **U.S. Cl.** 144/237; 144/208 F;
144/218; 144/231; 144/241; 144/340
[58] **Field of Search** 144/162 R, 176, 218,
144/231, 233, 236, 237, 241, 338, 374, 208 F,
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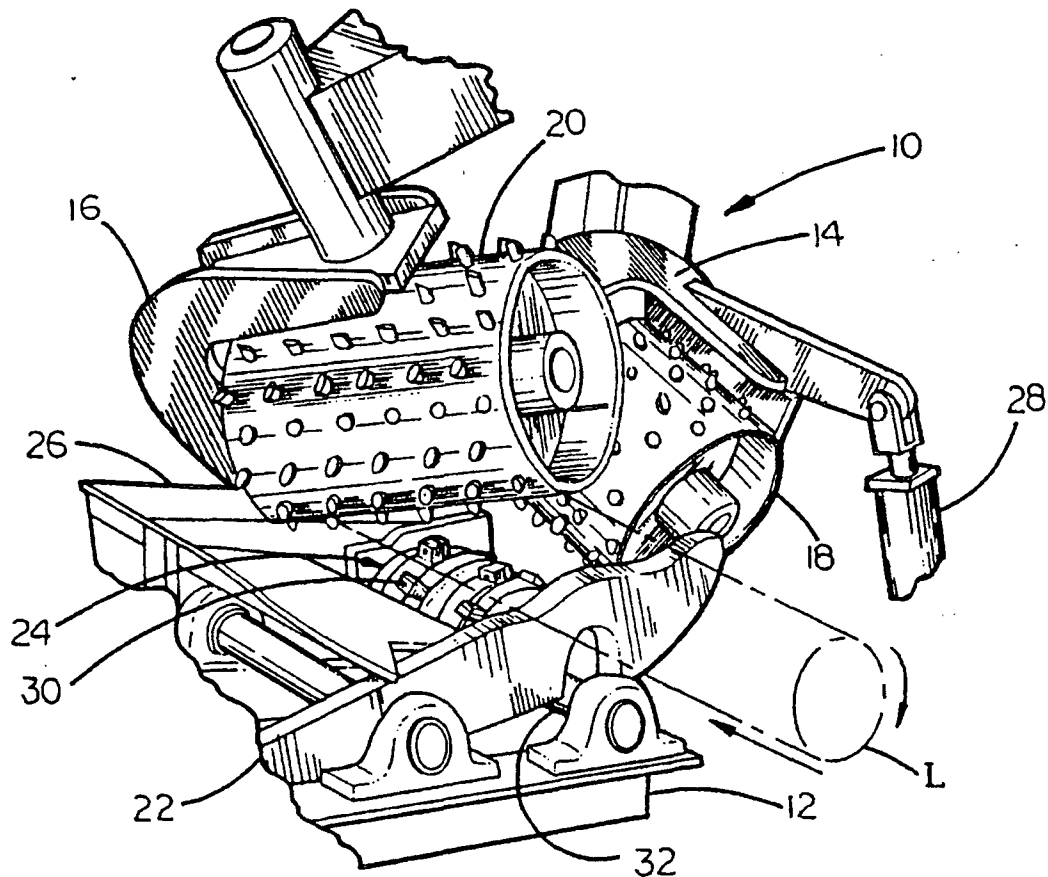
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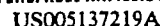
Primary Examiner—W. Donald Bray
Attorney, Agent, or Firm—Warner, Norcross & Judd

[57] **ABSTRACT**

A debarker knife assembly is disclosed including a plurality of disks rotatably and drivingly carried on a shaft. The disks have cutting teeth on their circumferences and are co-rotated on the shaft to remove the bark from a log as the log advances and rotates past the rotating debarker knife assembly. The disks are interchangeable and readily assembled or disassembled for repair or replacement. The cutting teeth are provided with replaceable, reversible cutting inserts fixed to the leading faces of the teeth.

21 Claims, 2 Drawing Sheets





[11] **Patent Number:** **5,137,219**

[45] **Date of Patent:** Aug. 11, 1992

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Chippit II.**

Primary Examiner—Joseph M. Gorski
Attorney, Agent, or Firm—Price, Heneveld, Cooper,
DeWitt & Litton

[57] **ABSTRACT**

A brush/wood chipper having a small diameter pressing feed cylinder adjacent and parallel to an anvil which is generally perpendicular to the feed disc, the cylinder also being adjacent the chipping disc. This feed cylinder is in an infeed chute, and presses the branches, twigs or other wood against the anvil while the wood is fed to and chipped by knives on the disc. The radially oriented knives are each canted relative to the chordal anvil so that, preferably assisted by a canted feed cylinder, the wood is forced toward the center of the chipping disc. The infeed chute has a wall generally at the center of the disc. The chips are propelled to a flow arrester for discharge into bags or bypassed to a discharge chute extension, using a control valve at the flow arrester.

19 Claims, 5 Drawing Sheets

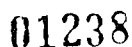
Related U.S. Application Data

- [63] Continuation-in-part of Ser. No. 155,124, Feb. 11, 1988.
- [51] Int. Cl.⁵ B02C 18/06; B02C 18/22
- [52] U.S. Cl. 241/92; 144/176;
241/101.7; 241/245; 241/280
- [58] Field of Search 144/176, 162 R, 246 R,
144/246 F; 241/55, 56, 92, 101.2, 101.7, 245,
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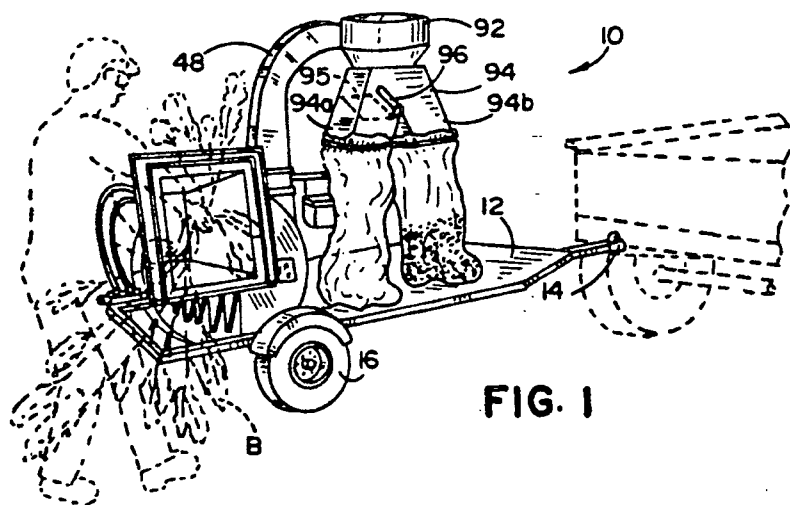


FIG. 1

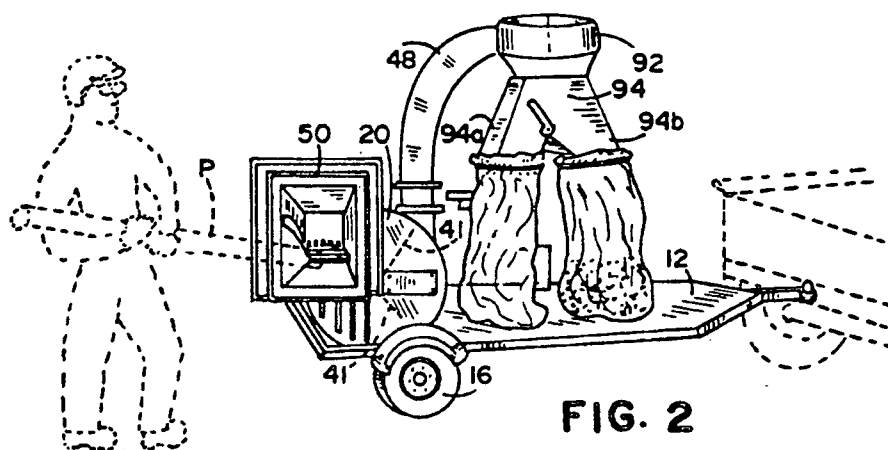


FIG. 2

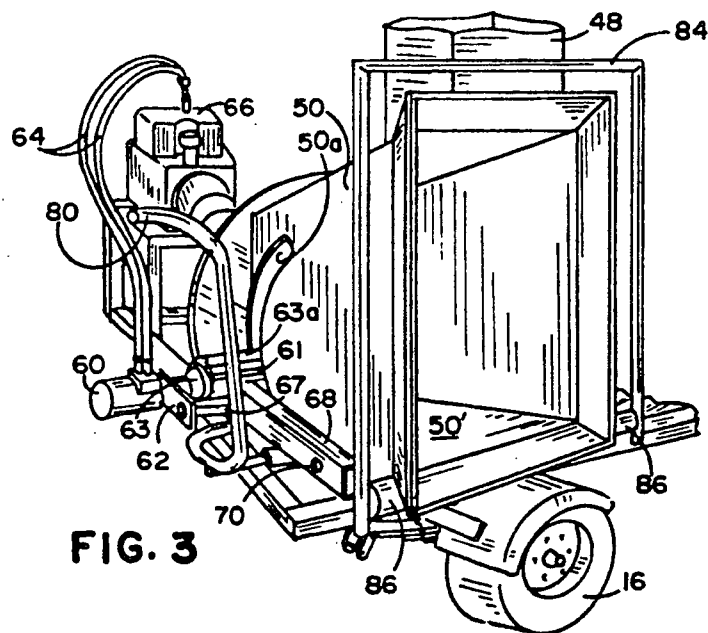


FIG. 3

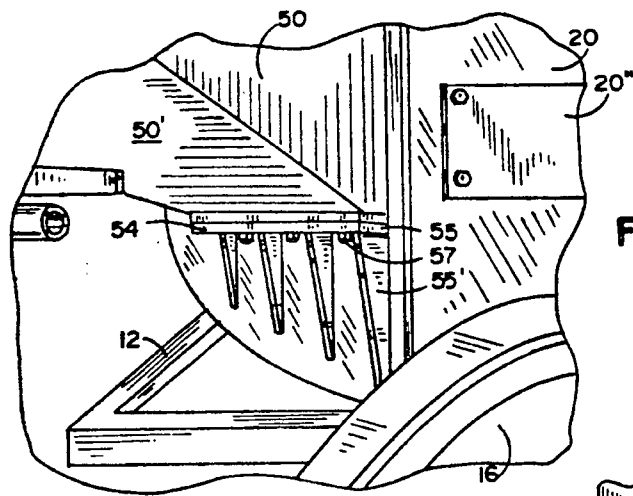


FIG. 4

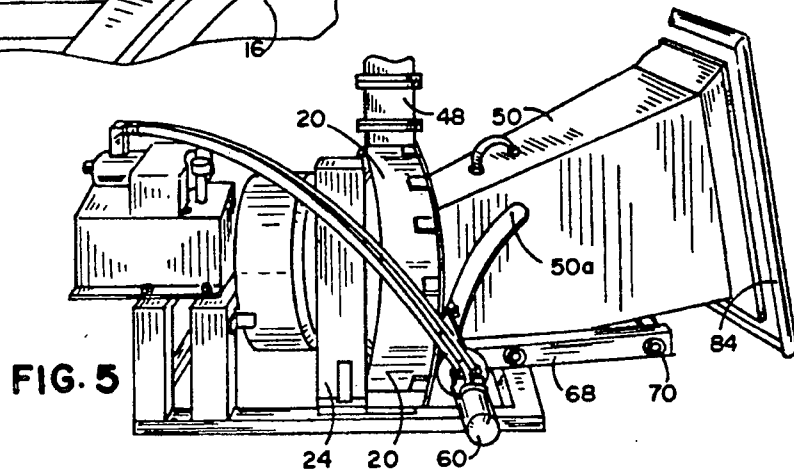


FIG. 5

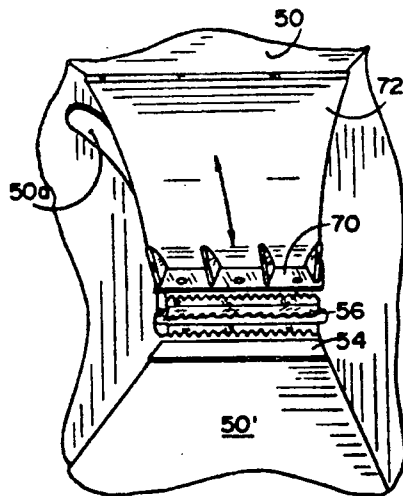


FIG. 6

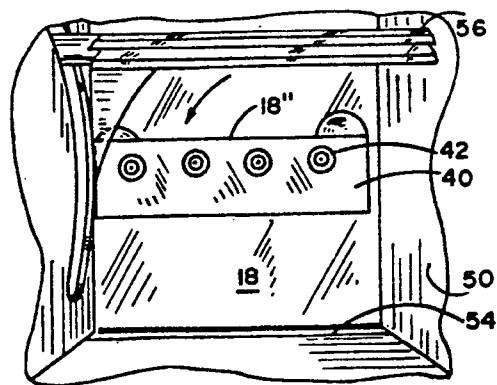


FIG. 7

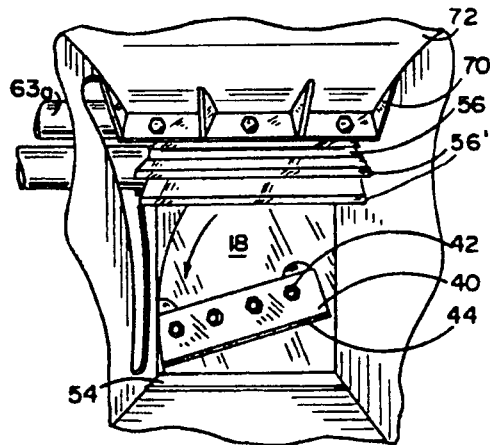


FIG. 8

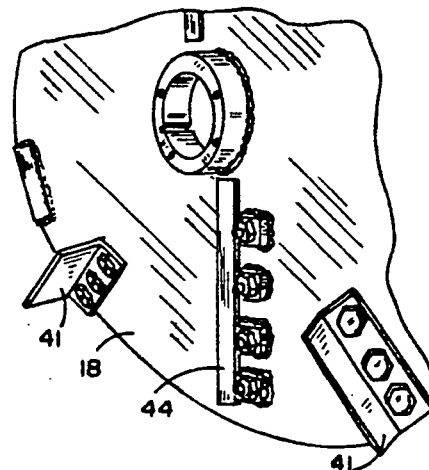


FIG. 10

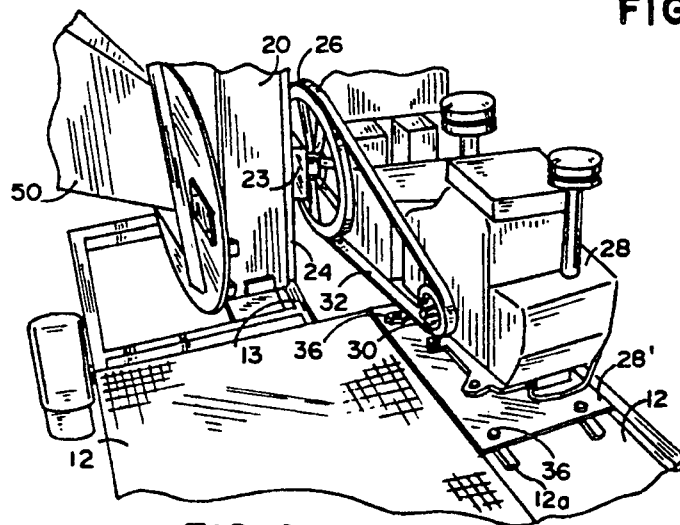


FIG. 9

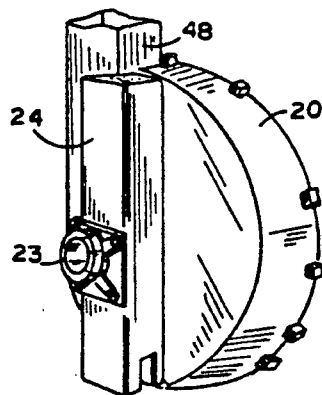


FIG. 11

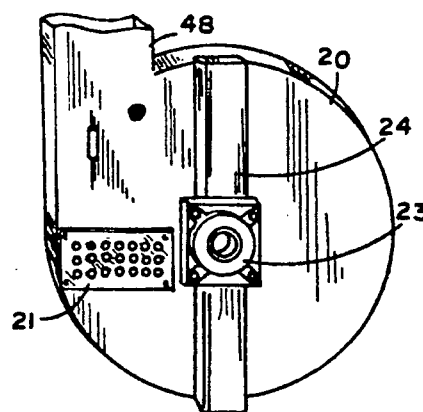


FIG. 12

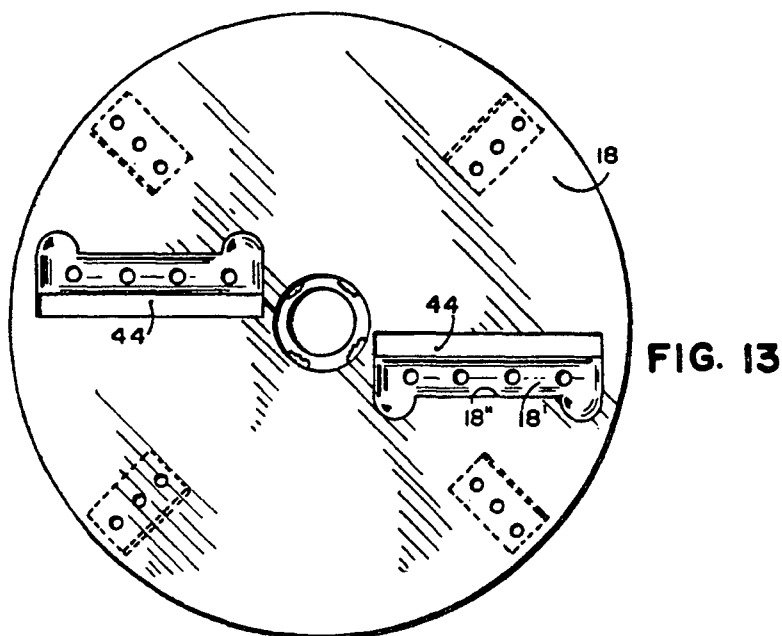


FIG. 13

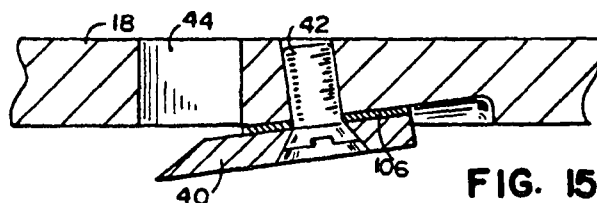


FIG. 15

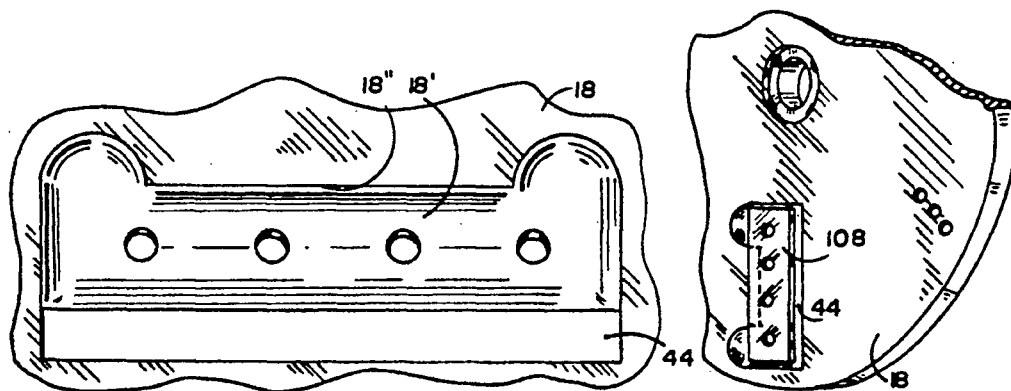
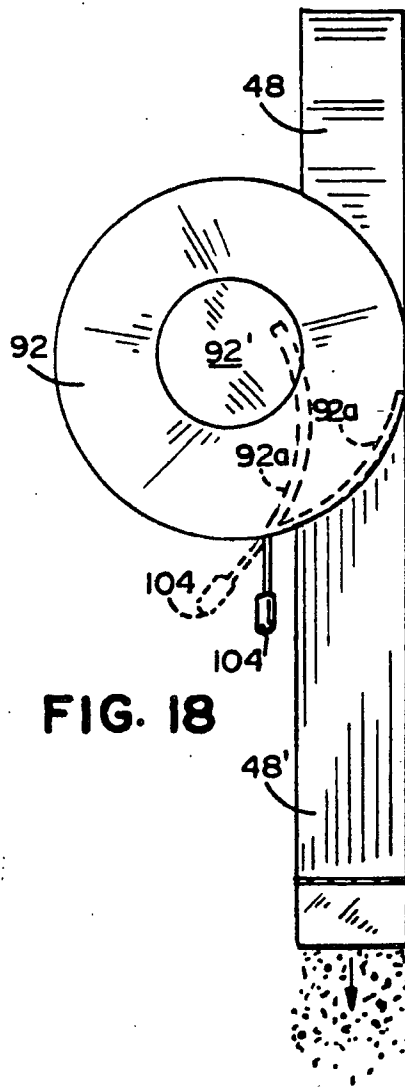
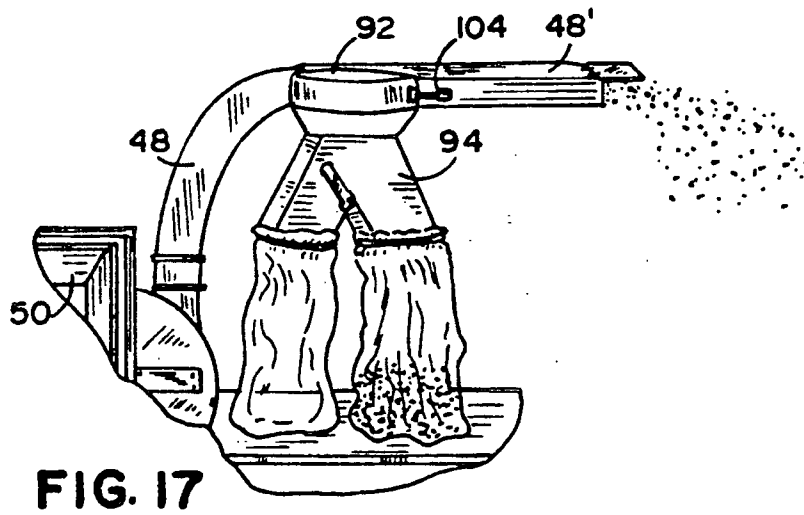


FIG. 14

FIG. 16



WOOD CHIPPER AND INFEEED SYSTEM

RELATED APPLICATION

This application is a continuation-in-part of the copending application entitled CHIPPER BAGGER, U.S. Ser. No. 155,124 filed Feb. 11, 1988.

BACKGROUND OF THE INVENTION

This invention relates to a wood chipping machine optionally capable of also simultaneously bagging chips, and particularly to a lightweight machine effective to chip not only brush and tree prunings but also larger diameter wood, using a small engine, and if desired to directly containerize the chips by power of the chipper.

A variety of wood chipping machines have been developed over the years for accommodating materials ranging in size from whole trees as in U.S. Pat. Nos. Re. 31,048 and 4,078,590 to brush as in U.S. Pat. No. 3,861,602. The latter type machine has proven highly effective and dependable for chipping brush and small trees, and consequently is widely employed by municipal crews, commercial tree services, landscapers and the like for converting large and small branches and even smaller trees into chips. The chips are typically blown from the chipper through a discharge chute at high velocity into an awaiting trailer, or truck, or often onto the ground. Although this machine can also be used for chipping the large volume of annual tree prunings produced when fruit and nut trees are pruned, or by smaller landscapers, the basic construction of this prior machine renders it more heavy duty than needed for such use, generally too costly to be economically feasible for many such operators, and sometimes too large, bulky and/or physically heavy to be moved along the work area, e.g. along rows of trees. A chipper for orchards and grooves must be capable of quick and easy movement from tree to tree to tree hundreds of times, to be able to quickly chip the 50-75 pounds or so of branches per tree. Up to the present time, it is understood that in states such as California hundreds of thousands of dollars have been spent seeking a solution to disposal of these annual prunings, but none has resulted. Thus, these are manually thrown into piles which are put into windrows and then pushed or hauled out of the grove or orchard for mass burning. Burning and landfill disposal of the prunings is being constantly further restricted because of pollution and the like.

Another disposal problem exists with respect to old lumber resulting from replacement every 15-25 years of exterior home structures such as decks and porches, and of downed or trimmed tree limbs and the like. Landfills do not allow or want them. Burning them is often outlawed. Trash trucks will usually not take them. Disposal is a real problem. Yet, the large engine of about 75-100 h.p. and accompanying heavy duty structure previously required to chip limbs and poles up to several inches in diameter place the price out of range for most potential users. The rule of thumb in the industry is that chipping of an eight inch diameter pole does require close to 100 h.p.

The chips resulting from such equipment are desirable for landscaping, mulch and the like. Prior brush chippers capable of handling these larger size poles and limbs, however, have a tendency when chipping brush to pull long strips or twigs through without cutting them into uniformly sized chips. Such long pieces or twigs are not attractive, are not as useful and tend to be

greatly troublesome when attempts are made to bag the chips. These twigs prevent proper filling of the bags.

In addition to these larger brush chippers for commercial use, there have also been very small chippers as for back yard use. These typically are comparable in size to lawn mowers and have an infeed hopper for the twigs and small branches to be fed down to the chipper at a drop angle of about 37 degrees. These small chippers also tend to pull long pieces of branch and twigs through rather than chipping them. Bagging is a problem. Efforts have been made to prevent these long strips or twigs from being pulled past the anvil by the knife in prior chippers by setting the anvil close to the knife, but then the brush has a tendency not to feed well. If the anvil is backed off from the knife for more effective feeding, then the twigs are pulled through. And they are totally incapable of chipping anything large. Hence, they have not been widely adopted.

As to bagging of chips, some lawn mower size chippers or shredders that bag the product have been proposed heretofore, but these small devices are not deemed practical except perhaps for occasional backyard usage as by a homeowner. There are also large machines capable of just bagging previously cut chips. Such commercial baggers of chips are expensive, and moreover do not create the chips, but just bag them. Such prior apparatus has not enabled effective creation and usage of wood chips by landowners, gardeners, landscapers, etc. of millions of tons of prunings and cleanup branches and brush occurring each year.

There has existed a need for equipment capable of chipping trimmings such as the annual prunings from fruit and nut trees, without pulling long twigs or strips through the chipper, but also capable of chipping larger pieces up to six or eight inches in diameter if necessary.

A chipper of smaller horsepower, e.g. about 25 h.p., and smaller size and lighter weight than that of the present commercial brush chippers, would be particularly advantageous, especially if it could also bag the chips, and if it dependably cut even twigs into small chips rather than passing long pieces. Such a chipper should also be capable of chipping limbs and poles up to several inches in diameter without jamming the chipper, since these are frequently encountered in cleanup operations. It should be capable of constant use on a commercial basis, yet easy to use as by rental agency customers.

SUMMARY OF THE INVENTION

An object of this invention is to provide a smaller horsepower, lower cost, commercial disc chipper than present commercial brush chippers, suitable for chipping the annual trimmings/prunings of fruit orchards and nut groves, and for landscaping and tree trimming businesses and the like in an economical manner, capable of effectively chipping twigs and small branches and brush into proper chip size, capable of chipping large diameter wood up to several inches in diameter, and also capable of optionally containerizing the chips. The novel machine is lightweight and can be readily moved as a unit on wheels to desired locations for use, and even moved during use. Its size allows it to pass through a grove or orchard without damage to the trees. It can move from tree to tree to tree to quickly chip the 50-75 pounds of branches at each tree. The prunings can be thrown directly into the chipper to avoid the usual costly cleanup on the ground. It can be in the form of a

trailer unit as depicted herein, or self-propelled as disclosed in the parent application. It chips the prunings or the like and uses the momentum of the propelled chips to directly containerize the chips. The chips can moreover be directly discharged into a truck or on the ground, or alternately discharged into attached and supported containers such as bags after the chip momentum is arrested. Valuable chips in amounts of 100 or so 75 pound bags per hour are the result. Chips from the large volume of prunings, limbs, poles or brush assume only a fraction of the initial volume and are immediately useable and have definite value. These containers of chips are temporarily transportable on the novel apparatus for later transfer onto road vehicles if necessary, for use as mulch, fuel, ground cover, building top soil or the like, without a significant amount of added labor.

The chipper has a special feed roll and anvil cooperative relationship, the feed roll being immediately adjacent the disc and directly above the anvil, biased down toward the anvil to forcefully retain branches and twigs down on the anvil for cutting, largely preventing long twigs and strips from being pulled through the chipper disc. The feed roll is moreover capable of having additional biasing force applied manually by the operator in a desired amount, at will, and without danger, to selectively increase the infeed pressure on the brush or wood against the anvil as needed. There is no danger caused by this manual function because the operator's hands are totally outside the infeed space.

The chipper also has a knife to anvil relationship, an infeed spout arrangement and preferably a feed roller orientation, that causes maximum cutting torque to be applied to the wood, enabling chipping of poles and limbs several inches in diameter using a drive engine less than about one-third the horsepower of prior commercial brush chippers capable of accommodating this size wood.

The chipper can be regulated to produce chips over a large range from about one inch or so thick down to a fine mulch.

The chipper/bagger employs the velocity of the chips propelled from the fan blades on the chipping disc to propel them, preferably to a flow arrester in the form of a cyclone separator. The velocity of the chips and flowing air can be retarded by the flow arrester to cause the chips to drop into containers temporarily suspended adjacent the outlet for the chips. Successive containers are readily attachable to and detachable from chip outlet spouts to allow the machine operator to chip and bag containers of chips and temporarily retain and transport such to a common location. Alternatively the chips can be directed in bulk out of the apparatus into a vehicle such as a truck or trailer, or onto the ground.

These and other features, advantages and objects of the apparatus will become apparent upon studying the following specification in conjunction with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of one embodiment of the novel apparatus, viewed toward the right rear of the machine, and showing brush being fed into the chipper infeed chute;

FIG. 2 is a perspective view of the apparatus in FIG. 1, showing a pole several inches in diameter being fed into the chipper infeed chute;

FIG. 3 is a perspective view toward the right rear of the machine in FIGS. 1 and 2, showing the drive motor

for the feed cylinder, and the manual lift and pressure control for the pressing feed cylinder;

FIG. 4 is a fragmentary perspective view showing the underside of the infeed chute and the mounted anvil;

FIG. 5 is a view toward the rear of the apparatus;

FIG. 6 is a fragmentary view into the infeed chute of the apparatus showing the pressing feed cylinder adjacent and above the anvil;

FIG. 7 is an enlarged fragmentary view of the throat of the infeed chute in FIG. 5, with the pressing infeed roll and the deflector thereabove purposely manually elevated for viewing of a chipping knife on the disc beginning to approach the anvil;

FIG. 8 is a fragmentary perspective view into the infeed chute, showing the chipping knife further approaching the anvil, and showing the anvil itself, and also the pressing feed cylinder and deflector still in the purposely elevated condition;

FIG. 9 is a fragmentary perspective view of the drive motor and pulley assembly for the chipper disc.

FIG. 10 is a fragmentary perspective view of the rear, i.e. discharge, face of the disc;

FIG. 11 is a rear perspective view of the housing for the disc and the main support pillar for the machine;

FIG. 12 is a rear elevational view, slightly in perspective, of the disc housing and support pillar in FIG. 11;

FIG. 13 is an elevational view of the front, i.e. chipping face of the disc, but without the knives being mounted thereon;

FIG. 14 is an enlarged view of one knife pocket and adjacent slot through the disc;

FIG. 15 is a fragmentary enlarged sectional view of a portion of the disc with a knife and an optional shim mounted in place;

FIG. 16 is a fragmentary perspective view of the disc with a blank mounted in one knife pocket and the other pocket still empty;

FIG. 17 is a fragmentary perspective view of another embodiment of the apparatus with a discharge spout extension; and

FIG. 18 is a top plan view of the discharge apparatus in FIG. 13.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIG. 1, the complete assembly 10 there depicted is shown to include a wheeled platform 12 in the form of a trailer, including a pulling tongue and hitch 14 and wheels 16 on an axle. The unit may be readily pulled behind a truck, auto or tractor. Alternatively, it can be self-propelled as in the parent application.

In the following description, the use of the terms front, rear, side, etc. are relative to the orientation of the depicted embodiments, and not intended to be limiting in nature.

The remaining components of the chipper assembly, including the chipping disc, drive motor and chip handling components, are mounted on platform 12. The circular chipping disc 18 is within a surrounding generally cylindrical housing 20 and is mounted on a transverse central stub axle 22 which is secured to and projects from one face, the rear discharge face, of the disc. This axle extends through the adjacent wall of housing 20 and through a bearing 23 on main vertical support pillar 24, as well as through the pillar. Pillar 24 has its lower end mounted on beam 13 of platform 12 and extends upwardly to support other components. On

the extended end of shaft 22 opposite the chipping disc is mounted a driven pulley 26.

Pulley 26, shaft 22 and chipping disc 18 are driven by a power source 28 such as a gasoline engine, through drive pulley 30 and endless drive means such as V-belt 32 extending around drive pulley 30 and driven pulley 26. Motor 28 has a base 28' mounted on platform 12 with threaded fasteners 36. The motor is adjustable relative to the disc. The adjustable arrangement includes a pair of elongated slots 12a in platform 12 through which bolt-type fasteners 36 extend to secure motor platform 28' to platform 12 in the desired position. This adjustment capability allows different size pulleys to be employed at 26 and 30 for setting the desired disc speed/power ratio.

Chipping disc 18 is preferably one to two inches thick, having knife means 40 on the front axial face thereof opposite to the rear face to which axle shaft 22 is secured. Radially extending knife means 40 (FIG. 6), preferably two in number and opposite each other, are mounted to the disc by fasteners 42. Each knife is mounted in a knife pocket 18' formed into disc 18 at an angle of about seven degrees to the disc face. Each pocket has a backup face 18'' for the knife. Adjacent each pocket is a slot 44 that extends through the disc from the front chipping face to the rear discharge face. Each knife projects axially out from the face of the disc a controlled distance at the small acute angle of about seven degrees. The inside face adjacent the cutting edge is at an angle of about 26 degrees or so to the outside face. Each knife is oriented radially on the disc and has its radially inner end approaching the center of the disc, spaced therefrom just slightly more than the radius of shaft 22. The cutting edge of each knife is a continuous linear edge lying substantially along the radius of the disc. Slots 44 adjacent the leading sharp edge of the respective knives each form a passageway to cause the chips cut by the knife to pass through the disc to the rear discharge face. On this discharge face are mounted a plurality of conventional radially extending fan blades 41 which propel the cut chips through the tangentially oriented discharge chute 48 on housing 20. An opening on the front side of the housing 20, under removable plate 20'', allows access to the knives for adjustment or removal and replacement. A perforated plate 21 covering an opening on the rear side of the housing allows air entry for travel with the discharged chips.

The infeed chute 50 through which material is fed to the chipping disc is oriented generally laterally, having an open outer end and an inner throat where it is joined to housing 20. It is somewhat convergent toward the throat. One side wall of the chute is positioned close to the center of the disc, such that the horizontal anvil 54 at the chute throat has its radially inner end close to the vertical plane that passes through the disc center, as will be explained more fully hereinafter. The cooperative knives also have their inner ends close to the disc center, so that the radially inner end of the knife is adjacent said chute side wall. Housing 20 has an opening on one side, contiguous with the throat of the infeed chute, allowing access of wood to the chipping disc. Thus, secured to and extending from the housing around this opening is infeed chute 50 shown to have a top, two sides and a bottom. This bottom 50' also serves as a support for brush B (FIG. 1), poles P or limbs fed to the chipping disc. Bottom 50' is almost horizontal, i.e. almost perpendicular to the disc. It preferably is at a small acute downwardly sloping angle of about 10-12 de-

grees. This is in sharp contrast to the angle of about 37 degrees for conventional small brush chippers. Anvil 54 is basically normal to the disc.

At the inner throat of support 50', immediately adjacent disc 18 so as to be spaced only thousandths of an inch from revolving knives 40, is the anvil 54. The anvil inner edge is spaced about 20 thousandths to about 150 thousandths of an inch from the protruding cutting edge of the passing knives, with 75 thousandths to 100 thousandths being preferred. Anvil 54 is securely mounted atop a platform 55 (FIG. 4) by removable fasteners 57. The fasteners extend through slots to allow anvil adjustment relative to the disc. The fasteners also enable anvil reversal after wear of one edge thereof, and anvil replacement as necessary. Platform 55 is braced by a series of vertical diagonal supports 55' (FIG. 5) because of the stress repeatedly applied to the anvil. This anvil is cooperative with the passing knives to chip the wood. Both the chipping knives and the anvil are formed of hardened materials, usually steel.

Above anvil 54, immediately adjacent disc 18 and generally parallel to the anvil, is a special small diameter wood pressing and feed roll 56 a few inches in diameter. This cylinder is purposely mounted only a fraction of an inch from the disc, usually about one-half inch, so as to just be cleared by the passing knives. It is small in diameter compared to the chute height and to the disc, to be directly above the anvil, and to be vertically movable in the chute. This special cylinder is shown to have a plurality of radially projecting, axially extending wood engaging teeth portions. Each of these portions can optionally have serrated outer edges as depicted in FIG. 6, or preferably linear sharp outer edges as depicted in FIGS. 7 and 8. In either type, the outer edges are capable of penetrating and therefore forming a biting action on wood fed into the infeed chute. For a disc about 28 inches in diameter, and an infeed chute about 20 inches high, this pressing feed cylinder is preferably about three inches in diameter and the teeth or blades project about three-quarter inch more, so that the total diameter is about four and one-half inches. The cylinder extends basically the full width of the infeed chute. Importantly, the roll presses and holds the wood down horizontally on the anvil as it feeds the wood to a point where the chipping knives can engage the wood and chip it. During chipping, the knife pulls the wood to feed it. This cylinder is rotationally powered, preferably by a rotary hydraulic motor 60 (FIG. 3) affixed directly to the end of the cylinder. Motor 60 is powered with hydraulic fluid through fluid pressure lines 64 from a pump and pumping reservoir 66 of conventional type. Motor 60 and cylinder 56 are secured to an elongated pivot arm 68. Motor 60 has its drive shaft extending through cylindrical housing 63 which is secured to pivot arm 68. Also, motor 60 is attached to plate 62 which is attached by a pin 67 to pivot arm 68. Pivot arm 68 has a fixed pivot axle 70 at its outer end opposite the end to which housing 63 and motor 60 are secured.

Motor 60 drives its rotary shaft 61 which extends through housing 63 and through an arcuate slot-type opening 50a in the adjacent sidewall of infeed chute 50. Cylinder 56 is on shaft 61. Also extending through slot 50a is a support pin 63a from housing 63. Secured to this pin 63a inside the chute is a deflector 72 described hereinafter. Pivot arm 60a enables motor 60, shaft 61 and cylinder 56 to move vertically as a unit in an arcuate path depicted by slot 50a, from a lower position immediately adjacent and above anvil 54 to an elevated posi-

tion several inches higher. Cylinder 56 is biased down toward anvil 54 by its own weight and the weight of the other components attached thereto. Additional mechanical biasing means as by springs could be applied if desired. This bias toward anvil 54 tends to forcefully push and hold wood tightly against the anvil during the cutting action. If the wood such as branches and twigs is held securely against the horizontal anvil a fraction of an inch from the knife as the knife passes vertically, neat chips are formed. If the brush is not so held, as in the prior art, it tends to be tipped up and dragged past the anvil by the passing knife, resulting in long, undesirable pieces several inches in length.

The novel apparatus also enables additional pressure of desired amount to be readily manually applied by force on the handle 80 (FIG. 3) secured to pivot arm 68. The lower inner end of handle 80 is secured to pivot arm 68 at two places, one of which is near pivot axle 70 (FIG. 3), to form a leverage effect, allowing arm 68 to be pivoted by pulling or pushing on the handle. The upper outer end extends away from the housing for grasping by a person's hand. Thus, by pulling on the upper outer end, pivot arm 68 will be raised to manually pivot about its axis 70, elevating motor 62, housing 63, shaft 61, the rotating cylinder 56 and the deflector 72 to raise the members for reasons noted below. The operator can also push a desired amount and for a desired time period on this handle to force rotating roller 56 against the wood down onto the anvil. This aids the cylinder feeding action. This action is done without the operator's hands being put inside the chute or in danger. This feature provides a significant advantage and safety feature since it not only aids in feed of plugging material or large material, but also removes the temptation of the operator to reach into the infeed chute and push the material toward the knives. There is an advantage to this infeed roll arrangement when introducing a large diameter piece of wood or clump of branches to the disc. Normally, the rotating feed cylinder will climb up over the infeed material, gripping it and pushing it toward the disc. If it does not climb over it, however, the rotating feed cylinder is simply elevated by pulling handle 80 sufficiently to allow the material to begin passing beneath it and then lowered again onto the material to feed it.

Secured to the inner end of mount 63a is a bracket 70 which supports the upstanding diagonal deflector 72. Deflector 72 protrudes upwardly and outwardly toward the input outer opening of chute 50. This deflector causes the inner ends of branches, brush, twigs or poles being inserted into the infeed chute to be deflected downwardly to the rotating presser cylinder 56 which forces the wood beneath it and down onto the anvil into the chipping disc. Deflector 72 moves vertically with the cylinder. (Compare FIGS. 6 and 8.) The deflector also prevents pieces of wood from being thrown back by the knives over cylinder 56 toward the infeed opening.

Knife 40 has a special arrangement relative to anvil 54. The anvil is in chordal arrangement to the disc, offset below the rotational axis of the disc several inches, preferably about six to eight inches. Knife 40 is oriented to have its cutting edge about on the disc radius. Therefore, when the rotating knife is horizontal to be parallel to the anvil (FIG. 7), i.e. horizontal in the form depicted, it is spaced six to eight inches from the anvil to accept a piece of wood or clump of brush that large in diameter and still be able to advance such

toward the center of the disc as explained further herein. As the knife advances further (FIG. 8), the arrangement will cause the outer end portion of the knife to pass the outer end portion of anvil 54 prior to the remaining inner portions of the knife passing inner portions of anvil 54. The knife portions progressively pass the anvil portions from outer end to inner end. The continuous linear knife edge thus has a force vector toward the center of the disc applied to the wood, as well as a force vector toward the anvil, thereby pushing the wood toward the inner end of the knife and anvil near the center of the disc where the cutting force leverage is greatest. Also, to assist in this action cylinder 56 is preferably canted at a small acute angle relative to the anvil, up to about 15 degrees, the outer end of the cylinder being closer to the anvil than the inner end of the cylinder. This also tends to push the wood toward the center of the disc. As a result of this pressing and feeding action by the cylinder against the anvil and coaction between the knife and anvil with rotation of the chipping disc, the wood forced to a position near the rotational axis of the disc has the greatest cutting leverage applied to it. This is in contrast to accepted practice of having the chipping performed on the outer end portion of the knife some 2-3 inches from the rim. This present combination enables a far smaller horse power drive unit of about 25 h.p. to chip large diameter pieces formerly requiring 75 h.p. or more. Experimental operation with a 25 h.p. unit has shown that poles six to eight inches in diameter can be dependably chipped without stalling the engine or excess slippage of drive belts as previously experienced. Yet the unit with this arrangement is capable of also neatly and reliably chipping small brush, twigs and trimmings effectively.

For additional control, hydraulic motor 60 is stoppable and reversible to drive cylinder 56 in reverse or forward directions or to stop its rotation as in U.S. Pat. No. 3,861,602. This is controlled by a manual lever 84 of conventional type having a generally inverted U-shaped configuration. It is mounted adjacent the inlet opening of chute 50 on pivot pins 86 at the lower ends of its opposite legs. Pushing and pulling of lever 84 operates a control valve (not shown) for stopping or reversing the direction of hydraulic fluid through lines 64 to motor 60. This enables infeeding wood to be stopped or backed out as desired, and serves a safety function.

Extending tangentially from housing 20 is the discharge chute 48 depicted as extending curvilinearly upwardly outwardly to a cyclone separator 92 serving as a flow arrester for chips and air discharged from the chipper disc. The top of separator 92 has a conventional top opening 92' for discharge of excess air pulled into housing 20 through an inlet plate 21 in the housing wall (FIG. 12) and traveling with the chips. Depending from separator 92 is a bifurcated drop chute means 94 shown to include two alternate chutes 94a and 94b. These each have an open lower end. Around each of these lower ends is a flange member over which the upper open end of a chip receiving bag or equivalent container resting on platform 12 can be placed. The bags are preferably retained on these flanges by respective circumferential tension coil springs or the equivalent. Each spring extends around the chute for squeezing and holding a bag on the chute above the flange. A bag upper end is pulled up over the flange and the coil garter spring or rubber equivalent pulled down over it to retain it in place. Bags can be alternately filled with chips dropping from the

flow arrester through these spouts by shifting a pivotal butterfly valve 95 between the spouts within housing 94, using external pivot handle 96.

In the embodiment depicted in FIGS. 17 and 18, the chips can, instead of being bagged, be optionally propelled through a chute extension 48' downstream of the cyclone unit so as to bypass the cyclone unit. This is accomplished by providing chute extension 48' and an arcuate valve segment 92a of the cyclone wall (FIG. 18) pivotally shiftable on pin 102 between a first position (phantom lines) blocking flow to the chute extension and forming part of the separator wall so that they enter the cyclone separator, and a second position allowing the chips to bypass the separator directly to extension 48'. This valve is shifted with an exterior pivot handle 104.

The chipping apparatus can produce a variety of chip sizes, from about one inch thickness to a small mulch. This is achieved with a selected combination of drive and driven sheave or pulley ratios and thus disc speed, knife width, knife spacing from the disc, and number of knives. Specifically as to the sheaves, selected diameter sheaves 26 and 30 can be mounted on their respective shafts and the belt tightened by adjusting engine platform 28' on platform 12 (FIG. 9). This controls the disc speed. As to the knife width, the cutting edge location of the edge of each knife 40 can differ if a narrower knife (e.g. one that has been repeatedly sharpened) is mounted rather than a wider knife. Knife spacing from the disc also depends upon whether one or more shim spacers 106 (FIG. 15) of desired thickness is placed between the knife and disc. The number of blades can be varied as by bolting a blank 108 (FIG. 16) in one knife pocket, leaving only one knife in a two pocket disc. The blank is flush with the disc face and is retained by threaded fasteners through the disc at the knife pocket. To the extended ends of the fasteners can be attached suitable counterweights on the discharge face of the disc. If very large chips are desired, the disc is rotated more slowly, a wider knife is used, a greater spacing of the knife from the disc is provided by one or more shim spacers, and a blank is mounted in one pocket. If very small chips are desired, the disc is rotated more rapidly, narrower knives are used, no spacers are employed, and all pockets are filled with knives.

In operation of the apparatus, it is moved on its wheels to the desired location, as in an orchard, a nut grove, along a curbside or elsewhere to trim small branches, larger poles and branches up to about eight inches or so in diameter, using an engine of only about 25 h.p. The engine 28 drives the disc via the V-belt to rotate disc 18 and knives 40 past anvil 54. It also drives the hydraulic pump to operate motor 60 for rotating infeed pressing cylinder 56 down toward anvil 54 and the disc 18. One end of the wood is manually inserted into chute 50, where cylinder 56 engages it, presses it down onto anvil 54 and advances it to the rotating knives. If the wood is too large for cylinder 56 to climb onto it, the operator pulls on handle 80 temporarily to elevate cylinder 56 sufficiently for the wood to pass beneath it. As cylinder 56 presses the wood on the anvil and feeds it to the knives, the knives slice into it and pull it while cutting, and the chips pass through the slots in the disc to the fan blades on the rear. If the wood or brush tends to jam at the disc, the operator can manually push down on handle 80 to momentarily apply selected amounts of greater force by cylinder 56 against the wood, for better feeding action to the disc. If it still

does not fully feed in, the operator can reverse cylinder 56 to back the wood out.

The wood fed in, particularly larger diameter wood, is caused by the knife-to-anvil and cylinder-to-anvil relationship to move to the inner ends of the knife and anvil for maximum cutting leverage. A pole several inches in diameter will thus tend to be at an angle to the passing knife, usually a compound angle, the inner end of the pole being at the one side wall of the chute near the disc center and the outer end tending to move to the opposite side wall of the chute, and the pole also following the downward tilt of the chute bottom.

The chips thrown through discharge chute 48 are directed to flow arrester 92 for the chips to drop through one or the other chutes 94a and 94b into bags retained thereon, or propelled out the laterally oriented discharge opening of the chute extension 48' into a truck, trailer, container or onto the ground.

Hence, worthless and troublesome brush, branches and the like can be quickly converted to valuable, useable chips of high quality, in containers. Testing shows the apparatus can fill one hundred 70 pound bags per hour, using only a 25 h.p. engine.

Additional advantages and obvious variations to the depicted and described preferred versions of the invention may well occur to those in the art. The invention is intended to be limited only by the appended claims and the equivalents thereto.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A wood chipper comprising:

a rotational chipping disc having radial knife means on an axial cutting face thereof for chipping brush and other elongated pieces of wood, said knife means projecting from said axial cutting face at an acute angle;

said knife means having a continuous linear cutting edge with a radially outer end and a radially inner end, said radially inner end being close to the center of said disc;

a housing around said disc;

an infeed chute to said disc, having a wall close to the center of said disc, having an open outer end to receive wood to be chipped and having an inner end;

said knife means radially inner end being adjacent said infeed chute wall;

an anvil fixed at said infeed chute inner end and closely adjacent said disc face but spaced therefrom, said anvil having an elongated dimension oriented chordally of said disc such that said knife means passes closely adjacent said anvil to cut wood therebetween;

said knife means being canted relative to said anvil, with said radially outer end of said cutting edge advanced in position relative to the direction of rotation of said disc to pass said anvil first before the remaining portions of said knife means pass said anvil and cause successive adjacent radially inner portions of said knife means to progressively advance to and past said anvil in a manner to force wood being cut to be shifted radially inwardly to said disc along said linear cutting edge to said radially inner end of said cutting edge and said infeed chute wall;

a powered feed cylinder in said infeed chute, adjacent said anvil, and closely adjacent said disc cutting face;
 said feed cylinder being movable to relative to said anvil and being biased toward said anvil and cooperative therewith to squeeze wood and brush thereagainst as the wood is engaged by said knife means; and
 operator controlled handle means outside said infeed chute and operably associated with said powered feed cylinder for enabling said feed cylinder to be momentarily moved away from said anvil for entry of larger diameter wood between said feed cylinder and said anvil and enabling extra bias to be manually applied by said feed cylinder against wood on said anvil.

2. The wood chipper in claim 1 including a pivotal support mounting said feed cylinder, and said handle means being connected to said pivotal support.

3. The wood chipper in claim 1 wherein said feed cylinder is canted at a small acute angle relative to said anvil, the outer end of said cylinder being closer to said anvil than the inner end of said cylinder so that the cooperative action of said knife means, cylinder and anvil tend to shift wood being cut radially inwardly of said disc.

4. A wood chipper comprising:
 a rotational chipping disc having radial knife means on an axial cutting face thereof for chipping brush and other elongated pieces of wood, said knife means projecting from said axial cutting face at an acute angle;
 said knife means having a continuous linear cutting edge with a radially outer end and a radially inner end, said radially inner end being close to the center of said disc;
 a housing around said disc;
 an infeed chute to said disc, having a wall close to the center of said disc, having an open outer end to receive wood to be chipped and having an inner end;
 said knife means radially inner end being adjacent said infeed chute wall;
 an anvil fixed at said infeed chute inner end and closely adjacent said disc face but spaced therefrom, said anvil having an elongated dimension oriented chordally of said disc such that said knife means passes closely adjacent said anvil to cut wood therebetween;
 said knife means being canted relative to said anvil, with said radially outer end of said cutting edge advanced in position relative to the direction of rotation of said disc to pass said anvil first before the remaining portions of said knife means pass said anvil and cause successive adjacent radially inner portions of said knife means to progressively advance to and past said anvil in a manner to force wood being cut to be shifted radially inwardly to said disc along said linear cutting edge to said radially inner end of said cutting edge and said infeed chute wall;
 a pressing feed cylinder in said infeed chute and closely adjacent said disc, in cooperative relation with and generally parallel to said anvil, and biased toward said anvil; and
 power motor means for said feed cylinder to rotate said feed cylinder toward said anvil and said disc for forcefully holding infeed poles, limbs and

branches down against said anvil while feeding such to said cutting face for cutting into chips the poles, limbs and branches between said knife means and said anvil.

5. The wood chipper in claim 4 wherein said feed cylinder is movable vertically varying distances from said anvil against said bias to accommodate varying diameter pieces of wood and brush while pressing the wood and brush against the anvil and feeding it toward said disc.

6. The wood chipper in claim 5 wherein said motor means is attached to and movable vertically with said feed cylinder; and
 handle means outside of said chute and connected to said motor means and cylinder for manually shifting said cylinder momentarily away from said anvil and for allowing manual force to be applied by said cylinder against wood on said anvil.

7. The wood chipper in claim 5 including a deflector in said infeed chute above said feed cylinder to deflect wood down between said feed cylinder and said anvil.

8. The wood chipper in claim 7 wherein said deflector is attached to and movable vertically with said feed cylinder.

9. A wood chipper comprising:
 a rotational chipping disc having radial knife means on an axial chipping face thereof for chipping brush and other elongated pieces of wood, said knife means projecting from said axial face at an acute angle;
 an anvil fixed closely adjacent said face, said anvil having an elongated dimension oriented generally chordally of said disc such that said knife means passes closely adjacent said anvil to cut wood therebetween;
 a wood pressing feed cylinder also closely adjacent said disc and generally parallel to said anvil and in cooperative relationship with said anvil;
 said feed cylinder being movable away from and toward said anvil to accommodate varying diameter pieces of wood, and being biased toward said anvil to press the wood thereagainst;
 power motor means for rotationally driving said feed cylinder in a direction to rotate said feed cylinder toward said anvil and said disc while forcefully holding wood and branches against said anvil as such are cut by said knife means.

10. The wood chipper in claim 9 wherein said feed cylinder is canted at a small acute angle relative to said anvil, with the outer end of said cylinder being closer to said anvil than the inner end of said cylinder.

11. The wood chipper in claim 10 wherein said motor means is movable vertically with said feed roll.

12. The wood chipper in claim 10 including a deflector above said feed cylinder to deflect wood down between said feed cylinder and said anvil.

13. The wood chipper in claim 12 wherein said deflector is movable vertically with said feed cylinder.

14. The wood chipper in claim 9 including a wood support platform extending to said anvil.

15. The wood chipper in claim 14 wherein said platform is at a small acute angle from a plane perpendicular to said disc face in a direction away from the advancing knife means.

16. A wood chipper comprising:
 a rotational chipping disc having radial knife means on an axial face thereof for chipping brush and

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other elongated pieces of wood, said knife means projecting from said axial face at an acute angle;
 an anvil fixed closely adjacent said face, said anvil having an elongated dimension oriented generally chordally of said disc such that said knife means passes closely adjacent to said anvil to cut wood therebetween;
 said anvil being substantially normal to said disc chipping face;
 an infeed chute to said disc, the bottom of which is a support for wood being fed to said chipper;
 said anvil being at the inner end of said support; and
 a powered infeed pressure cylinder generally parallel to said anvil, closely adjacent said disc and biased toward said anvil, to press infeed wood against said anvil and hold it while feeding it to said disc for cutting by said knife means.
 17. A wood chipper comprising:
 a rotational chipping disc having radial knife means for chipping brush and other elongated pieces of wood;
 a housing around said disc;
 an infeed chute to said disc having an open outer end to receive wood to be chipped and having an inner end;
 an anvil fixed at said infeed chute inner end;
 a powered feed cylinder in said infeed chute, adjacent said anvil and said disc cutting face;
 said feed cylinder being movable relative to said anvil and cooperative therewith to squeeze wood and brush thereagainst as the wood is fed to and engaged by said knife means; and

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operator controlled handle means outside said infeed chute and operably associated with said powered feed cylinder for enabling said feed cylinder to be momentarily moved away from said anvil for entry of larger diameter wood between said feed cylinder and said anvil and enabling selected amounts of force to be manually applied by said feed cylinder against wood on said anvil.

18. The wood chipper in claim 17 wherein said powered feed cylinder is mounted on a pivotal support, and said handle means is attached to said pivotal support.

19. A wood chipper comprising:

a rotational chipping disc having radial blade means for chipping brush and other elongated pieces of wood;

an anvil fixed closely adjacent said face, said anvil having an elongated dimension oriented generally chordally of said disc such that said blade means passes closely adjacent said anvil to cut wood therebetween;

said blade means being canted relative to said anvil, with the radially outer end thereof being advanced in position relative to the direction of rotation of said disc to pass said anvil first before the remaining portions of said blade means pass said anvil and cause successive adjacent radially inner portions of said blade means to progressively advance to and past said anvil in a manner to force wood being cut to be shifted radially inwardly of said disc; and

a powered feed cylinder adjacent and generally parallel to said anvil and adjacent said disc for pressing wood against said anvil as the wood is fed to and chipped by said knife means.

* * * * *



US005138957A

United States Patent [19][11] **Patent Number:** **5,138,957****Morey et al.**[45] **Date of Patent:** **Aug. 18, 1992**

[54] **HOT GAS GENERATION SYSTEM FOR PRODUCING COMBUSTIBLE GASES FOR A BURNER FROM PARTICULATE SOLID ORGANIC BIOMASS MATERIAL**

[75] **Inventors:** Norval K. Morey, Weidman; Robert J. Engler, Mt. Pleasant, both of Mich.

[73] **Assignee:** Biotherm Energy Systems, Inc., Winn, Mich.

[21] **Appl. No.:** 700,242

[22] **Filed:** May 15, 1991

[51] **Int. Cl.⁵** F23B 7/00

[52] **U.S. Cl.** 110/234; 48/111; 48/209; 110/110; 110/171; 110/188; 110/214; 110/229; 110/247; 110/259; 110/346

[58] **Field of Search** 110/110, 229, 346, 234, 110/211, 214, 188, 190, 247, 259, 165 R, 171; 48/209, 111

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Primary Examiner—Edward G. Favors

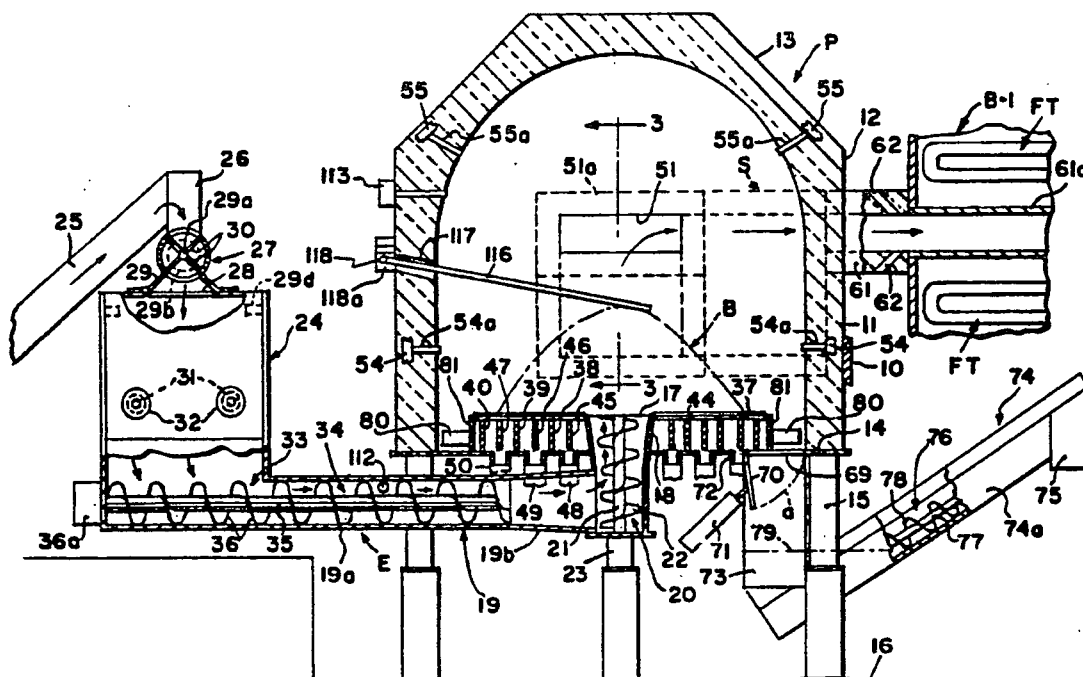
Attorney, Agent, or Firm—Learman & McCulloch

[57] **ABSTRACT**

A bottom-feed, biomass material gasification system

feeds fuel such as green and wet woodchips from below up through a central opening in a stationary, perforate fire table which supports the mound-like fuel bed which is formed. A plurality of ring-like air manifolds contiguously below the fire table, and surrounding the fuel supply tube are separately provided with air in a controlled manner according to the demand for the combustible gas produced, and a greater volume of air is supplied to the centralmost manifold, than to the outer manifold, or manifolds. The system includes, in addition to a primary heating chamber, a secondary heating chamber which receives the hot gases generated in the primary chamber and, via a centrifugal cyclonic action, combusts fly ash particles which may remain entrained in the gas, before passing the hot gases to the boiler burner for combustion. The atmosphere in the primary combustion chamber is partially starved, insofar as the supply of oxygen is concerned, and is maintained under a lower pressure than the gases which outlet from the primary chamber to the secondary chamber so that there is a continuous suction or draft pulling the hot gases generated in the primary chamber directly to the secondary chamber. An ash disposal system has paddles mounted on a rotary band bearing on the fire table for moving the ash which is generated from the perimeter of the fire table, when the ash build-up is sufficient to warrant it.

23 Claims, 5 Drawing Sheets





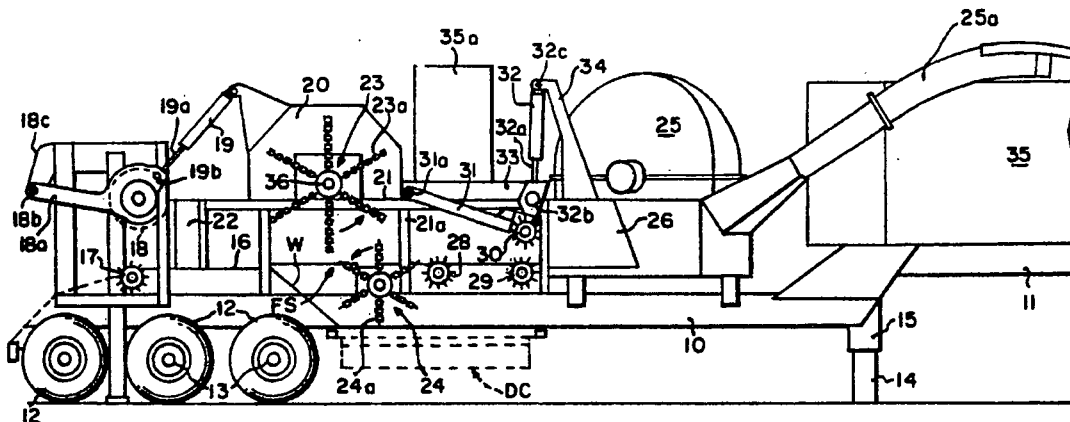
US005148844A

United States Patent [19][11] **Patent Number:** **5,148,844****Robison**[45] **Date of Patent:** **Sep. 22, 1992****[54] FLAIL DRUM SYSTEM**[75] **Inventor:** **Milan W. Robison, Weidman, Mich.**[73] **Assignee:** **Chiparvestors, Inc., Winn, Mich.**[21] **Appl. No.:** **834,597**[22] **Filed:** **Feb. 12, 1992**[51] **Int. Cl.⁵** **B27L 1/00**[52] **U.S. Cl.** **144/208 J; 144/2 Z;**
144/341; 144/343; 144/337; 144/3 R;
241/101.7; 241/193[58] **Field of Search** **241/101.7, 193;**
144/2 Z, 208 R, 208 J, 337, 370, 3 R, 341, 343**[56] References Cited****U.S. PATENT DOCUMENTS**

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Primary Examiner—W. Donald Bray**Attorney, Agent, or Firm—Learman & McCulloch****[57] ABSTRACT**

A flail drum system for delimbing and/or debarking small trees and logs has an upper rotary chain flail drum disposed above the path of travel of the wood product and a lower rotary chain flail drum disposed below the path of the product adjacent to the upper drum. Both drums rotate about a generally horizontal axis transverse to the path of travel of the tree or log. Each flail drum assembly includes a central drive shaft and axially spaced apart end rod support members releasably fixed to the shaft. A series of rod support rings have circumferentially spaced openings through which the rods releasably extend to be also releasably received by the end support members. Circumferentially scalloped spacers between the rings, and between the endmost rings and end members, provide radially inwardly extending openings through which the rods pass. Radially extending chains, having inner terminal links which are received on the rods, are provided in the scalloped openings of the spacers and, as the shaft rotates, the chain flails radially contact the wood product moving in the flailing path.

18 Claims, 5 Drawing Sheets

FLAIL DRUM SYSTEM

FIELD OF THE INVENTION

The present invention relates to flail drum systems for delimbing and/or debarking wood products comprising trees and logs.

BACKGROUND OF THE INVENTION

Particularly for producing chips from logs and small trees which are used in the paper industry to make pulp, it is desirable to remove any limbs and the bark prior to introducing the tree or log to a chipper for chipping the wood product into usable chips. Flail drum systems of the character to be disclosed have been used in conjunction with chippers and like processing machinery for many years, and have been proposed and used in many forms. For example, the following prior art U.S. Pat. Nos., which are incorporated herein by reference, are concerned with various flail assemblies and their use:

1,552,498, Noyes
4,023,604, Stadnick
4,061,166, Larson
4,172,481, Brisson
4,222,418, McCray et al
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4,787,431, Demlow
4,889,169, Peterson et al
4,947,906, Schroeder

The present invention is directed to a system of improved character which will operate in the field for much longer periods of time before part replacement is necessary, provides increased bark removing capability, and enables the more economic replacement of the component parts which are subject to wear.

SUMMARY OF THE INVENTION

The present flail system incorporates bark and limb removing flails such as chains, to forcibly remove small limbs or limb stubs, and the bark, from the core portion of the tree or log, as the wood products are fed continuously through a bark and limb flailing station. Typically, the station may be part of a mobile machine which also mounts a chipper to which the wood products are then fed, or the flailing station may itself constitute a separate mobile unit which is movable up to a position adjacent such a chipper.

The present invention is concerned with a flail drum having a central shaft connected with a drive mechanism for rotating the shaft. Removable end support members are fixed to the shaft and have circumferentially spaced removable rods which extend between them. A series of rod support rings have circumferentially spaced openings, through which the rods extend and circumferentially scalloped spacers are provided between the rings and have radially inwardly extending enlarged recesses through which the rods extend without engaging the spacers. The radially extending, circumferentially spaced chains are connected at their inner terminal ends to the rods and have their end links received in the recesses in the spacers. As the drum rotates, the outer terminal ends freely contact the forwardly moving wood products to flail and remove the bark and limbs. The system contemplates the employment of a pair of axially side by side chains on the rods, between each of the rings, with the rings projecting

circumferentially beyond the spacers to protect the chains.

One of the prime objects of the present invention is to provide a longer operable system of the character described which is so constructed that wear parts can be more readily disassembled, new parts substituted, and operation quickly resumed.

Another object of the invention is to provide a system wherein the parts to be replaced for wear are relatively simple and compact, and economical to manufacture as well as replace.

Still another object of the invention is to provide a system which does not require the welding of elements to the shaft so that no welding stresses are induced in the shaft and high alloy shafts of greater strength can be used.

Another object of the invention is to provide a flail system of the character described which has visible component parts and is easy to inspect for wear, and wherein there is ready access to the chains and a wider variation of chain lengths, pitches, and diameters is possible.

Still a further object of the invention is to provide a system in which plural, side by side, chain flails are used which cooperate to mutually support one another and increase chain life, while covering a larger surface area of the wood product.

Another object of the invention is to provide a flail system of the character described wherein available chain area is increased by plural side by side chains which are used between rod support rings and function more efficiently to remove the bark and limbs.

Still another object of the invention is to provide a system involving spacers which are of lesser diameter than rod supporting rings which are used, the system tending to protect the inner links of the chain and the rods by holding the wood product up on the rings where the smooth peripheral surface of the rings provides an easy surface to ride on so that drag on the tree or log is avoided.

Still another object of the invention is to provide a system which permits the use of a larger diameter shaft capable of standing more abuse and punishment and improving the flywheel effect and balance of the flailing drum.

Other objects and advantages of the invention will be pointed out specifically or will become apparent from the following description when it is considered in conjunction with the appended claims and the accompanying drawings.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic, side elevational view of one machine with which the flail drum system of the present invention may be utilized;

FIG. 2 is a schematic, side elevational view of the drum only, certain parts being omitted in the interest of clarity;

FIG. 3 is a schematic, transverse sectional view taken on the line 3—3 of FIG. 2 in which, however, all of the circumferentially spaced chain pairs are illustrated;

FIG. 4 is an enlarged, fragmentary, side elevational sectional view, more particularly illustrating one of the end support members and the manner in which the chain support rods are received therein, parts being omitted in the interest of clarity;

FIG. 5 is a cross-sectional view taken on the line 5—5 of FIG. 4;

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FIG. 6 is a cross-sectional view taken on the line 6—6 of FIG. 4;

FIG. 7 is a fragmentary, transverse sectional view on an enlarged scale, taken on the line 7—7 of FIG. 2, with certain parts again omitted in the interests of clarity;

FIG. 8 is an enlarged fragmentary transverse sectional view taken on the line 8—8 of FIG. 2, with parts again omitted in the interest of clarity; and

FIG. 9 is an enlarged, fragmentary, side elevational view illustrating the opposite and support member, parts again being omitted in the interest of clarity.

Referring now more particularly to the accompanying drawings, and in the first instance to FIG. 1, I have shown a trailer vehicle including a frame or bed 10 having a forwardly extending tow bar 11 adapted to be connected to a motive vehicle which can pull it along logging trails in the forest. The frame 10 is supported on wheels 12, rotatable on frame supported axles 13, and on a lowerable front stand 14 which is raiseable to a position within a housing 15 when not in use and the trailer is in transit. A floor 16 is provided to support the tree or log as it is moved forwardly into the machine by a hydraulically driven, toothed lower roll 17, and a hydraulically driven upper roll 18 may be provided to further assist the log or tree into the device and hold it in position for flailing. It is to be understood that, typically, a boom with a grapple (not shown) will be utilized to pick up the logs and feed them into the inlet of the machine defined by rolls 17 and 18. The upper roll 18 is supported for vertical swinging travel on an arm 18a pivoted at 18b to a frame supported bracket 18c. A hydraulic cylinder 19, which has its piston rod 19a connected to arm 18a at 19b is pivotally supported on a housing 20 supported by longitudinally extending sub-frame members 21. The members 21 are supported from the frame 10 on vertical posts 21a.

As FIG. 1 indicates, housing 20 may be provided to house a belt drive mechanism for driving an upper flail drum assembly, generally designated 23, which, with a lower flail drum assembly, generally designated 24, and supported on the open frame 10, constitutes a debarking and delimbing flail drum system disposed at what may be termed a flailing station FS. It is to be understood that the flail drum assemblies 23 and 24 are identical except that the chain systems 23a of system 23 may be longer, i.e., typically twenty-four inches, than the chain systems 24a of flail drum assembly 24, which typically may be fifteen inches in length. The assembly 24 is located slightly upstream from the assembly 23 and is driven in a counter direction to the flail drum assembly 23, as indicated by the counter-rotating arrows in FIG. 1. Material removed by the flail units 23 and 24 can fall to a paddle type endless debris conveyor DC, extending transversely to the machine, with inclined wall W assisting its passage.

Upstream of flail drum assembly 24, is a conventional angularly disposed chipper unit, generally designated 25, having an inlet chute 26 to receive the debarked and delimbed wood products, and an outlet duct 25a to direct chips to a chip van or the like (not shown). Toothed rolls 28 and 29 are provided at the level of the bottom of chute 26, and an upper toothed roller 30 is also provided to assist the feed of the wood products into chute 26. The toothed roller 30, which is mounted on an arm 31 pivoted to the frame as at 31a, may be raised and lowered by the piston rod 32a of a hydraulic cylinder 32 which connects to arm 31 at 32b. Cylinder 32 is pivotally mounted at 32c on a frame supported bracket 34.

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All of the rollers 17, 18, 22, 28, 29 and 30 are driven by a conventional rotary hydraulic motor or motors in a direction to advance the trees or logs through the flail station FS. The chipper disc within chipper unit 25 preferably is separately powered and the belt drive mechanism driving flails 23 and 24 are not driven at any speed correlated to the chipper disc. For instance, one engine 35 powers the knived chipper disc and separate engine 35a powers the flail assemblies 23 and 24.

Referring now more particularly to the flail units 23 and 24, attention is directed to the remaining figures of the drawing wherein their construction is described in more detail. Because the flail units are identical, except for the length of the flail chain systems, 23a and 24a, a description of the flail chain assembly 24 will suffice as a disclosure of both.

The assembly 23 includes a central shaft 36 (FIG. 2) having a drive key slot 37 for a keyed drive sheave which is driven by belt drive mechanism operated by a diesel or other engine. As FIG. 2 particularly indicates, the shaft 36 is threaded at spaced intervals as at 38 and 39 and a second longitudinally extending keyway 40 is provided in the shaft 36 to receive a key 41.

At one end of shaft 36, rod end support member 42, having a central opening 43 is provided with a key slot 43a so that it can be slipped over the shaft 36. The end disc or member 42 is provided with a series of equally circumferentially spaced, rod-receiving openings 44 (FIG. 5) to receive longitudinally extending rods R, and is further provided with threaded bores 45 (FIG. 5) for a purpose to be later described. A positioning nut 46, threaded on the shaft thread 38, bears against the recessed shouldered wall 42a. Scalloped annular spacers, generally designated 47 (see FIG. 7), having shaft accommodating openings 48 with keyways 49, and rod receiving support rings 50 (FIGS. 2 and 8), are also assembled in alternating relation on the shaft 36. The rings 50 have circumferentially spaced, rod-receiving openings 51 in exactly the spaced relation of the openings 44 in end member 42, and also have a central shaft accommodating opening 52 provided with a keyway 53. It is to be noted that the spacers 47 have radially extending recesses or openings 47a spaced circumferentially so that the axes "x" of openings 47a are in axial alignment with the openings 44 and 51. Thus, the elongate axially parallel rods R, when received in the openings 44 and 51, extend centrally through the spacer recesses 47a in the manner indicated in FIG. 7 on axes "x" for the radii "y" on which the inner curved ends of recesses 47 are generated. As FIG. 7 indicates, there may be six such recesses 47a and, between the recesses 47a, are toothlike protrusions 47b which have enlarged rounded ends 47c curving oppositely to the curvature of recesses 47a.

Provided on each of the rods R to extend radially outwardly from the rods, are the chain systems 23a and 24a, which each comprise a pair of common link chains 54 and 55. These have, respectively inner links 54a and 55a, and outer links 54b and 55b. The links of the chains 54 and 55, as shown, have successive links disposed at right angles one to the other and, as FIG. 2 indicates, the alternating links, beginning with the second links 54c and 55c are sidewise adjacent one another. Provided on the opposite end of the shaft 36 from end member 42, is an end member 56 (FIG. 9) which has circumferentially disposed blind bores 57 for receiving the ends of rods R. Centrally, the member 56 has a shaft accommodating opening 58 provided with a keyway 59 for receiving key 41. A nut 60 can be threaded on the

threaded portion 39 of the shaft 36 until it comes into engagement with the recessed shoulder portion 61 of end member 56.

Because the spacers 47 are smaller in maximum diameter than the end members 42 and 56, and the rings 50, radially inwardly extending annular pockets 62 (FIG. 2) are provided adjoining the recesses 47a between the ring members 50, and between the end ring members 50 and the end members 42 and 56 at each end of the assembly. As FIG. 2 illustrates, the links 54c and 55c, when in side by side alignment, are a relatively close fit in the pockets 62 and so the edges of links 54c and 55c tend to be guided by one another and by the radial walls of the rings 50, and the inner radial walls of the members 42 and 56. With the pairs of chains in this position of adjacency, they tend to mutually support one another and maintain their side by side alignment (although some turning on rods R can occur) and there is less wear than is encountered when chains are employed singly, because there is less deflection over the full lengths of the chains on rebound.

The assembly disclosed provides better chain control and enables the use of pairs of mutually reinforcing chains in pairs, without the necessity of staggering the pairs circumferentially. It has been found that the greatest chain wear occurs in the first links 54a and 55a, and in the outer three links of the chains. Worn chains from the assembly 23 which are required to be, for example, 13 links in length, can after that wear, be reduced in length and used as the 8 links in the assembly 24. A further advantage of providing pockets 62 is to keep any part of the wood product engaged with the peripheries of members 42, 50 and 56, which are smooth surfaced, and away from the scalloped circumferential surface of the spacers 47.

As FIGS. 4 and 6 particularly illustrate, a locking plate 63, which is rotatable on shaft 36, is used to selectively close off the openings or passages 44 in end member 42. The plate 63 has spaced recesses 64 which circumferentially align with the openings 44 in one rotary position of plate 63 and permit the rods R to be simply pulled outwardly for replacement of any of the chains 54 and 55. The plate 63 also has a pair of slots 65 aligning with the threaded openings 45 in the end member 42 so that bolts 66 with enlarged washers 67, can thread into the openings 45. When the plate 63 is rotated slightly the ends of rods R are covered by the protrusions 6B between recesses 64, the slots 65 being of somewhat less width than the diameter of the rods R in those protrusions 6B which have the slots 65. In its rod blocking position, plate 63 is secured by bolts 66 to rotate with end member 42.

THE OPERATION

Small trees and logs are fed endwisely between the feed roll members 17 and 18 at the rear of the machine in FIG. 1 and travel inwardly between the lengths of the chain systems 23a and 24a of the respective flail assemblies 23 and 24. The flail assembly chain systems 23a tends to push the tree or log endwisely inwardly, but it is prevented from being hurled forwardly at an undue rate of speed by the chain systems 24a which operate in a counterclockwise direction in FIG. 1 to tend to brake the product passing between the assemblies 23 and 24. As a small tree, for example, proceeds in the path to flail station FS, the flail chain systems 23a and 24a, revolving at a rapid rate of speed, typically in the neighborhood of 500 or 550 revolutions per minute,

flail off limbs, and also effectively flail away the bark to leave a core free of bark. Since the flail drums are longer than the trees or logs are wide, the sides as well as the top and bottom surfaces of the wood product are fully engaged by the chains. The debarked core then can move into the chipper chute 26 and be reduced to small chips in the chipper 25 from whence the chips are ejected in an air stream out chipper outlet opening 25a. Loose bark, limbs and limb fragments, and any fragments of chain, can simply fall by gravity to the transversely extending debris conveyor DC provided to convey material to the sides of the unit.

Whereas, previously, flail drums of a different design have lasted sometimes as little as 30 days, it is expected that the present flail drum assembly will last many times that. All of the component parts shown in FIG. 2 are readily replaceable, either individually or even in large part collectively, when replacement is required, and within a relatively short period of time so that the machine need not be down for any substantial period of time. The replacement of chains is simply accomplished by backing off the bolts 67, slightly revolving the end locking plate 63 to access the rods R and removing the particular rod or rods R involved. Because each operator will maintain an inventory of all of these compact relatively small parts, other worn parts can, also, be easily replaced and the device very readily reassembled and locked in operative position once again.

It is to be understood that the embodiments described are exemplary of various forms of the invention only and that the invention is defined in the appended claims which contemplate various modifications within the spirit and scope of the invention.

What is claimed is:

1. In a flail drum system for delimbing and/or debarking wood products comprising trees and logs and wherein there is a wood product advancing mechanism for moving the wood products forwardly in a generally horizontal path; an upper rotary chain flail drum disposed above the path; and mounted to rotate about a generally horizontal axis transverse to the path; a lower rotary chain flail drum disposed below the path adjacent to the upper drum and mounted to rotate about a generally horizontal axis transverse to the path; and drive mechanism for driving the advancing mechanism and for rotating said flail drums; the improvement wherein at least one of said flail drums comprises:

- a. a central shaft connected to be driven by said drive mechanism;
- b. a pair of axially spaced apart end rod support members fixedly mounted on said shaft and having circumferentially aligned and spaced removable rods extending between them;
- c. a series of radially extending rod support rings, having side walls with circumferentially spaced openings through which said rods extend, and which support said rods, fixedly connected to rotate with said shaft;
- d. circumferentially scalloped annular spacers, disposed between said rings and circumferentially inset with respect to said rings to form circumferentially inset pockets between said rings with pocket side walls defined by said ring side walls, and providing radially inwardly extending openings through which said rods extend without engaging said spacers;
- e. radially extending, circumferentially spaced chains, comprising a series of connected loop links with

radially inner and outer terminal ends, the inner terminal ends of the chains comprising chain links, through which said rods extend, received in the openings in said spacers, and chain links extending outwardly therefrom which are guided on said pocket side walls radially outwardly of said spacers during rotation of the shaft, the outer terminal ends of said chains extending sufficiently beyond said rings to freely contact wood product moving in said path during rotation of said shaft;

- f. and means for fixedly connecting said spacers so that said openings therein, through which said rods extend, remain aligned with the openings in said rings through which said rods extend.

2. The system of claim 1 wherein said flail drums are counterrotated.

3. The system of claim 1 wherein said shaft is threaded at spaced apart intervals to coincide with the positions of said end rod support members, and nuts threaded on said shaft and cooperative with said end rod support members axially maintain said end rod support members on said shaft.

4. The system of claim 1 wherein said end rod support members, said spacers, and said rings are commonly keyed to said shaft.

5. The system of claim 1 wherein one of said end rod support member has rod receiving openings extending axially through it, a locking plate is rotatably mounted on said shaft adjacent said one end rod support member and has openings which align with said rod receiving openings provided between radial projections, said locking plate being rotatable from a position in which said openings in the locking plate align with said rod receiving openings in said one end rod support member to a position in which said radial projections align with them, and means for locking said locking plate in position.

6. The system of claim 1 wherein pairs of radially extending side by side chains, with alternate pairs of side by side chain links, are provided on said rods in each of said inwardly extending openings in said spacers.

7. The system of claim 6 wherein said spacers are radially inset from said rings to provide chain pockets between said rings of an axial width substantially the same as the axial width of the pairs of side by side chain links so that said rings tend to guide the radially inner ends of said chains and the chains tend to mutually reinforce one another in their flailing action.

8. A flail drum for a flail drum system operable for delimbing and/or debarking wood products, comprising trees and logs, at a flailing station wherein there is forwarding mechanism for moving the wood products forwardly in a generally horizontal path, a rotary chain flail drum disposed adjacent to the path and mounted to rotate about an axis transverse to the path, an opposite rotary chain flail drum disposed adjacent the path and mounted to rotate about an axis transverse to the path, and drive mechanism for driving the forwarding mechanism to move wood product in said path past said flail drums and for rotating said flail drums; said drum comprising:

- a. a central shaft connected to be driven by said drive mechanism;
- b. circumferentially spaced, generally axially extending rods radially spaced from said shaft and supported thereon for rotation therewith;

c. a series of rod support rings having circumferentially spaced openings through which said rods extend, and which support said rods, fixedly connected to rotate with said shaft;

d. circumferentially scalloped spacers between said rings, having ends adjacent said rings and connected to rotate with said shaft, and providing radially inwardly extending openings, with unbroken marginal radial walls extending from one end of the spacer to the other through which said rods extend without engaging said spacers; and

e. a plurality of side of side, axially in-line mutually reinforcing, radially extending, adjacent chains for each spacer comprising a series of connected loop links with radially inner and outer terminal ends, the inner terminal ends of the chains comprising closed links in said spacer openings through which said rods extend, and the outer terminal ends of the chains extending sufficiently beyond said rings with rotation of said shaft to freely contact wood product moving in said path.

9. The assembly of claim 8 wherein said spacers are circumferentially inset from said rod support rings.

10. The assembly of claim 8 wherein said spacers and rings are commonly keyed to said shaft.

11. The assembly of claim 8 wherein at least one end rod support member is provided adjacent the endmost of said spacers and has openings circumferentially spaced to receive the ends of said rods.

12. The system of claim 11 wherein said end rod support member has rod receiving openings extending axially through it, a locking plate is rotatably mounted on said shaft and has openings, which align with said rod receiving openings, provided between radial stop projections, said plate being rotatable from a position in which said openings in the locking plate align with said rod receiving openings in said end rod support member to a position in which said radial projections align with them and block said rods, and means for locking said locking plate in blocking position.

13. The system of claim 8 wherein pairs of side by side chains have radially inner links received on said rods in each of said inwardly extending openings in said spacers.

14. The system of claim 13 wherein said side by side chains have side by side links adjacent to said inner links, said spacers are radially inset from said rings to provide chain pockets between said rings of an axial width substantially the same as the axial width of the pair of side by side chain links so that said rings not only tend to guide the radially inner ends of said chains but the chains tend to mutually reinforce one another in their flailing action.

15. The assembly of claim 8 wherein said spacer openings are configured to provide radially extending tooth-like projections between them, and said projections at their outer ends are circumferentially enlarged and have curvilinear surfaces forming the necks of said spacer openings.

16. A method of removing flail supporting rods from a flail drum operable for delimbing and/or debarking wood products, comprising trees and logs, at a flailing station wherein forwarding mechanism moves the wood products forwardly in a path past a rotary chain flail drum disposed adjacent to the path and mounted to rotate about an axis transverse to the path, the flail drum having a central shaft, axially parallel, circumferentially spaced generally axially parallel rods radially spaced

from the shaft and supported thereon for rotation therewith, a series of rod support rings having circumferentially spaced openings through which the rods extend connected to rotate with the shaft, circumferentially scalloped spacers between the rings connected to rotate with the shaft and providing radially inwardly extending openings through which the rods extend without engaging the spacers, and radially extending, circumferentially spaced chains comprising a series of connected loop links with radially inner and outer terminal ends, the inner terminal ends of the chains comprising closed links through which the rods freely extend, and the outer terminal ends of the chains extending sufficiently beyond the rings to freely contact wood product moving in the path, end members on said shaft, one of said end members having circumferentially spaced through passages in which the ends of said rods are received, and a lock plate rotatable on said shaft relative to said end member from a position covering said passages to a position in which it does not; and locking mechanism for said lock plate to lock it in position, the steps of:

- a. unlocking said lock plate;
- b. revolving it from a position in which it blocks the openings in said end member to a position in which it does not;
- c. withdrawing at least one of the rods endwisely from the drain links and drum to free chains formerly supported thereon;
- d. reinserting said rod through the inner closed links of chains held in the spacer openings; and
- e. rotating said locking plate to block the rod ends in said end member passages and locking it in position to rotate with the end member.

17. A flail drum for a flail drum system operable for delimbing and/or debarking wood products, comprising trees and logs, at a flailing station wherein there is forwarding mechanism for moving the wood products forwardly in a generally horizontal path, a rotary chain flail drum disposed adjacent to the path and mounted to rotate about an axis transverse to the path, an opposite rotary chain flail drum disposed adjacent the path and mounted to rotate about an axis transverse to the path, and drive mechanism for driving the forwarding mechanism to move wood product in said path past said flail drums and for rotating said flail drums; said drum comprising:

- a. a central shaft connected to be driven by said drive mechanism;
- b. circumferentially spaced generally axially extending rods radially spaced from said shaft and supported thereon for rotation therewith;
- c. a series of rod support rings having circumferentially spaced openings through which said rods extend, and which support said rods, fixedly connected to rotate with said shaft;
- d. circumferentially scalloped spacers between said rings connected to rotate with said shaft and providing radially inwardly extending openings through which said rods extend without engaging said spacers;
- e. radially extending, circumferentially spaced chains comprising a series of connected loop links with radially inner and outer terminal ends, the inner terminal ends of the chains comprising links

through which said rods extend, and the outer terminal ends of the chains extending sufficiently beyond said rings with rotation of said shaft to freely contact wood product moving in said path;

- f. at least one end disc member provided at the end of said drum which has through openings circumferentially spaced to receive the ends of said rods; and
- g. a locking plate rotatably mounted on said shaft and having through openings which align with said rod receiving openings, provided between radial stop projections, said plate being rotatable from a position in which said openings in the locking plate align with said rod receiving openings in said end support member and can be withdrawn to a position in which said radial projections align with the openings in said end support member and block said rods; and
- h. releasable means for holding said locking plate in blocking position.

18. A flail drum for a flail drum system operable for delimbing and/or debarking wood products, comprising trees and logs, at a flailing station wherein there is forwarding mechanism for moving the wood products forwardly in a generally horizontal path, a rotary chain flail drum disposed adjacent to the path and mounted to rotate about an axis transverse to the path, an opposite rotary chain flail drum disposed adjacent the path and mounted to rotate about an axis transverse to the path, and drive mechanism for driving the forwarding mechanism to move wood product in said path past said flail drums and for rotating said flail drums; said drum comprising:

- a. a central shaft connected to be driven by said drive mechanism;
- b. circumferentially spaced, generally axially extending rods radially spaced from said shaft and supported thereon for rotation therewith;
- c. a series of radially extending rod support rings, having side walls with circumferentially spaced openings through which said rods extend, and which support said rods, fixedly connected to rotate with said shaft;
- d. circumferentially scalloped spacers, disposed between said rings and circumferentially inset with respect to said rings to form circumferentially inset pockets between said rings with pocket side walls defined by said ring side walls, connected to rotate with said shaft and providing radially inwardly extending openings through which said rods extend without engaging said spacers; and
- e. radially extending, circumferentially spaced chains comprising a series of connected loop links with radially inner and outer terminal ends, the inner terminal ends of the chains comprising chain links, through which said rods extend, and chain links connected thereto and extending outwardly therefrom which are guided on said pocket side walls radially outwardly of said spacers during rotation of the shaft, and the outer terminal ends of the chains extending sufficiently beyond said rings with rotation of said shaft to freely contact wood product moving in said path during rotation of said shaft.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 5,148,844

DATED : September 22, 1992

INVENTOR(S) : Milan W. Robison

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 3, line 63, change "t" to -- to --.

Column 5, line 46, change "6" to -- 63 --; line 47,
change "6B" to -- 68 --.

Signed and Sealed this
Fifth Day of October, 1993

Attest:



BRUCE LEHMAN

Attesting Officer

Commissioner of Patents and Trademarks



US005191754A

United States Patent [19]

Morey

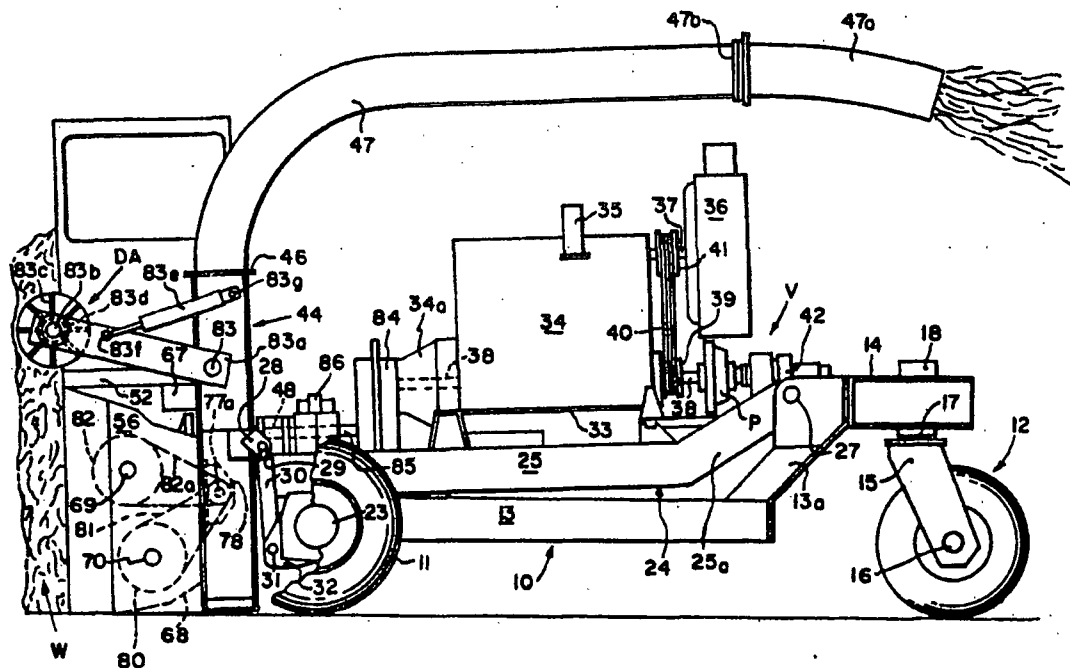
[11] **Patent Number:** **5,191,754**[45] **Date of Patent:** **Mar. 9, 1993****[54] SELF-PROPELLED COMPOST WINDROW TURNING AND AERATING MACHINE AND METHODS OF OPERATING THE MACHINE**[75] **Inventor:** Norval K. Morey, Weidman, Mich.[73] **Assignee:** Wood Technology, Inc., Winn, Mich.[21] **Appl. No.:** 900,577[22] **Filed:** Jun. 18, 1992[51] **Int. Cl.⁵** A01D 84/00[52] **U.S. Cl.** 56/13.3; 56/12.8;
56/14.7; 56/16.4; 56/365[58] **Field of Search** 56/12.8, 12.9, 13.1,
56/13.2, 13.3, 14.7, 16.4, 16.6, 365, DIG. 5;
414/25, 132**[56] References Cited****U.S. PATENT DOCUMENTS**

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Primary Examiner—George A. Suchfield
Attorney, Agent, or Firm—Learman & McCulloch**[57] ABSTRACT**

A self-propelled compost windrow turning and aerating machine includes a longitudinally extending vehicle main frame supported on a pair of front wheels and a rear castored wheel. An upper longitudinally extending subframe is swingably supported from the rear end of the main frame to raise and lower the front end of the subframe relative to the main frame. A blower housing mounted on the subframe has a material admitting opening leading to a rotary fan provided in the housing, the blower housing having a discharge opening with a spout for directing material blown out of the housing. Material debridging and feeding mechanism supported on the subframe in advance of the blower housing removes material from a compost windrow and delivers it to the material admitting opening, and an engine drive system powers the front wheels, the fan, and the material debridging and feeding mechanism.

19 Claims, 4 Drawing Sheets



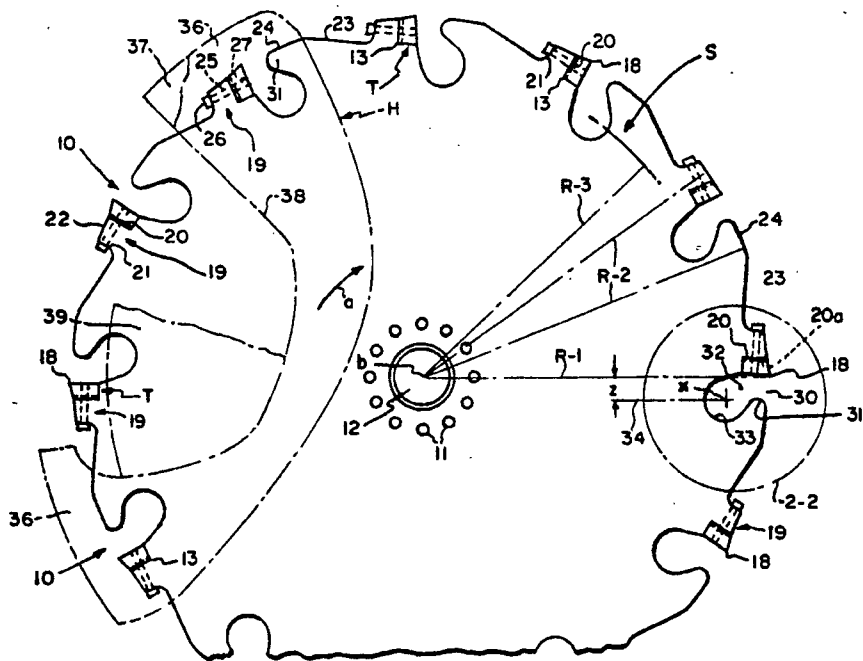
US005261306A

United States Patent [19][11] **Patent Number:** **5,261,306****Morey et al.**[45] **Date of Patent:** **Nov. 16, 1993****[54] CIRCULAR SAW BLADE FOR TREE CUTTING AND BUNCHING VEHICLES****[75] Inventors:** Norval K. Morey, Weidman; Donald J. Ryan, Sheridan, both of Mich.**[73] Assignee:** Wood Technology, Inc., Winn, Mich.**[21] Appl. No.:** 843,817**[22] Filed:** Feb. 28, 1992**[51] Int. Cl.:** B27B 33/08; B23D 61/04**[52] U.S. Cl.:** 83/840; 83/855; 144/34 R; 144/231; 144/241**[58] Field of Search:** 83/840, 831, 833, 835, 83/838, 839, 853, 855, 698, 842-845, 834; 144/34 R, 231, 241, 218; 407/33, 42, 48, 51; 30/355**[56] References Cited****U.S. PATENT DOCUMENTS**

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Primary Examiner—Hien H. Phan**Assistant Examiner—Clark F. Dexter**
Attorney, Agent, or Firm—Learman & McCulloch**[57] ABSTRACT**

An improved circular saw blade is rotatable in a guard casing having tree receiving vertically aligned openings in its upper and lower plates. The blade has a peripheral surface formed in part by a series of replaceable circumferentially spaced teeth with transverse cutting edges positioned to rotate about a predetermined first radius. The blade also has a series of circumferentially spaced, generally radially projecting backer tooth mounts for receiving the rear surfaces of the teeth. The mounts have sloped peripheral surfaces lying radially inside the first radius of rotation and have rear surfaces generally parallel to the mount front surfaces. The saw further has generally tangentially projecting finger-like guides in a guide region spaced circumferentially forwardly from each tooth to provide a radially extending chip passing slot between each tooth and guide and the guides have peripheral surfaces positioned to rotate radially inside the first arc of rotation about a second arc of rotation. Rearwardly and outwardly extending trailing surfaces extending substantially perpendicularly from the rear surfaces of the mounts lead from the tooth mounts to the guide peripheral surfaces to form the peripheral surfaces of the saw between the tooth mounts and guides. A series of loop shaped openings join to the chip passing slots and have marginal radially angular chip deflecting walls extending at an angle in a forward direction. Fasteners extend chordally through the mounts from the rear of the mounts into the teeth to releasably secure them to the mounts.

17 Claims, 2 Drawing Sheets

01260



US005322104A

United States Patent [19]

Morey et al.

[11] Patent Number: 5,322,104
[45] Date of Patent: Jun. 21, 1994

[54] FLAIL DRUM MACHINES AND METHODS

[75] Inventors: Norval K. Morey; Milan W. Robison,
both of Weidman, Mich.

[73] Assignee: Wood Technology, Inc., Winn, Mich.

[21] Appl. No.: 57,179

[22] Filed: May 4, 1993

[51] Int. Cl.⁵ B27L 1/00; B27L 7/00

[52] U.S. Cl. 144/341; 144/2 Z;
144/208 J; 144/343; 144/249 R; 241/193

[58] Field of Search 29/402.3, 402.8, 889.1;
241/192, 193; 144/2 Z, 208 R, 249 R, 249 A,
340, 341, 343

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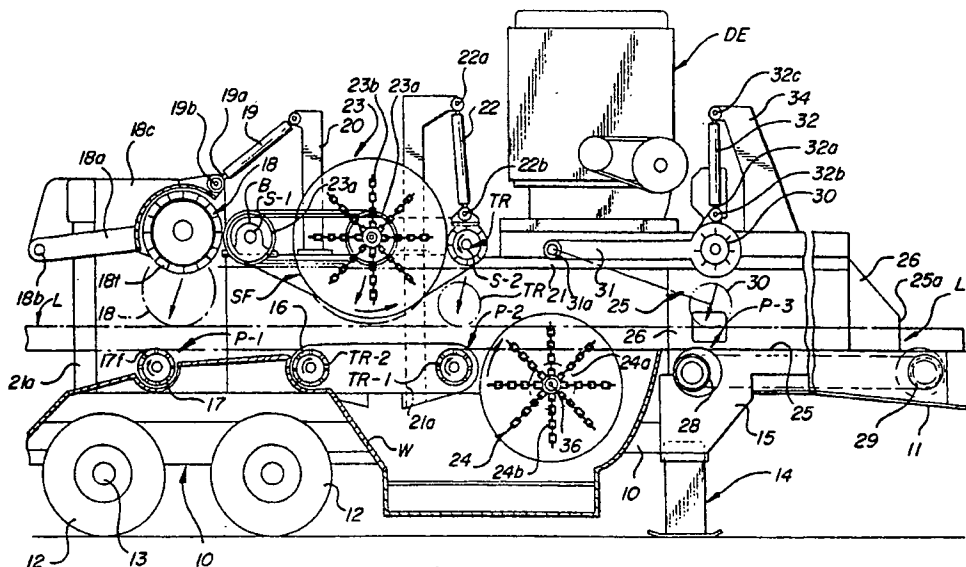
Translation of claims in Swedish 8201547 and 6 pages of translation of the specification.

Primary Examiner—W. Donald Bray
Attorney, Agent, or Firm—Learman & McCulloch

[57] ABSTRACT

A flail drum system has an upper rotary chain flail drum and a lower rotary chain flail drum longitudinally downstream from the upper drum. Wood product advancing mechanism on the machine frame moves the logs forwardly while spreading them and creates a downward pressure on the products at a first pinch point. The upper and lower flail drums are each driven in rotation about a generally horizontal axis transverse to the path of the log. There is a vertically fixed log support member longitudinally between the upper and lower flail drums and driven means for engaging and advancing the logs is provided on a vertically movable subframe which mounts the upper flail drum, longitudinally between the flail drums, for creating a downward pressure on the logs passing between the upper and lower flail drums and preventing raising and diving movement of the logs passing between the drums. The flail drums have a central shaft with scalloped rod support and spacer elements providing perimetral openings, through which chain supporting rods extend without engaging the elements, alternately with circumferentially spaced openings through which the rods extend and which support the rods. The chains are arranged in an axially progressive spiral array on the rods.

17 Claims, 6 Drawing Sheets



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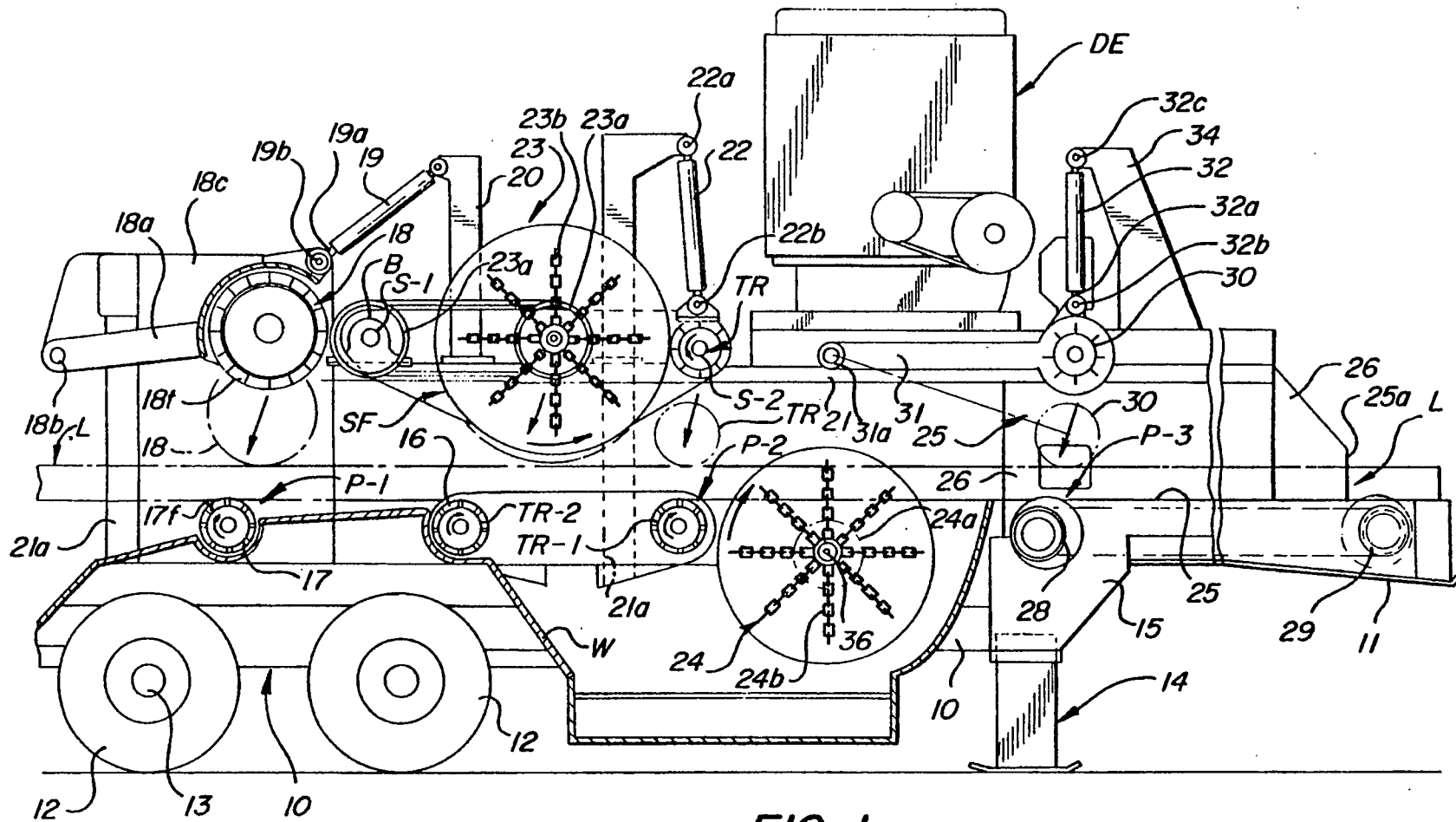


FIG-1



US005419502A

United States Patent [19]

[11] Patent Number: 5,419,502

Morey

[45] Date of Patent: May 30, 1995

[54] TUB GRINDER SYSTEMS AND METHODS
FOR COMMUNUTING WASTE WOOD

[75] Inventor: Norval K. Morey, Weidman, Mich.

[73] Assignee: Wood Technology, Inc., Winn, Mich.

[21] Appl. No.: 48,792

[22] Filed: Apr. 14, 1993

[51] Int. Cl.⁶ B02C 13/06; B02C 13/28

[52] U.S. Cl. 241/101.7; 241/197

[58] Field of Search 241/101.7, 73, 89.5,
241/186.35, 189.1, 197, 191, 28, 298, 300, 192,
195; 125/15; 51/206 R, 206 S, 319, 320

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Primary Examiner—Douglas D. Watts

Attorney, Agent, or Firm—Learman & McCulloch

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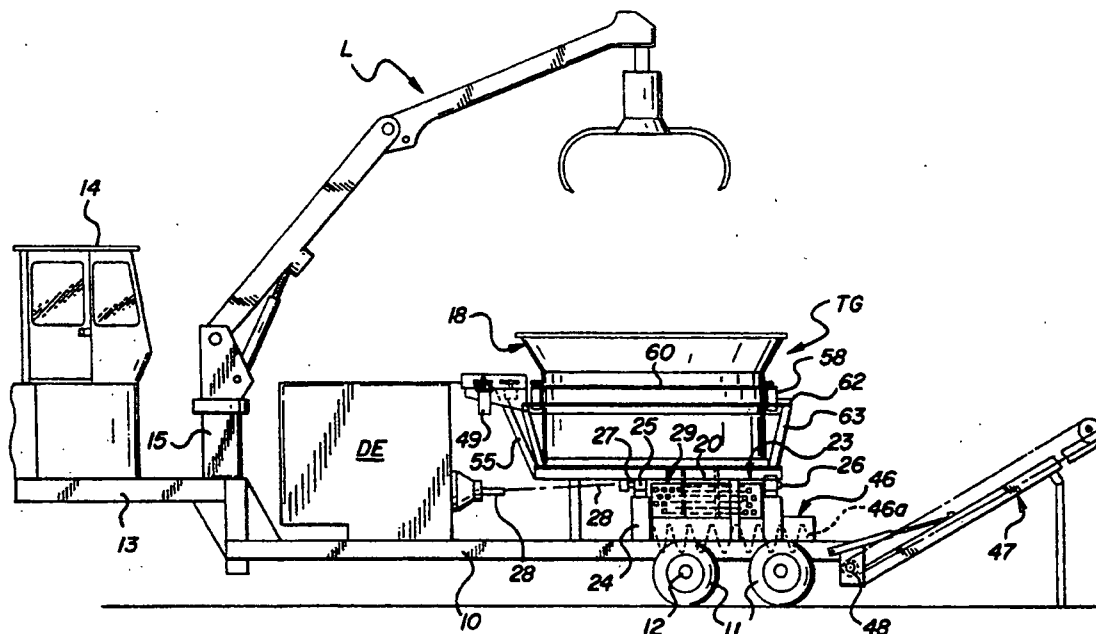
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[57] ABSTRACT

A comminuting machine for waste wood and other waste comminutable material has a vehicle frame and a conveyor in the form of a tub or bed for receiving material to be comminuted. A comminuting assembly has a shaft with a series of rotors with flat radially extending side walls fixed in an angularly offset continuous helical array from one end to the other on the shaft. Comminuting members presenting blunt material shattering beads are releasably secured on the arm mounting surfaces.

27 Claims, 7 Drawing Sheets



01263



US005713525A

United States Patent [19]
Morey

[11] Patent Number: 5,713,525
[45] Date of Patent: Feb. 3, 1998

[54] **HORIZONTAL COMMINUING MACHINE
PARTICULARLY FOR RECYCLABLE HEAVY
WOOD RANDOMLY CARRYING NON-
SHATTERABLE FOREIGN PIECES**

[75] Inventor: Norval K. Morey, Weidman, Mich.

[73] Assignee: Wood Technology, Inc., Winn, Mich.

[21] Appl. No.: 414,434

[22] Filed: Mar. 31, 1995

[51] Int. Cl.⁶ B02C 18/16

[52] U.S. Cl. 241/32; 241/88.4; 241/222;
241/290; 241/300

[58] Field of Search 241/222, 224,
241/225, 32, 290, 286, 294, 300, 197, 88.4,
242, 243

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Primary Examiner—Mark Rosenbaum

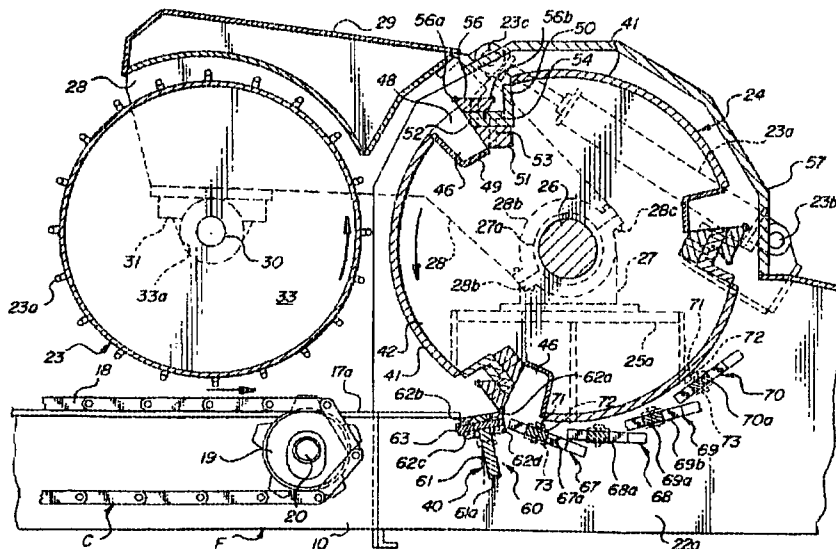
Attorney, Agent, or Firm—Learman & McCulloch

[57]

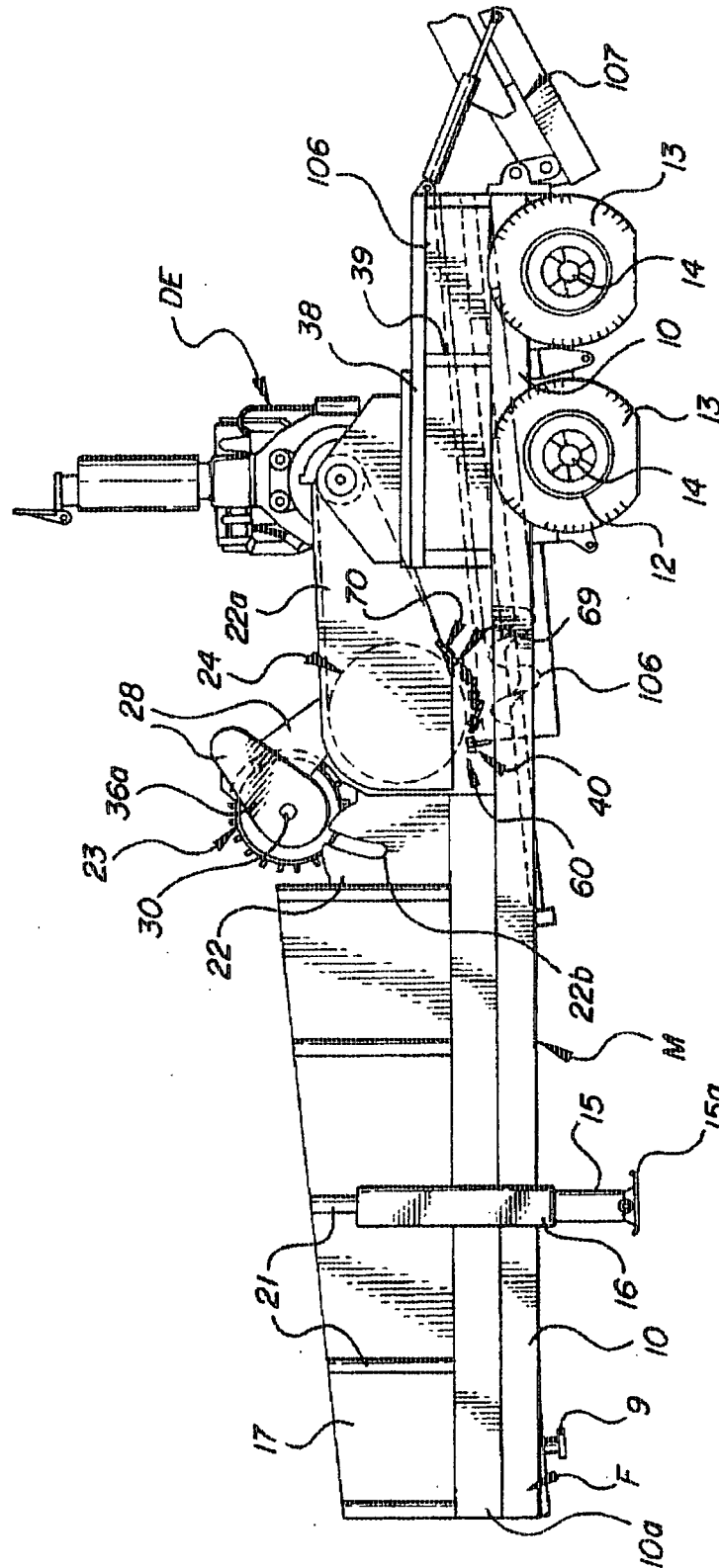
ABSTRACT

A horizontal comminuting machine for reducing recyclable waste wood and other comminutable material which may have non-reducible foreign objects incorporated with it has a generally horizontal rotary drum mounting a plurality of peripherally spaced comminuting tools traveling in a continuous work contacting path. A feed works delivers material forwardly to the rotating drum in a longitudinal feed stream and to a lead anvil which, under undue operating pressure, withdraws from an operative position adjacent the path of the tools to a removed position. An anvil confining assembly on the machine frame controls the travel of the anvil. Rearwardly of the lead anvil, individual anvils are mounted to cooperate with the tools to further reduce the material.

17 Claims, 9 Drawing Sheets



1974





US005820042A

United States Patent [19][11] **Patent Number:** **5,820,042****Robison**[45] **Date of Patent:** **Oct. 13, 1998**[54] **WOOD CHIPPER ROTOR HEAD KNIFE
HOLDER AND KNIFE ASSEMBLY**[75] **Inventor:** Milan W. Robison, Weidman, Mich.[73] **Assignee:** Wood Technology, Inc., Winn, Mich.[21] **Appl. No.:** 877,232[22] **Filed:** Jun. 17, 1997[51] **Int. Cl.** B02C 18/18[52] **U.S. Cl.** 241/92; 29/402.08; 29/428;
144/176; 241/298[58] **Field of Search** 29/402.03, 402.08,
29/426.1, 428, 464, 465; 144/162.1, 176;
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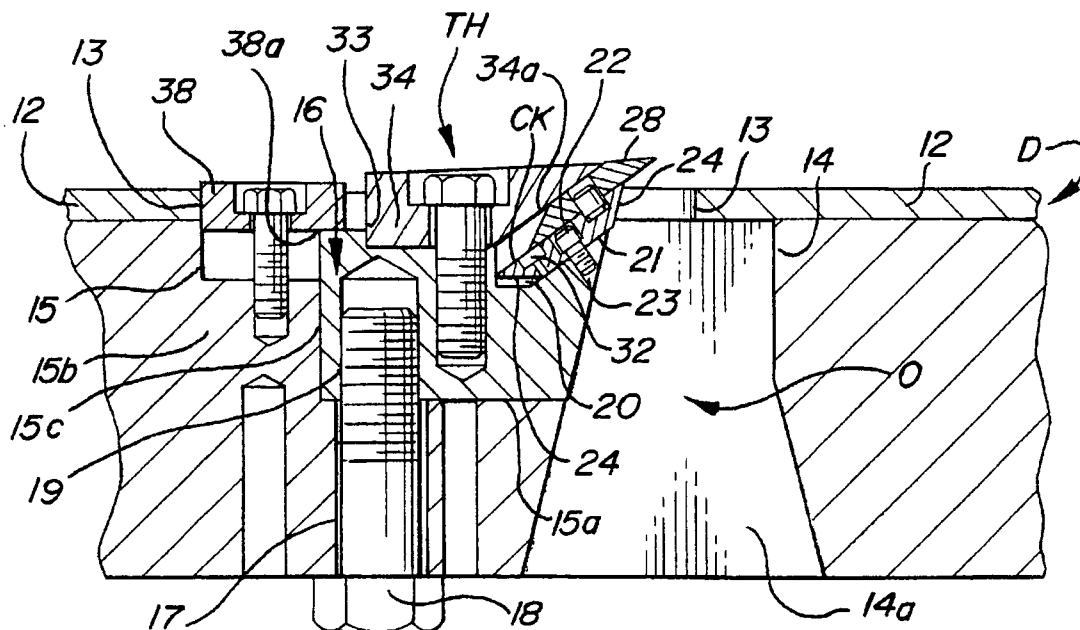
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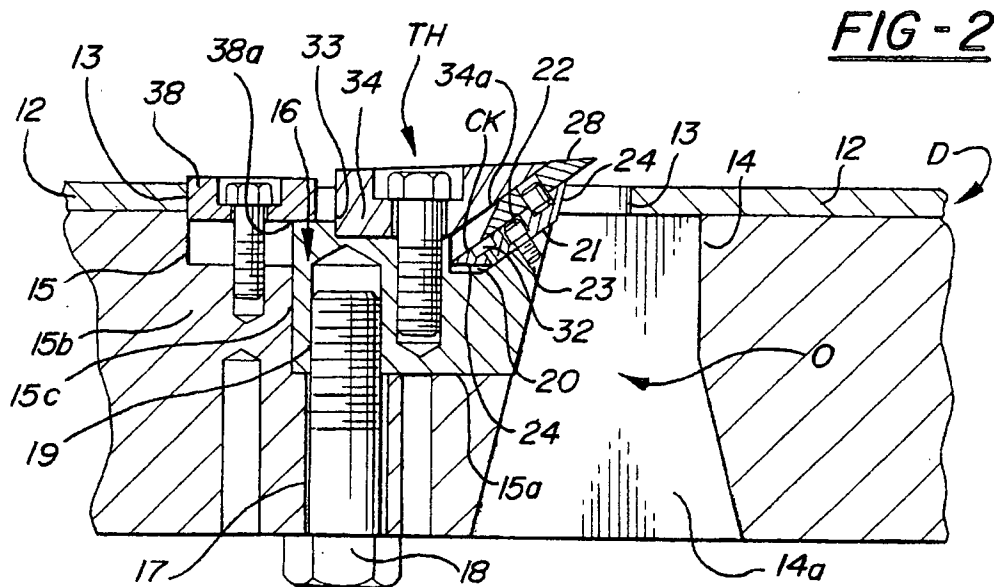
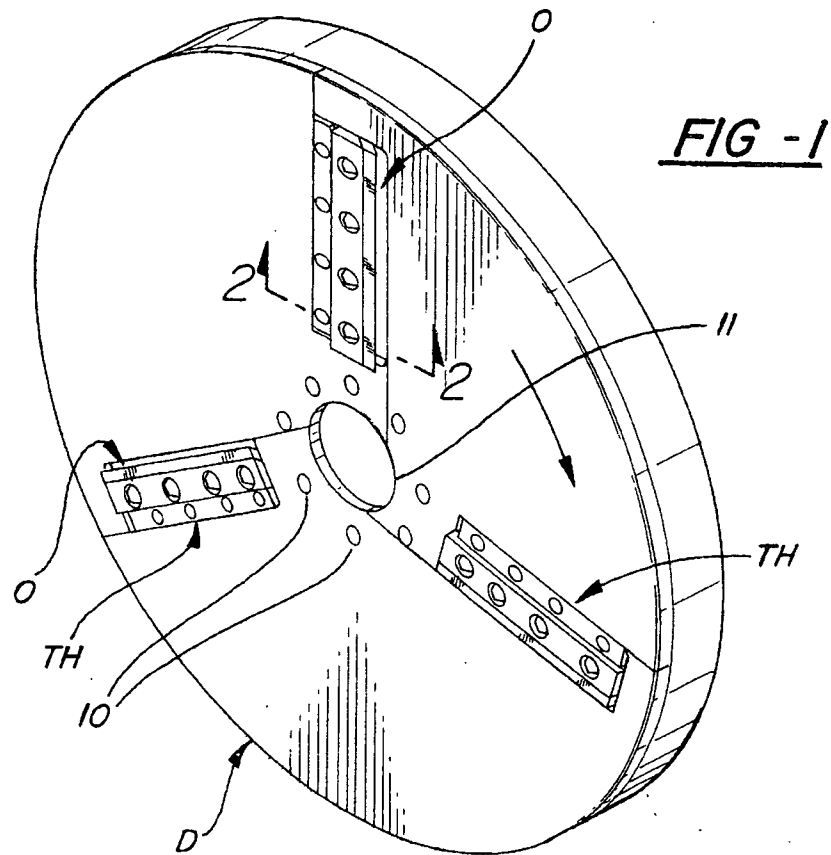
FOREIGN PATENT DOCUMENTS

3722682 1/1989 Germany 144/176

Primary Examiner—Mark Rosenbaum**Attorney, Agent, or Firm**—Reising, Ethington, Learman &
McCulloch, PLLC[57] **ABSTRACT**

A wood chipper knife holder assembly for a power driven rotor head has at least one opening in its wood confronting surface for the knife holder assembly which includes a mount block. A counter-knife receiving surface opposite the wood confronting surface of the rotor head is provided on the mount block for a counter-knife and a reversible knife blade with cutting surfaces along opposite transverse edges is received on the counter-knife. A clamp plate secures to clamp the knife in a projecting cutting position. The counter-knife has at least one pair of spaced apart pin openings and the knife blade has at least one pair of complementary pin openings, and pins are received in the knife blade openings and counter-knife pin openings to permit 180° relocation of the knife.

9 Claims, 2 Drawing Sheets



STATE OF SOUTH CAROLINA
COUNTY OF CLARENDON

IN THE COURT OF COMMON PLEAS
THIRD JUDICIAL CIRCUIT

2008 CP 14-00461

Andreal Holland by his Guardian Ad
Litem Peggy Knox

Plaintiff,

vs.

Morbark, Inc, Precision Husky
Corporation, A & K Mulch, LLC,
Watford Industry, Inc.

Defendants,

Defendant A&K Mulch, LLC's
Responses to Plaintiff's Request
To Admit

CERTIFIED TRUE COPY
OF ORIGINAL FILED IN THIS OFFICE

DATE

8/18/10

Beverly S. Roberts
CLERK OF COURT
CLARENDON COUNTY, SC

TO: DONALD E. JONAS, ATTORNEY FOR PLAINTIFF

The Defendant A&K Mulch, LLC, by and through the undersigned Counsel, responds to
Plaintiff's Request For Admissions as follows:

**OMIT RESPONSES TO
REQUEST TO ADMIT #1 THROUGH #14**

15. There are no written records of safety meetings of A&K Mulch prior to June 1, 2006.

RESPONSE: Admitted. Defendant has not been able to locate any written records of safety meeting prior to June 1, 2006.

16. After the Mobark Model 58" stationary chipper machine, serial # 914, purchased from Precision Husky was delivered to A&K Mulch, LLC on or about April 6, 2006, J.C. Witherspoon, Jr. called Clayton at Precision Husky and discussed the fact that the machine had what Mr. Witherspoon believed to be a bearing noise. (Depo. Witherspoon, p. 138).

RESPONSE: Denied as written. Defendant admits that Clayton was called about possible bearing noise after the chipper was installed and operating.

STATE OF SOUTH CAROLINA

COUNTY OF CLARENDON

Andreal Holland by his Guardian ad Litem
Peggy Knox

Plaintiff,

v.

Morbark, Inc.; Precision Husky Corporation;
A&K Mulch, LLC; Watford Industry, Inc.

Defendants.

IN THE COURT OF COMMON PLEAS
THIRD JUDICIAL CIRCUIT

CIVIL ACTION NO.
2008-CP14-0461

AFFIDAVIT OF BOB SMITH

In person appeared Bob Smith, who, after being duly sworn, deposes and says upon his oath that the facts and recitals of facts set forth in the Affidavit are true and correct to the best of his knowledge and belief.

1. I am over the age of nineteen years, I am not laboring under any disability, and I am giving this affidavit of my own free will and accord.

2. I make this affidavit on the basis of personal knowledge, with the knowledge that it may be used in legal proceedings.

3. I am the current Chief Executive Officer of Precision Husky Corporation ("Precision Husky"), and have been employed with Precision Husky for 43 years.

4. Precision Husky received the 58" chipper at issue in this litigation on trade-in and later resold the chipper to J.C. Witherspoon, Inc. We have no records of the minimal work that was done to the chipper before resale, but Precision Husky would not have made any alternations or modifications to the chipper save for cleaning and adding our own warning decals. We may

) also have re-painted the chipper. I do not know whether we received the machine without any warnings at all or if the warnings were merely illegible, but it is our standard practice not to remove or paint over legible warnings before resale, and it is unlikely that we would have applied our own warnings decals if the Morbark warnings were still in place, intact and legible.

5. Following the purchase of the chipper, Mr. Witherspoon inquired about replacement bearings for the machine, and we shipped a set of bearings in April of 2006. We heard nothing further on this issue after we shipped the bearings.

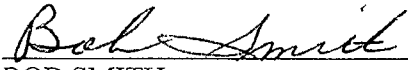
6. We have no knowledge or records of receiving a Morbark operator's manual when we accepted the chipper on trade-in or of providing any operator's manual to J.C. Witherspoon, Inc., but I cannot rule out the possibility that either occurred.

) 7. We did not provide any equipment to J.C. Witherspoon, Inc. other than the 58" chipper at issue and the aforementioned bearings. Specifically, the 48" Morbark chipper which I understand to be installed at the Witherspoon facility was not purchased from Precision Husky.

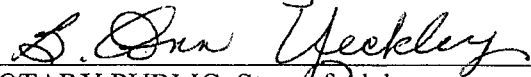
8. We have been using the warning decal produced in this lawsuit as PH003 for approximately 15 to 20 years, and I have no records or memory of the design process. I assume that the design would have been developed in conjunction with our label supplier, as they have been our source for our labeling needs for many years. I have heard of incidents over the years where someone was injured by a chipper hood because they opened the hood while the cutting wheel is in motion. At this time, however, I cannot recall any specific incident or whether any particular incident led to the creation of the warning label Precision Husky currently uses.

9. Precision Husky makes chipper hoods with a hood lock bar. While I am not sure exactly when that design came into existence, I can say that it has been used by Precision Husky since at least the 1980's. It has not been patented.

FURTHER AFFIANT SAYETH NOT.


BOB SMITH

Sworn to and subscribed before me
This 16th day of August, 2010.


NOTARY PUBLIC, State of Alabama
My Commission Expires: 8-26-10

GLEN K. ADAMS, VOLUME I

1 STATE OF SOUTH CAROLINA) IN THE COURT OF COMMON PLEAS

2)

3 COUNTY OF CLARENDON) CASE NO.: 2008-CP-14-00461

4

5

6 Andreal Holland, by his)

7 Guardian Ad Litem,)

8 Peggy Knox,)

9)

10 Plaintiff,)

11)

12 vs.)

13)

14 Morbark, Inc., Precision Husky))

15 Corporation, A & K mulch, LLC,))

16 and Watford Industry, Inc.,)

17)

18 Defendants.)

19)

20

21 Deposition on oral examination of GLEN K. ADAMS,

22 reported by Cecelia P. Englert, Court Reporter and

23 Notary Public in and for the State of South Carolina;

24 said deposition taken pursuant to Rule 30 of the South

25 Carolina Rules of Civil Procedure, at Turner, Padgett,

26 Graham & Laney, P.A., 1901 Main Street, Plaza 17th

27 Floor, Bank of America, Columbia, South Carolina, on the

28 27th day of August, 2010, commencing at the hour of 1:00

29 p.m.

1 me.

2 A. I understand.

3 Q. And you understand, I get to dispose
4 somebody once in a case. So this is what I would
5 call my only shot to find out your opinions that
6 you intend to offer at the trial of this case.

7 A. If you're -- if you're asking me to
8 understand your legal proceedings or, you know, the
9 legal parts of it, I would not claim to understand
10 all that, so --

11 Q. Well, you understand generally when an
12 opposing counsel comes in to take your deposition,
13 that they're trying to find out all the opinions
14 that you've generated as you've worked in this case
15 and everything that you're going to testify to
16 potentially at trial. I mean, you understand that;
17 don't you?

18 A. I understand that if I'm deposed, I'm
19 required to attend. And I understand that the
20 information that I have at that point in time is
21 what I have.

22 Q. And I'm not throwing blame or doing
23 anything. I'm just trying to find out if you have
24 formulated all of the opinions you intend to offer
25 at the trial of this case or not. And if you

1 haven't, then this is premature.

2 A. I have not. And one -- one big component
3 of my opinion would be Dr. Deysach's assessment,
4 which hasn't yet occurred. So I'm not sure -- I
5 mean, in a -- in a -- in a traumatic brain injury
6 case, the neuropsych testing and opinions are very
7 important to me. I know what he said last year.
8 But, you know, he has that appointment coming up.

9 MR. OTT: You know, Don, we do have the
10 schedule in order. And I said, you know,
11 we can be flexible if necessary. But I
12 don't want to take a deposition and then
13 get to trial and hear all sorts of new
14 opinions that he is yet to formulate. So
15 you can understand that I'm in a little
16 bit of a pickle here.

17 MR. JONAS: You want to go off the record
18 and do it? Or --

19 MR. OTT: That's fine.

20 MR. JONAS: -- put it on the record? Go
21 off the record.

22 (Off the record.)

23 [MARKED FOR IDENTIFICATION AS EXHIBIT NO.
24 1 - Handwritten assessment notes.]

25 Q. Mr. Adams, we're essentially finished for

1 today. We're going to do some quick housekeeping
2 matters and I'll put something on the record about
3 holding your deposition open until you've completed
4 your work. So I'm going to hand you what's been
5 marked as Exhibit No. 1 to your deposition. Would
6 you please identify what that is?

7 A. These are my handwritten assessment notes
8 with annotations that I added this morning in the
9 left column. But these are from my initial
10 assessment of Mr. Holland.

11 [MARKED FOR IDENTIFICATION AS EXHIBIT NO.

12 2 - Handwritten notes from a follow-up
13 call with Mr. Holland.]

14 Q. Hand you what's been marked as Exhibit
15 No. 2 and ask you to please identify that exhibit.

16 A. These are my handwritten notes from a
17 followup call I made to Mr. Holland this morning,
18 to obtain some additional information I didn't
19 have.

20 [MARKED FOR IDENTIFICATION AS EXHIBIT NO.

21 3 - Mr. Adams report template.]

22 Q. And Exhibit 3, what is that?

23 A. This is what I call just the report
24 template with the information of the case -- the
25 case header information, that is, and just has my

1 A. Yes.

2 MR. OTT: Wildcat.

3 Q. Now, also to put on the record, we've
4 agreed to end your deposition today, to leave it
5 open until such a time as you have had to complete
6 your work on this case, such that you will have
7 formulated all of the opinions you intend to offer
8 at the trial. And at that point, Mr. Jonas will
9 notify me that you are ready to continue and
10 conclude your deposition. Do you understand that?

11 A. I do.

12 Q. And will you please advise Mr. Jonas when
13 you reach that position?

14 A. I will.

15 Q. Thank you for your time today.

16 *****

17 Further deponent sayeth not.

18 (There being no further questions,
19 the deposition concluded at 2:08 p.m.)
20
21
22
23
24
25

1 State of South Carolina) In the Court of Common Pleas
2 County of Clarendon) C.A. No.: 2008-CP-14-00461

3
4 Andreal Holland,)
by his Guardian Ad Litem,)
5 Peggy Knox,)

6 Plaintiff,)

7 Vs.)

8 Morbark, Inc., Precision)
Husky Corporation,)
9 A & K Mulch, LLC, and)
Watford Industry, Inc.,)

10 Defendants.)
11)
12)

Continued
Deposition of
GLEN K. ADAMS
(Volume II)

November 3, 2010

13 Continued deposition on oral examination of
14 GLEN K. ADAMS (Volume II),
15 reported by Ilene K. Schreiner, certified court
16 reporter, and notary public in and for the state
17 of South Carolina; said deposition taken pursuant
18 to Notice and in accordance with the South
19 Carolina Rules of Civil Procedure, at the law firm
20 of Turner, Padgett, Graham & Laney, P.A., 1901 Main
21 Street, Plaza 17th Floor, Bank of America, Columbia,
22 South Carolina, on Wednesday, November 3, 2010,
23 scheduled for 9:00 a.m., and commencing at the hour
24 of 9:10 a.m.
25

1 This deposition is taken in accordance with
2 the South Carolina Rules of Civil Procedure.

3 It is agreed and stipulated by the witness and
4 respective counsel that the reading and signing of the
5 deposition is expressly waived.

6 **WHEREUPON:**

7 **GLEN K. ADAMS**, being duly sworn and cautioned to speak
8 the truth, the whole truth and nothing but the truth,
9 testifies as follows:

10 **EXAMINATION**

11 **BY MR. OTT:**

12 Q. Mr. Adams, this is a continuation of a
13 deposition that we started back on August 27th of this
14 year. Is it fair to say that we recessed that
15 deposition to be reconvened because at that time you had
16 not completed your work on this case?

17 A. Yes.

18 Q. And is it fair also to say that we recessed
19 and decided to reconvene your deposition back in August
20 because you had not yet finalized the opinions you
21 intended to give in this lawsuit?

22 A. Yes.

23 Q. Now that we are reconvening, is it fair for
24 me to assume that you have completed all your work in
25 this case?

1 A. Yes.

2 Q. And is it also fair for me to assume that
3 you've formulated any opinions you intend to offer at
4 the trial of this case?

5 A. Yes.

6 Q. Is there any other work that you intend to
7 do between now and trial on this case?

8 A. None. None that I have planned, no.

9 Q. You've completed all the tests that you
10 would want to administer to Mr. Holland?

11 A. Yes.

12 Q. You've interviewed all the people you wish
13 to interview?

14 A. Yes.

15 Q. And you don't intend to do any more work on
16 this case other than what might be necessary to prepare
17 for your testimony at trial?

18 A. No.

19 Q. What is your financial agreement in this
20 case?

21 A. I bill at 110 hourly for all of my work.
22 That would include travel time. And then I bill for
23 mileage expense at I believe 58 cents a mile.

24 Q. And who is paying your bills in this case?

25 A. Well, I send my bill to Mr. Jonas. He

1 retained me.

2 Q. Has anyone else in your office, which is I
3 guess Adams & Wilkinson, performed any substantive work
4 on this matter?

5 A. No.

6 Q. Let's do a little bit of housekeeping. I
7 think our last work during your deposition back in
8 August was to mark five exhibits, so I'm going to go
9 ahead and remark them since we don't have those exhibits
10 with us today.

11 Would you please identify what is --

12 MR. OTT: (To the reporter) I tell you
13 what, let's mark it as Exhibit 6. That way there won't
14 be any confusion.

15 (Defendant's Exhibit No. 6 marked for
16 identification.)

17 Q. Would you please identify what's been marked
18 as Exhibit No. 6?

19 A. These are my assessment notes from my
20 meeting with Mr. Holland and his mother.

21 Q. And did that meeting occur on August 19?

22 A. Yes.

23 Q. That is your handwriting?

24 A. Yes.

25 Q. Correct me if I'm wrong, but is it fair to

STATE OF SOUTH CAROLINA) IN THE COURT OF COMMON PLEAS
COUNTY OF CLARENDON)
Andreal Holland by his)
Guardian Ad Litem)
Peggy Knox,)
Plaintiff,) C/A NO. 2008-CP-14-00461
vs.)
Morbark, Inc., Precision)
Husky Corporation, A & K)
Mulch, LLC, and Watford)
Industry, Inc.,)
Defendants.)

DEPOSITION OF

LEVAIN BROWN

Wednesday, August 4, 2010
1:50 p.m.-3:16 p.m.

The deposition of LEVAIN BROWN, taken on behalf of the Defendant at the offices of Land, Parker & Welch, 29 South Mill Street, Manning, South Carolina, on the 4th day of August, 2010, before Lyn Allen, Court Reporter and Notary Public in and for the State of South Carolina, pursuant to Notice of Deposition and/or agreement of counsel.

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Columbia, South Carolina 29211

(803) 256-4500

01281

- 1 A: It's similar to that or bigger. Similar.
- 2 Q: Does it have a similar design to it?
- 3 A: The hatch is different on it. It doesn't flip back
- 4 like the other one did. You pull the doors off from
- 5 the side.
- 6 Q: Okay. Are there doors on each side?
- 7 A: Each side.
- 8 Q: Is the procedure for changing the blades on the current
- 9 machine essentially the same as what they were for the
- 10 machine that was present at the time of the accident?
- 11 A: Yes.
- 12 Q: You'd still wait for the wheel to stop before you touch
- 13 the machine?
- 14 A: Right.
- 15 Q: How do you determine if the wheel is stopped on the
- 16 current machine?
- 17 A: You can still see the belt.
- 18 Q: Mr. Brown, you said you saw Mr. Holland even before his
- 19 accident more than once working on this chipper while
- 20 the wheel was still moving; correct?
- 21 A: Yes. Just usually blowing the chips out between the
- 22 blades with the air hose.
- 23 Q: But was the wheel still turning? In other words, the
- 24 wheel had not yet coasted to a complete stop?
- 25 A: Right.

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01282

- 1 Q: And did you understand that when you saw it to be a
2 dangerous situation?
- 3 A: Yes.
- 4 Q: Because you've got moving knives and such?
- 5 A: (Nods head affirmatively.)
- 6 Q: Is that a yes?
- 7 A: Yes.
- 8 Q: Did you also understand that there was a danger
9 associated with opening the hood too early because the
10 fan blades could hit the hood and cause it to kick
11 back?
- 12 A: Yes.
- 13 Q: Did you know that before the date of Mr. Holland's
14 accident?
- 15 A: Yes, sir.
- 16 Q: And so when you saw him do this before the accident I
17 mean were you concerned about his safety?
- 18 A: Yeah.
- 19 Q: And did you mention something to him because you were
20 concerned about his safety?
- 21 A: Yes.
- 22 Q: Did you talk about what type of injuries he could get
23 if he was doing that?
- 24 A: Yes.
- 25 Q: What did you tell him?

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01283

1 A: We always said he was going to get a headache if he
2 kept opening it up.

3 Q: Get a headache from the hood hitting him?

4 A: The hood. Yeah.

5 Q: Are you aware that Mr. Witherspoon once caught him
6 doing that?

7 A: No.

8 Q: Are you aware that Mr. Wright once caught him doing
9 that?

10 A: Yes.

11 Q: How did you know about that?

12 A: He told me.

13 Q: David did?

14 A: Yeah.

15 Q: And what did David tell you about it?

16 A: He just said he had to tell him again not to open the
17 hatch while it's still spinning.

18 Q: Was anyone else around when David told you that?

19 A: I don't know.

20 Q: Did Mr. Holland ever tell you that David had spoken to
21 him about --

22 A: No.

23 Q: What was Mr. Holland's reaction when you would see him
24 working on the machine while the disks were still
25 moving and you would come up and say you're going to

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01284

1 hurt yourself?

2 **MR. JONAS:** Object to the question.

3 Q: He's going to object to some of my questions but you're
4 still going to need to give an answer to them.

5 A: Could you --

6 Q: He's just making a record.

7 A: Could you repeat it?

8 Q: Sure. What was Mr. Holland's reaction when you would
9 see him operating or working on the chipper with the
10 hood open and the disks still turning and you would
11 confront him with that? What was his reaction?

12 A: Back then it usually was at the end of the day if I
13 helped him. So he would say he was ready to go.

14 Q: He was in a hurry?

15 A: (Nods head affirmatively.)

16 Q: Is that a yes?

17 A: Yes.

18 Q: But there's no doubt he understood that he wasn't
19 supposed to do that?

20 A: Right.

21 Q: Did you look at the pins on the side of the machine
22 after the accident happened?

23 A: I don't remember.

24 Q: Do you know what damage if any there was to the hood
25 after the accident?

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01285

1 State of South Carolina) Court of Common Pleas
2 County of Clarendon) No.: 2008-CP-14-00461
3
4
5 Andreal Holland by his)
6 Guardian Ad Litem Peggy)
7 Knox,)
8 Plaintiff,)
9 vs.) Deposition of
10) DAVID WRIGHT
11 Morbark, Inc., Precision)
12 Husky Corporation, A & K)
13 Mulch, LLC, and Watford)
14 Industry, Inc.,)
15 Defendants.) July 26, 2010
16)
17)
18)
19)
20)
21)
22)
23)
24)
25)

Deposition on oral examination of DAVID WRIGHT,
reported by Brad H. Thomas, Certified Realtime
Reporter and Notary Public in and for the State of
South Carolina; said deposition taken pursuant to
agreement and in accordance with the South Carolina
Rules of Civil Procedure, at the Offices of Land,
Parker & Welch, 29 South Mill Street, Manning, South
Carolina, on July 26, 2010, at the hour of 1:01 p.m.

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(803) 256-4500

DAVID WRIGHT

1 what hit him?

2 A. Can't answer that.

3 Q. You didn't talk about that with him?

4 A. Well, he told me that a stick or something
5 was lodged up in that machine and when he tried to
6 open the door it kicked back. That's about it what
7 I know about it, what he told me.

8 Q. When did he tell you this?

9 A. I guess when he was able to communicate.
10 How long after that I really don't know.

11 Q. Did he mention whether the disk or wheel
12 on the chipper was still moving when the accident
13 happened?

14 A. I don't think he knew. I'm not sure.

15 Q. Have you ever operated this chipper?

16 A. I taught him how to use it.

17 Q. You're the one who trained Mr. Holland
18 when he started?

19 A. Yeah.

20 Q. Okay. When did Mr. Holland begin working
21 at A & K?

22 A. I don't remember.

23 Q. You don't remember how long before his
24 accident?

25 A. No, I don't.

DAVID WRIGHT

1 object to some questions because he represents
2 Mr. Holland and that's his job, but you can ignore
3 his objections unless he instructs you not to
4 answer, but during the time that I'm the one asking
5 the questions you need to answer my questions.

6 Okay. Let me ask you again. Did you
7 specifically tell Andreal, "Listen, you can get hurt
8 if you try to touch this machine before you let that
9 disk stop turning"?

10 A. Yeah.

11 Q. And did you have any doubt that Andreal
12 understood that when you told him that?

13 A. No.

14 Q. And did you tell him that he could get cut
15 if he tried to open that hood too early?

16 A. Yes, I did.

17 Q. Did you tell him also that if you pull
18 those two locking pins out of the hood too early and
19 the wheel hits it, that that hood can come back and
20 hit you in the head?

21 A. Yes, I did.

22 Q. You specifically remember telling him
23 that?

24 A. Yeah.

25 Q. And did you have any doubt that he

DAVID WRIGHT

1 understood those dangers associated with that
2 machine as you were training him?

3 A. No.

4 Q. And if the investigation by OSHA and the
5 investigation by A & K Mulch show that Mr. Holland
6 opened this machine and the hood on this machine
7 before the disk had stopped turning, that the disk
8 hit the hood and it came back and hit Mr. Holland in
9 the head area, is there any doubt that Mr. Holland
10 violated A & K procedures on how to operate this
11 chipper?

12 MR. JONAS: Object to the form of the
13 question.

14 BY MR. OTT:

15 Q. You still need to answer.

16 A. Well, if that is the case, you know, if it
17 was turning, he violated.

18 Q. If the disk was still turning and it hit
19 the hood, the hood came back and hit him in the
20 head, that happened because he violated specific
21 training by you, correct?

22 A. Yeah.

23 Q. And he violated specific company
24 procedures on how to operate the chipper, correct?

25 A. I didn't never know the company

DAVID WRIGHT

1 opening that thing up, isn't it?

2 A. It's not no minor cut I'm talking about.
3 It's a very serious cut I'm talking about.

4 Q. You've never seen it, but you can imagine
5 how bad it could be?

6 A. Oh, yeah.

7 Q. But you never have seen one?

8 A. No, I haven't.

9 Q. Did you specifically tell him that one of
10 the dangers was he could be hit in the head,
11 specifically hit in the head?

12 A. What I meant was that I know he could
13 have, yeah.

14 Q. Being injured in some way on this machine
15 is obvious. Okay. The question is a very specific
16 one. "Andreal, if you pull the pins out before the
17 wheel stops turning, not only will you lose an arm
18 and get cut, but you'll also get hit in the head."
19 Now, did you use those words or are you just
20 guessing at what you told him at this point?

21 MR. OTT: Objection to the form.

22 THE WITNESS: I'm just -- I'm just --
23 I'm just guessing that's what I told him.

24 BY MR. JONAS:

25 Q. Okay. I'm asking you specifically what do

DAVID WRIGHT

1 you specifically recall, if anything, of the words
2 you used to train him?

3 A. I said, "Dreal, about that, opening that,
4 pulling those pins out, if you ever pull these pins
5 out of this" -- well, I wasn't using the words I'm
6 using now, but, "If something happens that the side
7 of this hood hit one of those things there, it is
8 going to come back and hit you in the face," is
9 basically what I was telling him.

10 Q. So what were you saying, that the hinge in
11 the hood was so sloppy that it would allow the hood
12 to come in contact with the cutter or the wheel
13 itself?

14 MR. OTT: Objection to form.

15 THE WITNESS: No. I was telling him
16 because it didn't look right. If something don't
17 look light, it looks I'm going to get hurt or
18 somebody else is going to get hurt, I'm going to let
19 them know. And it didn't look -- it looked too
20 dangerous to just take it for granted you could just
21 pull this hood back and just start spinning like
22 that. It don't make sense. So that's what I told
23 him.

24 BY MR. JONAS:

25 Q. And I followed what you were trying to

Robert Desaych, PhD.

Dr. Deysach is a neuropsychologist who examined of Mr. Holland. Dr. Deysach was named as a witness by Plaintiff to appear on behalf of Mr. Holland. A copy of Dr. Desaych's report (04/09/09) is attached as Record pp. 1059-1063. Dr. Desaych was ~~was~~ deposed.

STATE OF SOUTH CAROLINA) IN THE COURT OF COMMON PLEAS COUNTY OF CLARENDON) C/A NO. 2008-CP-14-00461 Andreal Holland by his) Guardian Ad Litem) Peggy Knox,) Plaintiff,) vs.) Morbark, Inc., Precision) ROBERT E. DEYSACH, Ph.D. Husky Corporation,) A & K Mulch, LLC, and) Watford Industry, Inc.,) Defendants.) Deposition on oral examination of ROBERT E. DEYSACH, Ph.D., reported by Jennifer L. Weber, Verbatim Court Reporter and Notary Public in and for the State of South Carolina; said deposition taken pursuant to notice and/or agreement at the offices of TURNER, PADGET, GRAHAM & LANEY, P.A., 1901 Main Street, 17th Floor, Columbia, South Carolina, on Monday, November 8, 2010, scheduled to begin at 2:00 p.m. and commencing at 2:04 p.m.		Page 3 EXHIBITS MARKED AS DEFENDANT'S EXHIBIT 1: Private Practice Forensic Activity of Robert E. Deysach, Ph.D. (1 page)..... 5 MARKED AS DEFENDANT'S EXHIBIT 2: Vita of Robert Edward Deysach, Ph.D. (19 pages)..... 21 MARKED AS DEFENDANT'S EXHIBIT 3: HealthSouth Rehabilitation Hospital Outpatient Neuropsychological Consultation for Andreal Holland, with attachments for dates seen 03-15-07 and 04-06-07 (19 pages)..... 62 MARKED AS DEFENDANT'S EXHIBIT 4: HealthSouth Rehabilitation Hospital Outpatient Neuropsychological Consultation for Andreal Holland, with attachments, dated 04/09/2009 (14 pages)..... 62 MARKED AS DEFENDANT'S EXHIBIT 5: HealthSouth Rehabilitation Hospital Outpatient Neuropsychological Consultation for Andreal Holland, with attachments, dated 09/09/2010 (9 pages)..... 62 MARKED AS DEFENDANT'S EXHIBIT 6: Carolina's Rehabilitation Vocational Services report for dates of evaluation 10/24/06 to 12/13/06 (26 pages)..... 74 MARKED AS DEFENDANT'S EXHIBIT 7: HealthSouth Rehabilitation Hospital records for Andreal Holland (72 pages)..... 74
Page 2 APPEARANCES: REPRESENTING THE PLAINTIFF: DONALD E. JONAS, ESQUIRE COTTY & JONAS 1328 Blanding Street Post Office Box 97 Columbia, South Carolina 29202 REPRESENTING THE DEFENDANTS: CURTIS L. OTT, ESQUIRE TURNER PADGET GRAHAM & LANEY P.A. 1901 Main Street, 17th Floor (29201) Post Office Box 1473 Columbia, South Carolina 29202 Counsel for Morbark, Inc. DARRELL W. CARTER, ESQUIRE SWEENEY, WINGATE & BARROW, P.A. 1515 Lady Street Post Office Box 12129 Columbia, South Carolina 29211 Counsel for Axis Insurance Company REPORTED BY: JENNIFER L. WEBER CONTENTS (DEPOSITION OF ROBERT E. DEYSACH, Ph.D.) STIPULATIONS 4 EXAMINATION BY MR. OTT 4 EXAMINATION BY MR. JONAS 75 CERTIFICATE OF REPORTER 81 	Page 4 1 This deposition is taken in accordance with 2 the South Carolina Rules of Civil Procedure. 3 It is agreed and stipulated by the deponent 4 and respective counsel that the reading and 5 signing of the deposition by the deponent is 6 expressly WAIVED. 7 WHEREUPON: 8 ROBERT E. DEYSACH, Ph.D., being duly sworn 9 and cautioned to speak the truth, the whole truth 10 and nothing but the truth, and having identified 11 himself for the record as Robert Edward Deysach, 12 testifies as follows: 13 EXAMINATION BY MR. OTT: 14 Q. Dr. Deysach, my name is Curtis Ott; we 15 just met before the deposition began. I'm here 16 today to take your testimony in a case brought by 17 Andreal Holland against my client, Morbark. 18 The first thing I want to do is make sure you 19 have an understanding of what we're doing here 20 today. Have you given depositions before? 21 A. Yes, I have. 22 Q. All right. Do you have a CV with you? 23 A. I -- I know I emailed one -- 24 THE DEPONENT: (To Mr. Jonas) Do you 25 have one? I emailed one to your office.	

1 (Pages 1 to 4)

1 State of South Carolina) In the Court of Common Pleas
 2 County of Clarendon) C.A. No.: 2008-CP-14-00461

4 Andreal Holland,)
 by his Guardian Ad Litem,)
 5 Peggy Knox,)

6 Plaintiff,)

7 Vs.)

8 Morbark, Inc., Precision)
 Husky Corporation,)
 9 A & K Mulch, LLC, and)
 Watford Industry, Inc.,)

10 Defendants.)
 11)
 12)

Deposition of
 DAVID E. CLEMENT, Ph.D.

September 13, 2010

13 Deposition on oral examination of

14 DAVID E. CLEMENT, Ph.D.,

15 reported by Ilene K. Schreiner, certified court
 16 reporter, and notary public in and for the state
 17 of South Carolina; said deposition taken pursuant
 18 to Notice and in accordance with the South
 19 Carolina Rules of Civil Procedure, at the law firm
 20 of Turner, Padgett, Graham & Laney, P.A., 1901 Main
 21 Street, Plaza 17th Floor, Bank of America, Columbia,
 22 South Carolina, on Monday, September 13, 2010,
 23 commencing at the hour of 9:00 a.m.
 24
 25

DAVID E. CLEMENT, Ph.D.

1 A. By you, at the end of May.

2 Q. And at that point you didn't know that you
3 had been identified as a witness, correct?

4 A. That's correct.

5 Q. You didn't have any file materials?

6 A. That's correct.

7 Q. So you couldn't respond to a subpoena?

8 A. That's correct.

9 Q. Other than to say I don't got anything?

10 A. Yes, sir, that's correct.

11 Q. When was your next contact about this
12 lawsuit?

13 A. I believe it was -- well, I called
14 Mr. Jonas's office and I believe that -- I'm not sure,
15 frankly, whether we discussed anything about the case or
16 not. But then I met with him on -- I think it was June
17 4th. I said the date before and I could look it up
18 again.

19 Q. That's what I wrote down.

20 A. But that was the first time that I got
21 information.

22 Q. Is that when you were retained?

23 A. Yes.

24 Q. Who is paying your fees in this case?

25 A. Mr. Jonas.

DAVID E. CLEMENT, Ph.D.

1 probably 90 percent of those documents.

2 Q. Just what I would call general safety?

3 A. General safety and sometimes comments about
4 -- and that part is simply confirming to me that this
5 wasn't a surprise to anybody that there's things that
6 could go bad with this equipment.

7 In terms of specific designs, I didn't get
8 -- unless somebody mentioned the one about having a
9 chipper that had a clutch and brake kind of system in
10 it. Which, if it worked, would make it safer. But I
11 don't need the expertise to be able to tell you it would
12 be ungodly expensive in equipment of this size.

13 Q. Anything else particular about Exhibit 3?

14 A. No, sir. Did I hand you this and you just
15 handed it back?

16 Q. Yes, sir.

17 A. Oh, okay.

18 Q. Do I have all your notes from your note pad
19 in front of you?

20 A. I made a copy of this for you. This is my
21 billing information to date. People always ask about my
22 bookkeeping. And I'm a fan of --

23 Q. What are those?

24 A. Oh, the dashes each represent an hour. I
25 mean the dashes, the straight lines. The letters on

State of South Carolina) In the Court of
County of Clarendon) Common Pleas
))
))
Andreal Holland by his) C.A. No.
Guardian Ad Litem) 2008-CP-14-00461
Peggy Knox,) Deposition of
) ROGER E. DAVIS,
Plaintiff,) P.E., C.F.E.I
) August 31, 2010
))
vs.))
))
Morbark, Inc., Precision)
Husky Corporation, A & K)
Mulch, LLC, and Watford)
Industry, Inc.,)
))
Defendants.)
-----)

Deposition on oral examination of ROGER E. DAVIS, P.E., C.F.E.I., reported by Mary W. Hoskins, RPR and Notary Public in and for the State of South Carolina; said deposition taken pursuant to notice of deposition, by agreement and in accordance with South Carolina Rules of Civil Procedure, at the law offices of Turner, Padgett, Graham & Laney, P.A., 1901 Main Street, 17th Floor, Columbia, South Carolina, on the 31st day of August, 2010, commencing at the hour of 10:05 a.m.

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01294

Roger E. Davis, P.E., C.F.E.I.

1 A & K Mulch employees and owner?

2 A. I have read a summary of those
3 depositions.

4 Q. Who prepared the summary?

5 A. I don't know, but I was provided that
6 by Mr. Jonas.

7 Q. Is that in your materials here?

8 A. It is, yes.

9 Q. You haven't read the transcripts
10 themselves?

11 A. No.

12 Q. Do you have copies of the transcripts
13 themselves?

14 A. I do not.

15 Q. You don't have copies of any
16 depositions?

17 A. I have a deposition from the workers'
18 comp hearing from Mr. Holland.

19 Q. Do you have any depositions that have
20 been taken in this case?

21 A. No.

22 Q. What standards applicable to this
23 case did you discuss with Mr. Jonas?

24 A. Well, we've discussed, of course, the
25 OSHA regulation. We have discussed the --

Roger E. Davis, P.E., C.F.E.I.

1 actually a standard that is not directly
2 applicable since it's a foreign standard. We
3 discussed the standard in British Columbia that
4 is applicable to this type machine in British
5 Columbia. And we discussed the fact that
6 there's no specific standard for fixed chippers
7 in the U.S.

8 Q. By fixed, do you mean stationary?

9 A. Yes.

10 Q. Did you discuss any other potentially
11 applicable standards?

12 A. Not that I recall.

13 Q. Did you discuss any what I would call
14 warts of Mr. Jonas's case?

15 A. I'm sorry?

16 Q. Did you discuss any what I would call
17 warts of Mr. Jonas's case?

18 A. Oh, warts.

19 Q. I can use a more technical term if
20 you like.

21 A. Oh, I understand the term exactly.
22 It's just I'm very hard of hearing.

23 Q. I'll try to speak up. I'm sorry.

24 A. That's okay. You spoke loud enough.
25 It's just my limitation.

1 Q. Let me stop you there. The research
2 you collected, is that the same research that
3 is attached to your report?

4 A. No. It's different. It's similar,
5 but different. It's just that I came across
6 this research in another case I was working on
7 and felt it was applicable to this case, so I
8 copied it and put it in there.

9 Q. Okay. What else is new?

10 A. I have placed a copy of
11 ANSI Z-133.1 -- ANSI, A-N-S-I, Z-133.1 in my
12 file. That's a standard for -- that's a safety
13 standard for tree care operations. Not
14 particularly relevant to the case, but --

15 Q. Then why is it in there?

16 A. Because I thought a question might
17 come up about standards that might apply.
18 There are some standards in this document that
19 apply to brush chippers. Of course, there is
20 no specific standard for stationary chippers,
21 but I felt that something might come up about
22 whether other standards might apply.

23 Q. Are there specific standards for
24 brush chippers?

25 A. Well, to the extent they're in this

Roger E. Davis, P.E., C.F.E.I.

1 58-inch machine.

2 So at the end of the shift, he turned
3 off the machine, locked it out. He waited for
4 a time for it to coast down. He was told by a
5 coworker -- apparently he had left the area.
6 He was told by a coworker that the machine was
7 making a noise that he couldn't identify.
8 Mr. Holland then, I understand, went to consult
9 with Mr. Woods about what to do about it. I
10 think he probably did that on -- maybe twice.
11 But ultimately came back.

12 He, I understand, stuck a branch or
13 something into the intake of this machine to --
14 which was typically the way he used to
15 determine if it was still rotating; did not
16 believe based on that test that it was
17 rotating. He removed one or more pins securing
18 the hood to the machine, began to try to open
19 the hood, and the rotating member struck the
20 hood violently knocking it in the open position
21 striking Mr. Holland in the face.

22 Q. From whom did you obtain this
23 understanding?

24 A. Well, from my review of the file,
25 from my discussion with Mr. Woods, and from my

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01297

STATE OF SOUTH CAROLINA) IN THE COURT OF COMMON PLEAS
COUNTY OF CLARENDON)
Andreal Holland by his)
Guardian Ad Litem)
Peggy Knox,)
Plaintiff,) C/A NO. 2008-CP-14-00461
vs.)
Morbark, Inc., Precision)
Husky Corporation, A & K)
Mulch, LLC, and Watford)
Industry, Inc.,)
Defendants..)

DEPOSITION OF

WOODROW WOODS

Wednesday, August 4, 2010
9:56 a.m.-1:36 p.m.

The deposition of WOODROW WOODS, taken on behalf of the Defendant at the offices of Land, Parker & Welch, 29 South Mill Street, Manning, South Carolina, on the 4th day of August, 2010, before Lyn Allen, Court Reporter and Notary Public in and for the State of South Carolina, pursuant to Notice of Deposition and/or agreement of counsel.

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01298

1 A: Yes, sir.

2 Q: Next set of photographs I'm going to show you,
3 Mr. Woods, are Defendant's Exhibit Number Three to
4 Mr. Witherspoon's deposition. And they are a series of
5 four photos. And I would ask that you please just take
6 a look at those photographs and let me know when you've
7 had a chance to do that. Have you had a chance to do
8 that? Have you had a chance to look at them?

9 A: Yes, sir.

10 Q: Do these photographs show the hood that was on the
11 machine at the time of the accident?

12 A: Yes, sir. That's the hood.

13 Q: Do you recognize the hood?

14 A: Yes, sir.

15 Q: Do you recognize the warning and danger decals that we
16 talked about earlier that has the diagram of someone
17 getting hit in the head by the hood?

18 A: Yes, sir.

19 Q: And how many different places do you see that diagram
20 on the hood?

21 A: It's on the back, on the right-hand side and it's on
22 the left-hand side.

23 Q: So you see it in at least three places?

24 A: Yes, sir. Three different places.

25 Q: Looking at that diagram, and I can show you a close up

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01299

1 if you need to, do you recall the diagram?

2 A: Yes, sir. I know.

3 Q: Do you need to see a close up of it?

4 A: No, sir.

5 Q: Is there any doubt having looked at that diagram that
6 what the warning symbol is telling you is that if you
7 open up the hood before the machine is stopped turning
8 that the hood can kick back and hit you in the head?

9 A: Yes, sir.

10 **MR. JONAS:** Object to the question.

11 Q: That's what you understood it to be?

12 A: Yes, sir.

13 Q: Nothing difficult about looking at that diagram and
14 figuring out that's what it's telling you, is it?

15 **MR. JONAS:** Object to the question.

16 A: Yes, sir.

17 Q: There's nothing difficult about it, is there?

18 **MR. JONAS:** Continue.

19 A: No, sir.

20 **MR. OTT:** You can have a continuing objection,
21 Don.

22 Q: And even without that diagram you knew that that was a
23 danger if you opened up the hood before the disk had
24 stopped turning; correct?

25 A: Yes, sir. It was a danger.

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01300

IN THE COURT OF COMMON PLEAS
THIRD JUDICIAL CIRCUIT

CIVIL ACTION NO.
2008-CP14-0461

**CERTIFIED TRUE COPY
ORIGINAL FILED IN THIS OFFICE**

DATE 11/25

DATE 11/25

Bentley S. Roberts
CLERK OF COURT

CLERK OF COURT
CLARENDON COUNTY, SC

**PRECISION HUSKY CORPORATION'S RESPONSES TO
PLAINTIFF'S INTERROGATORIES**

Defendant Precision Husky Corporation (“Precision Husky”) hereby responds to the Interrogatories of Plaintiff Andreal Holland by his Guardian ad Litem Peggy Knox (“Holland”) as follows:

OMIT #1 TO #6 & #11 TO #22

7. Identify the date and explain how the machine was purchased and/or consigned to Precision Husky Corporation.

01301

RESPONSE: The chipper at issue was received on or about August 24, 2005 as a trade-in from J. H. Chewning Lumber Company, Inc., 11252 Post Oak Road, Spotsylvania, Virginia.

8. Identify each and every inspection and/or modification of the machine that was performed by, or on behalf of, Precisions Husky Corporation while the machine was in the possession, or under the control of, Precision Husky Corporation.

RESPONSE: Precision Husky's only material modification was to add three warning decals to the hood of the chipper. Precision Husky reserves the right to supplement this response as additional information becomes available.

9. State the name and address of the seller or consigner of the machine to Precision Husky and the date of such event.

RESPONSE: See response to Interrogatory No. 7.

10. Identify the purchaser of the machine and the terms and date of sale by Precision Husky.

RESPONSE: The chipper at issue was sold on or about March 14, 2006 to J.C. Witherspoon, Jr., Inc., P.O. Box 289, Alderman County Road, Alcolu, South Carolina. Precision Husky refers Plaintiff to the documents produced in response to the Requests for Production served simultaneously with these Interrogatories for additional information on this sale.

STATE OF SOUTH CAROLINA)

IN THE COURT OF COMMON PLEAS
THIRD JUDICIAL CIRCUIT

COUNTY OF CLARENDON)

2008 CP 14-00461.

Andreal Holland by his Guardian Ad
Litem Peggy Knox)

Plaintiff,)

CONSENT STIPULATION

vs.)

Morbark, Inc, Precision Husky
Corporation, A & K Mulch, LLC,
Watford Industry, Inc.

CERTIFIED TRUE COPY
OF ORIGINAL FILED IN THIS OFFICE
DATE) 8/23/10

Defendants,)

Burke S. Roberts
CLERK OF COURT
CLARENDON COUNTY, SC

WHEREAS, Plaintiff, by and through its undersigned counsel, brought suit against Defendant Watford Industry, Inc. upon belief that Watford Industry, Inc. installed the Mobark Chipper machine that is the subject of this litigation; and

WHEREAS, through discovery in this action, Plaintiff has determined and is satisfied that Watford Industry, Inc., performed only minimal assistance in locating and welding the machine to an existing base and did not contribute to the cause of the injury of which the Plaintiff complains; and

WHEREAS, the parties acknowledge and agree that Watford Industry, Inc., should be dismissed from this liability action as expressed by the signatures of counsel for all parties, affixed below;

NOW, THEREFORE, upon the Motion of Donald E. Jonas, Esquire, and with the consent of Peggy Knox, the duly appointed guardian ad litem for the Plaintiff, and with the consent of Curtis Ott, Esquire, attorney for Mobark, Inc., Saunders M. Bridges, Esquire, attorney for Watford Industry, Inc., John Ecton, Esquire, attorney for A & K Mulch, LLC, J. Calhoun Land, IV, Esquire, attorney for Precision Husky Corporation, Joel C. Bailey, Esquire, attorney for Precision Husky Corporation, and Darrell W. Carter, Esquire, attorney for Axis Insurance Company;

IT IS ORDERED, that the Defendant Watford Industry, Inc., be dismissed as a party to this action, with prejudice.

AND IT IS SO ORDERED.

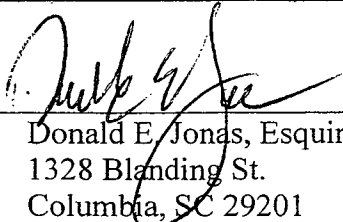
[Signature]
Presiding Judge

Clarendon County, South Carolina

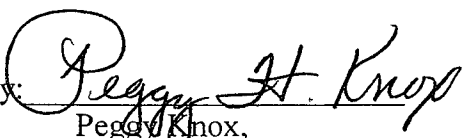
Aug. 18, 2010

WE SO MOVE AND CONSENT:

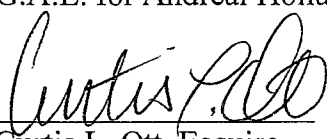
By: _____


Donald E. Jones, Esquire
1328 Blanding St.
Columbia, SC 29201
Attorney For Plaintiff Andreal Holland

By: _____


Peggy H. Knox,
G.A.L. for Andreal Holland

By: _____

 8/9/10
Curtis L. Ott, Esquire
Turner, Padgett, Graham & Laney, PA
PO Box 1473
Columbia, SC 29202
Attorney for Morbark, Inc.

By: _____

Saunders M. Bridges, Jr., Esquire
Aiken, Bridges, Nunn, Elliott, & Tyler, PA
PO Box 1931
Florence, SC 29506
Attorney For Watford Industry, Inc.

By: _____

John A. Ecton
7825 Broad River Road, Ste. 300
Irmo, South Carolina 29063
Attorney for Defendant A&K Mulch

By: _____

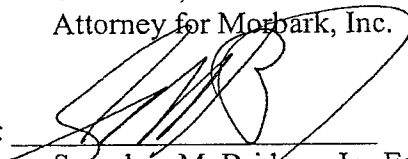
J. Calhoun Land, IV, Esquire
Land, Parker & Welch, PA
PO Box 138
Manning, SC 29102
Attorney For Defendant Precision Husky Corporation

WE SO MOVE AND CONSENT:

By: _____
Donald E. Jonas, Esquire
1328 Blanding St.
Columbia, SC 29201
Attorney For Plaintiff Andreal Holland

By: _____
Peggy Knox,
G.A.L. for Andreal Holland

By: _____
Curtis L. Ott, Esquire
Turner, Padgett, Graham & Laney, PA
PO Box 1473
Columbia, SC 29202
Attorney for Morbark, Inc.

By:  _____
Saunders M. Bridges, Jr., Esquire
Aiken, Bridges, Nunn, Elliott, & Tyler, PA
PO Box 1931
Florence, SC 29506
Attorney For Watford Industry, Inc.

By: _____
John A. Ecton
7825 Broad River Road, Ste. 300
Irmo, South Carolina 29063
Attorney for Defendant A&K Mulch

By: _____
J. Calhoun Land, IV, Esquire
Land, Parker & Welch, PA
PO Box 138
Manning, SC 29102
Attorney For Defendant Precision Husky Corporation

WE SO MOVE AND CONSENT:

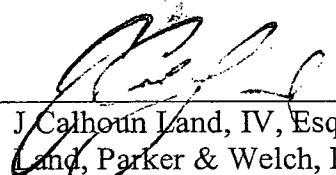
By: _____
Donald E. Jonas, Esquire
1328 Blanding St.
Columbia, SC 29201
Attorney For Plaintiff Andreal Holland

By: _____
Peggy Knox,
G.A.L. for Andreal Holland

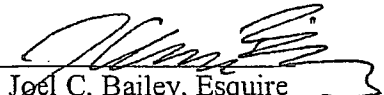
By: _____
Curtis L. Ott, Esquire
Turner, Padgett, Graham & Laney, PA
PO Box 1473
Columbia, SC 29202
Attorney for Morbark, Inc.

By: _____
Saunders M. Bridges, Jr., Esquire
Aiken, Bridges, Nunn, Elliott, & Tyler, PA
PO Box 1931
Florence, SC 29506
Attorney For Watford Industry, Inc.

By:  _____
John A. Ecton
7825 Broad River Road, Ste. 300
Irmo, South Carolina 29063
Attorney for Defendant A&K Mulch

By:  _____
J. Calhoun Land, IV, Esquire
Land, Parker & Welch, PA
PO Box 138
Manning, SC 29102
Attorney For Defendant Precision Husky Corporation

By: _____


Joel C. Bailey, Esquire
Lightfoot, Franklin & White
Clark Building
400 20th St. North
Birmingham, AL 35203
Attorney For Defendant Precision Husky Corporation

By: _____

Darrell W. Carter, Esquire
Sweeney Wingate & Barrow, P.A.
PO Box 12129
Columbia, SC 29211
Attorney for AXIS Insurance Company

By: _____

Joel C. Bailey, Esquire
Lightfoot, Franklin & White
Clark Building
400 20th St. North
Birmingham, AL 35203
Attorney For Defendant Precision Husky Corporation

By: _____


Darrell W. Carter, Esquire
Sweeney Wingate & Barrow, P.A.
PO Box 12129
Columbia, SC 29211
Attorney for AXIS Insurance Company

2013 AUG 20 PM 3:10

STATE OF SOUTH CAROLINA)

IN THE COURT OF COMMON PLEAS

COUNTY OF CLARENDON)

THIRD JUDICIAL CIRCUIT

2008 CP 14-00461.

Andreal Holland by his Guardian Ad
Litem Peggy Knox)

Plaintiff,)

CONSENT STIPULATION

vs.)

OF DISMISSAL OF DEFENDANT

Morbark, Inc, Precision Husky
Corporation, A & K Mulch, LLC,
Watford Industry, Inc.)

A & K MULCH, LLC
CERTIFIED TRUE COPY
OF ORIGINAL FILED IN THIS OFFICE
DATE 8/03/10

Defendants,)

Beulah S. Roberts
CLERK OF COURT
CLARENDON COUNTY, SC

WHEREAS, Plaintiff, by and through its undersigned counsel, brought suit against Co-Defendant A&K Mulch, LLC upon belief that Andreal Holland was employed by J.C. Witherspoon, Jr., Inc.; and

WHEREAS, through discovery in this action, Plaintiff has determined and is satisfied that he was employed by both A&K Mulch, LLC and J.C. Witherspoon, Jr., Inc., at the time of the accident that is subject of the claims against Defendants; and

WHEREAS, Andreal Holland was paid workers' compensation benefits pursuant to The South Carolina Workers' Compensation Act (S.C. Code Ann. § 42-1-10 et seq.) and the policy of insurance issued to J.C. Witherspoon, Jr., Inc. and A&K Mulch, LLC; and

WHEREAS, Plaintiff agrees that his sole and exclusive remedy against A&K Mulch, LLC, is by and through the South Carolina Workers' Compensation Act; and

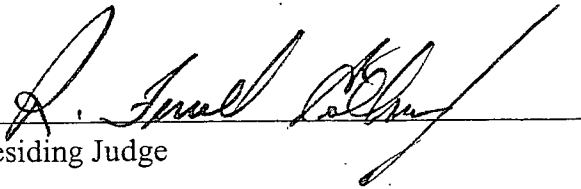
WHEREAS, the parties acknowledge and agree that A&K Mulch, LLC, should be dismissed from this liability action as expressed by the signatures of counsel for all parties, affixed below;

NOW, THEREFORE, upon the Motion of John Ecton, Esquire, attorney for A & K Mulch, LLC, and with the consent of the attorney for the Plaintiff, Donald E. Jonas, Esquire, and with the consent of Peggy Knox, the duly appointed guardian ad litem for the Plaintiff, with the consent of Curtis Ott, Esquire, attorney for Mobark, Inc., Saunders M. Bridges, Esquire, attorney for Watford Industry, Inc., J. Calhoun Land, IV, Esquire, attorney for Precision Husky Corporation, Joel C. Bailey, Esquire, attorney for Precision Husky Corporation, and Darrell W. Carter, Esquire, attorney for Axis Insurance Company;

IT IS ORDERED, pursuant to Rule 41 of the South Carolina Rules of Civil Procedure and the exclusive remedy provisions of the South Carolina Workers' Compensation Act (S.C.

Code Ann. § 42-1-10 et seq.), that the Defendant A&K Mulch, LLC, be dismissed as a party to this action, with prejudice. This dismissal does not affect any subrogation rights to recovery by A&K Mulch, LLC, such as those available pursuant to S.C. Code Ann. § 42-1-560.

AND IT IS SO ORDERED.


Presiding Judge

Clarendon County, South Carolina

Aug. 20, 2010

WE SO MOVE AND CONSENT:

By: 
John A. Ecton
7825 Broad River Road, Ste. 300
Irmo, South Carolina 29063
Attorney for Defendant A&K Mulch

By: _____
Donald E. Jonas, Esquire
1328 Blanding St.
Columbia, SC 29201
Attorney For Plaintiff Andreal Holland

By: _____
Peggy Knox,
G.A.L. for Andreal Holland

By: _____
Curtis L. Ott, Esquire
Turner, Padgett, Graham & Laney, PA
PO Box 1473
Columbia, SC 29202
Attorney for Morbark, Inc.

By: _____
Saunders M. Bridges, Jr., Esquire
Aiken, Bridges, Nunn, Elliott, & Tyler, PA
PO Box 1931
Florence, SC 29506

this action, with prejudice. This dismissal does not affect any subrogation rights to recovery by A&K Mulch, LLC, such as those available pursuant to S.C. Code Ann. § 42-1-560.

AND IT IS SO ORDERED.

Presiding Judge

Clarendon County, South Carolina
_____, 2010

WE SO MOVE AND CONSENT:

By: _____

John A. Ecton
7825 Broad River Road, Ste. 300
Irmo, South Carolina 29063
Attorney for Defendant A&K Mulch

By: _____

Donald E. Jonas, Esquire
1328 Blanding St.
Columbia, SC 29201
Attorney For Plaintiff Andreal Holland

By: _____

Peggy Knox,
G.A.L. for Andreal Holland

By: _____

Curtis L. Ott, Esquire
Turner, Padgett, Graham & Laney, PA
PO Box 1473
Columbia, SC 29202
Attorney for Morbark, Inc.

By: _____

Saunders M. Bridges, Jr., Esquire
Aiken, Bridges, Nunn, Elliott, & Tyler, PA
PO Box 1931
Florence, SC 29506
Attorney For Watford Industry, Inc.

Code Ann. § 42-1-10 et seq.), that the Defendant A&K Mulch, LLC, be dismissed as a party to this action, with prejudice. This dismissal does not affect any subrogation rights to recovery by A&K Mulch, LLC, such as those available pursuant to S.C. Code Ann. § 42-1-560.

AND IT IS SO ORDERED.

Presiding Judge

Clarendon County, South Carolina
_____, 2010

WE SO MOVE AND CONSENT:

By: _____
John A. Ecton
7825 Broad River Road, Ste. 300
Irmo, South Carolina 29063
Attorney for Defendant A&K Mulch

By: _____
Donald E. Jonas, Esquire
1328 Blanding St.
Columbia, SC 29201
Attorney For Plaintiff Andreal Holland

By: _____
Peggy Knox,
G.A.L. for Andreal Holland

By: Curtis L. Ott 8/9/10
Curtis L. Ott, Esquire
Turner, Padgett, Graham & Laney, PA
PO Box 1473
Columbia, SC 29202
Attorney for Morbark, Inc.

By: _____
Saunders M. Bridges, Jr., Esquire
Aiken, Bridges, Nunn, Elliott, & Tyler, PA
PO Box 1931
Florence, SC 29506

Code Ann. § 42-1-10 et seq.), that the Defendant A&K Mulch, LLC, be dismissed as a party to this action, with prejudice. This dismissal does not affect any subrogation rights to recovery by A&K Mulch, LLC, such as those available pursuant to S.C. Code Ann. § 42-1-560.

AND IT IS SO ORDERED.

Presiding Judge

Clarendon County, South Carolina
_____, 2010

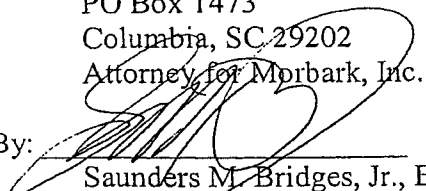
WE SO MOVE AND CONSENT:

By: _____
John A. Ecton
7825 Broad River Road, Ste. 300
Irmo, South Carolina 29063
Attorney for Defendant A&K Mulch

By: _____
Donald E. Jonas, Esquire
1328 Blanding St.
Columbia, SC 29201
Attorney For Plaintiff Andreal Holland

By: _____
Peggy Knox,
G.A.L. for Andreal Holland

By: _____
Curtis L. Ott, Esquire
Turner, Padgett, Graham & Laney, PA
PO Box 1473
Columbia, SC 29202
Attorney for Morbark, Inc.

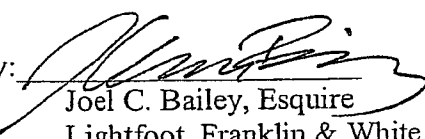
By:  _____
Saunders M. Bridges, Jr., Esquire
Aiken, Bridges, Nunn, Elliott, & Tyler, PA
PO Box 1931
Florence, SC 29506
Attorney For Watford Industry, Inc.

Attorney For Watford Industry, Inc.

By: _____

J. Calhoun Land, IV, Esquire
Land, Parker & Welch, PA
PO Box 138
Manning, SC 29102
Attorney For Defendant Precision Husky Corporation

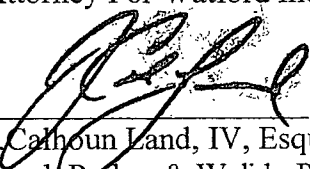
By: _____


Joel C. Bailey, Esquire
Lightfoot, Franklin & White
Clark Building
400 20th St. North
Birmingham, AL 35203
Attorney For Defendant Precision Husky Corporation

By: _____

Darrell W. Carter, Esquire
Sweeney Wingate & Barrow, P.A.
PO Box 12129
Columbia, SC 29211
Attorney for AXIS Insurance Company

Attorney For Watford Industry, Inc.

By: 

J. Calhoun Land, IV, Esquire

Land, Parker & Welch, PA

PO Box 138

Manning, SC 29102

Attorney For Defendant Precision Husky Corporation

By: _____

Joel C. Bailey, Esquire

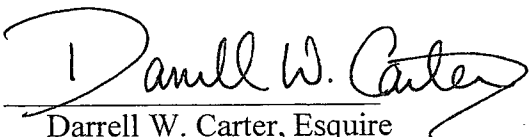
Lightfoot, Franklin & White

Clark Building

400 20th St. North

Birmingham, AL 35203

Attorney For Defendant Precision Husky Corporation

By: 

Darrell W. Carter, Esquire

Sweeney Wingate & Barrow, P.A.

PO Box 12129

Columbia, SC 29211

Attorney for AXIS Insurance Company

2016-03-23 11:07
STATE OF SOUTH CAROLINA)

IN THE COURT OF COMMON PLEAS
THIRD JUDICIAL CIRCUIT

COUNTY OF CLARENDON)

2008 CP 14-00461.

Andreal Holland by his Guardian Ad
Litem Peggy Knox)

Plaintiff,)

CONSENT STIPULATION
OF DISMISSAL OF DEFENDANT
PRECISION HUSKY CORPORATION

vs.)

Morbark, Inc, Precision Husky
Corporation, A & K Mulch, LLC,
Watford Industry, Inc.)

CERTIFIED TRUE COPY
OF ORIGINAL FILED IN THIS OFFICE
DATE 8/23/10

Defendants,)

Bentley S. Roberts
CLERK OF COURT
CLARENDON COUNTY, SC

WHEREAS, Plaintiff, by and through its undersigned counsel, brought suit against Defendant Precision Husky Corporation Watford Industry, Inc. upon belief that Precision Husky Corporation sold the used Mobark Chipper machine that is the subject of this litigation; and

WHEREAS, through discovery in this action, Plaintiff has determined and is satisfied that Precision Husky Corporation resold the used Mobark Chipper machine here involved, but did not alter its function and operation in any manner that caused or contributed to the injury of which the Plaintiff complains; and

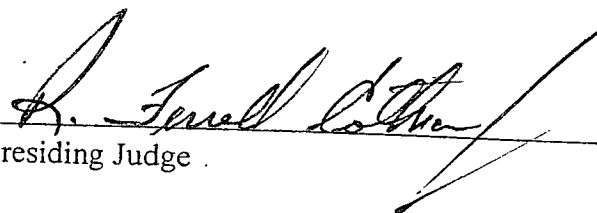
WHEREAS, the parties acknowledge and agree that Precision Husky Corporation, should be dismissed from this liability action as expressed by the signatures of counsel for all parties, affixed below;

WHEREAS, the parties further acknowledge and stipulate that dismissal is made with acknowledgment of the provisions of the Uniform Contribution Among Tortfeasors Act, Section 15-38-10, et seq., Code of Laws Of S.C.

NOW, THEREFORE, upon the Motion of Donald E. Jonas, Esquire, and with the consent of Peggy Knox, the duly appointed guardian ad litem for the Plaintiff, and with the consent of Curtis Ott, Esquire, attorney for Mobark, Inc., Saunders M. Bridges, Esquire, attorney for Watford Industry, Inc., John Ecton, Esquire, attorney for A & K Mulch, LLC, J. Calhoun Land, IV, Esquire, attorney for Precision Husky Corporation, Joel C. Bailey, Esquire, attorney for Precision Husky Corporation, and Darrell W. Carter, Esquire, attorney for Axis Insurance Company;

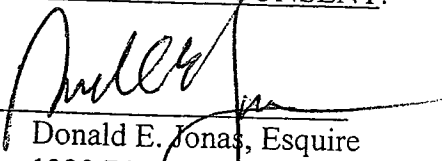
IT IS ORDERED, that the Defendant Precision Husky, be dismissed as a party to this action, with prejudice.

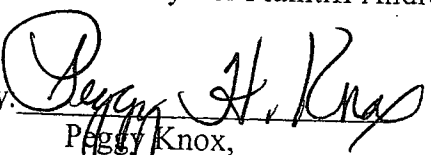
AND IT IS SO ORDERED.

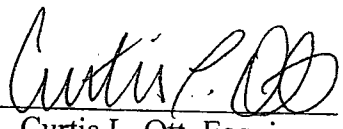

Presiding Judge

Clarendon County, South Carolina
Aug 20, 2010

WE SO MOVE AND CONSENT:

By: 
Donald E. Jonas, Esquire
1328 Blanding St.
Columbia, SC 29201
Attorney For Plaintiff Andreal Holland

By: 
Peggy Knox,
G.A.L. for Andreal Holland

By:  8/9/10
Curtis L. Ott, Esquire
Turner, Padgett, Graham & Laney, PA
PO Box 1473
Columbia, SC 29202
Attorney for Morbark, Inc.

By: _____
Saunders M. Bridges, Jr., Esquire
Aiken, Bridges, Nunn, Elliott, & Tyler, PA
PO Box 1931
Florence, SC 29506
Attorney For Watford Industry, Inc.

By: _____
John A. Ecton
7825 Broad River Road, Ste. 300
Irmo, South Carolina 29063
Attorney for Defendant A&K Mulch

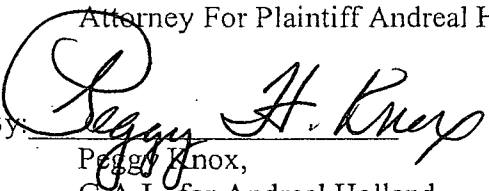
AND IT IS SO ORDERED.

Presiding Judge

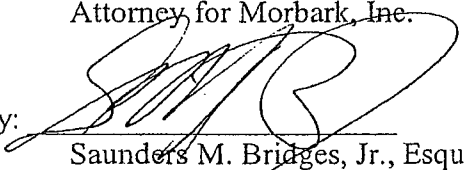
Clarendon County, South Carolina
_____, 2010

WE SO MOVE AND CONSENT:

By: _____
Donald E. Jonas, Esquire
1328 Blanding St.
Columbia, SC 29201
Attorney For Plaintiff Andreal Holland

By: 
Peggy Knox,
G.A.L. for Andreal Holland

By: _____
Curtis L. Ott, Esquire
Turner, Padgett, Graham & Laney, PA
PO Box 1473
Columbia, SC 29202
Attorney for Morbark, Inc.

By: 
Saunders M. Bridges, Jr., Esquire
Aiken, Bridges, Nunn, Elliott, & Tyler, PA
PO Box 1931
Florence, SC 29506
Attorney For Watford Industry, Inc.

By: _____
John A. Ecton
7825 Broad River Road, Ste. 300
Irmo, South Carolina 29063
Attorney for Defendant A&K Mulch

By: _____

01318

AND IT IS SO ORDERED.

Presiding Judge

Clarendon County, South Carolina
_____, 2010

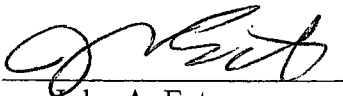
WE SO MOVE AND CONSENT:

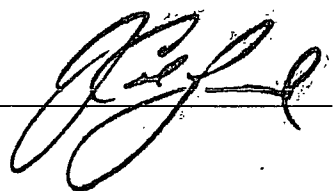
By: _____
Donald E. Jonas, Esquire
1328 Blanding St.
Columbia, SC 29201
Attorney For Plaintiff Andreal Holland

By: _____
Peggy Knox,
G.A.L. for Andreal Holland

By: _____
Curtis L. Ott, Esquire
Turner, Padgett, Graham & Laney, PA
PO Box 1473
Columbia, SC 29202
Attorney for Morbark, Inc.

By: _____
Saunders M. Bridges, Jr., Esquire
Aiken, Bridges, Nunn, Elliott, & Tyler, PA
PO Box 1931
Florence, SC 29506
Attorney For Watford Industry, Inc.

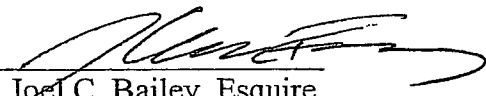
By:  _____
John A. Ecton
7825 Broad River Road, Ste. 300
Irmo, South Carolina 29063
Attorney for Defendant A&K Mulch

By:  _____

01319

J. Calhoun Land, IV, Esquire
Land, Parker & Welch, PA
PO Box 138
Manning, SC 29102
Attorney For Defendant Precision Husky Corporation

By: _____


Joel C. Bailey, Esquire
Lightfoot, Franklin & White
Clark Building
400 20th St. North
Birmingham, AL 35203
Attorney For Defendant Precision Husky Corporation

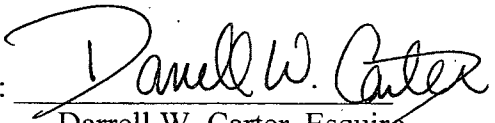
By: _____

Darrell W. Carter, Esquire
Sweeney Wingate & Barrow, P.A.
PO Box 12129
Columbia, SC 29211
Attorney for AXIS Insurance Company

J. Calhoun Land, IV, Esquire
Land, Parker & Welch, PA
PO Box 138
Manning, SC 29102
Attorney For Defendant Precision Husky Corporation

By: _____

Joel C. Bailey, Esquire
Lightfoot, Franklin & White
Clark Building
400 20th St. North
Birmingham, AL 35203
Attorney For Defendant Precision Husky Corporation

By:  _____

Darrell W. Carter, Esquire
Sweeney Wingate & Barrow, P.A.
PO Box 12129
Columbia, SC 29211
Attorney for AXIS Insurance Company

TURNER PADGET

TURNER PADGET GRAHAM & LANEY P.A.

CHARLESTON
COLUMBIA
FLORENCE
GREENVILLE
MYRTLE BEACH

Curtis L. Ott

E-Mail: COtt@TurnerPadget.com

Direct Dial: (803) 227-4292

August 9, 2010

Donald E. Jonas, Esquire
Cotty and Jonas
1328 Blanding Street
Columbia, SC 29201

Re: Andreal Holland by his Guardian Ad Litem Peggy Knox v. Morbark, Inc.,
Precision Husky Corporation, A & K Mulch, LLC, and Watford Industry, Inc.
Case No.: 2008-CP-14-0461
TPGL File No.: 7204.103

Dear Don:

Enclosed please find the following:

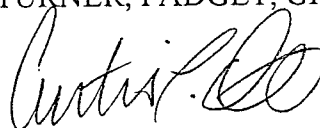
1. My executed consent to the dismissal of A&K Mulch, LLC;
2. My executed consent to the dismissal of Precision Husky Corporation;
3. My executed consent to the dismissal of Watford Industry, Inc.; and
4. My executed consent regarding your proposed Amended Complaint.

Please advise if you have any questions, and it would be appreciated if you would forward filed copies of the fully executed dismissals.

With kind regards, I am

Yours very truly,

TURNER, PADGET, GRAHAM & LANEY, P.A.



Curtis L. Ott

01322

BUSINESS • LITIGATION • SOLUTIONS

Bank of America Plaza • 17th Floor • 1901 Main Street (29201) • PO Box 1473 • Columbia, SC 29202
Phone (803) 254-2200 • Fax (803) 799-3957 • turnerpadget.com

August 9, 2010

Page 2

CLO/tj

Enclosures

cc: John C. Land, III, Esquire
John C. Land, IV, Esquire
Saunders M. Bridges, Jr., Esquire
John Aaron Ecton, Esquire
Gray Michael Borden, Esquire
William O. Sweeny, III, Esquire
Darrell W. Carter, Esquire
(w/enc.)

STATE OF SOUTH CAROLINA
COUNTY OF CLARENDON

IN THE COURT OF COMMON PLEAS
THIRD JUDICIAL CIRCUIT

2008 CP 14-0461

Andreal Holland by his Guardian Ad
Litem Peggy Knox

Plaintiff,

vs.

Morbark Inc, Precision Husky
Corporation, A & K Mulch, LLC,
Watford Industry, Inc.

Defendants,

CONSENT ORDER ALLOWING
AMENDED AND SUPPLEMENT
COMPLAINT.

This matter comes before the court upon motion by the Plaintiff, and with the consent of the Defendants, to amend and supplement Plaintiff's Complaint as set forth in the previously filed Motion To Amend and Supplement Plaintiff's Complaint and in the attachment to the motion and to remove Defendants Precision Husky Corporation, A&K Mulch, LLC and Watford Industry, Inc., from the caption and to remove them as parties to this action.

After consideration of this matter and for good cause shown,

IT IS THEREFORE ORDERED that the Plaintiff shall be allowed to file the proposed Amended and Supplemental Complaint and to remove Defendants Precision Husky Corporation, A&K Mulch, LLC and Watford Industry, Inc., from the caption and to remove them as parties to this action. Thereafter Plaintiff shall serve the Amended and Supplemental Complaint on the remaining Defendant, Mobark, Inc., in accord with the provisions of Rule 15, SCRCP.

AND IT IS SO ORDERED.

July ____, 2010

PRESIDING JUDGE
THIRD JUDICIAL CIRCUIT

01324

I consent to the Motion To Amend and Supplement Plaintiff's Complaint
in action no. 08 CP I 14-0461:

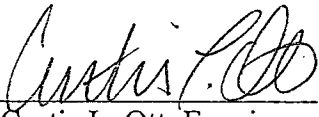
By: _____

John A. Ecton
7825 Broad River Road, Ste. 300
Irmo, South Carolina 29063
Attorney for Defendant A&K Mulch

By: _____

Donald E. Jonas, Esquire
1328 Blanding St.
Columbia, SC 29201
Attorney For Plaintiff Andreal Holland

By: _____

 8/9/10
Curtis L. Ott, Esquire
Turner, Padgett, Graham & Laney, PA
PO Box 1473
Columbia, SC 29202
Attorney for Morbark, Inc.

By: _____

Saunders M. Bridges, Jr., Esquire
Aiken, Bridges, Nunn, Elliott, & Tyler, PA
PO Box 1931
Florence, SC 29506
Attorney For Watford Industry, Inc.

By: _____

J. Calhoun Land, IV, Esquire
Land, Parker & Welch, PA
PO Box 138
Manning, SC 29102
Attorney For Defendant Precision Husky Corporation

Clarendon County Third Judicial Circuit - Roster Details
Motion's Roster-Friday, October 8, 2010

Court/Agency	Common Pleas	Judge	James	Roster Id	6
Roster Type	Motion	Roster Begin Date	10/08/2010	Roster End Date	10/08/2010

Number of motions = 19

Scheduled	#	Time	hr:mn	Description	Filing Party	Filed Date	Case	Case Sub Type	Plaintiff Attorney	Defendant Attorney	Notes
10/08/2010	1		0:15	Motion/Date Certain and to be Heard By Judge James, Jr.	C Kelly Jackson-PLT	03/18/2010	2005CP1400547 C Kelly Jackson VS Christopher Gadsden, defendant, et al	Forfeit-Petit (840)	Garryl Lynard Deas (803) 775-7004	Eleazer R. Carter (803) 779-2545 Barry Krell (843) 723-7491	C
10/08/2010	2		0:15	Motion/Compel and Service	Peggy Guardian Ad Litem Knox-PLT	08/04/2010	2008CP1400461 Peggy Guardian Ad Litem Knox, plaintiff, et al VS Morbark Industries Inc, defendant, et al	Products Liab 340	Darrell Wayne Carter ((80) 3) -256-x2233 Donald E. Jonas (803) 254-1570 William O. Sweeny III (803) 256-2233	Gray Michael Borden Saunders M. Bridges Jr. (843) 669-8787 John Aaron Ecton (803) 771-9800 John C. Land III (803) 435-8894 John Calhoun Land IV (803) 435-8894 David Christopher Marshall ((80) 3) -227- x4293 Curtis Lyman Ott (803) 227-4292	
10/08/2010	3		0:15	Motion/Motion to Amend	Peggy Guardian Ad Litem Knox-PLT	08/03/2010	2008CP1400461 Peggy Guardian Ad Litem Knox, plaintiff, et al VS Morbark Industries Inc, defendant, et al	Products Liab 340	Darrell Wayne Carter ((80) 3) -256-x2233 Donald E. Jonas (803) 254-1570 William O. Sweeny III (803) 256-2233	Gray Michael Borden Saunders M. Bridges Jr. (843) 669-8787 John Aaron Ecton (803) 771-9800 John C. Land III (803) 435-8894 John Calhoun Land IV (803) 435-8894 David Christopher Marshall ((80) 3) -227- x4293 Curtis Lyman Ott (803) 227-4292	
10/08/2010	4		0:15	Motion/Compel	Peggy Guardian Ad Litem Knox-PLT	09/07/2010	2008CP1400461 Peggy Guardian Ad Litem Knox, plaintiff, et al VS Morbark Industries Inc, defendant, et al	Products Liab 340	Darrell Wayne Carter ((80) 3) -256-x2233 Donald E. Jonas (803) 254-1570 William O. Sweeny III (803) 256-2233	Gray Michael Borden Saunders M. Bridges Jr. (843) 669-8787 John Aaron Ecton (803) 771-9800 John C. Land III (803) 435-8894 John Calhoun Land IV (803) 435-8894 David Christopher Marshall ((80) 3) -227- x4293	

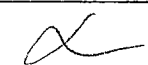
01326

Clarendon County Third Judicial Circuit - Roster Details
Motion's Roster-Friday, October 8, 2010

Court/Agency	Common Pleas	Judge	James	Roster/Id	6						
Roster/Type	Motion	Roster/Begin/Date	10/08/2010	Roster/End/Date	10/08/2010						
Number of motions = 19											
Scheduled	#	Time	hr:mn	Description	Filing Party	Filed Date	Case	Case Sub Type	Plaintiff Attorney	Defendant Attorney	Notes
10/08/2010	5		0:15	Motion/Summary Judgment and Service	Scarborough Landing Inc-DEF	07/20/2010	2008CP1400493 Sunbelt Shores LLC VS Scarborough Landing Inc	Breach of Cont 140	Natasha Hanna (843) 449-8562	Steven Barry Johnson ((80) 3) - 635- x3946 G. Murrell Smith Jr. (803) 778-2471	C
10/08/2010	6		0:15	Motion/Compel Discovery/Responses	Jimmy Tisdale-PLT	06/22/2010	2008CP1400664 Jimmy Tisdale, plaintiff, et al VS Lake Marion Nursing Center, defendant, et al	Medical Malpractice 220	Matthew W. Christian (864) 232-7363	Hugh Willcox Buyck (843) 377-1400 G Wade Cooper Lake Marion Nursing Center	C
10/08/2010	7		0:15	Motion/Compel	Jimmy Tisdale-PLT	06/22/2010	2008CP1400665 Jimmy Tisdale , plaintiff, et al VS Lake Marion Nursing Center , defendant, et al	Medical Malpractice 220	Matthew W. Christian (864) 232-7363	Hugh Willcox Buyck (843) 377-1400 G Wade Cooper Lake Marion Nursing Center	C
10/08/2010	8		0:15	Motion/Summary Judgment and Service	Bank of America Corporation-DEF	08/17/2010	2009CP1400286 Terry Johnson Sr VS Bank of Clarendon defendant, et al	Torts/Other 399	Paul L. Reeves (803) 929-0001	John T. Moore (803) 255-9415 Claude T. Prevost III (803) 225-0406	D
10/08/2010	9		0:15	Motion/Compel & Continue Trial	Bryan P Robbins-PLT	08/03/2010	2009CP1400346 Bryan P Robbins VS Cassey M Floyd	Motor Veh Accid 320	Kenneth R. Young Jr. (803) 773-4371	Clifford O. Koon Jr. (803) 461-2311	X
10/08/2010	10		0:15	Motion/Summary Judgment/Affidavit/Support and Service	Channel Group Inc-PLT	07/27/2010	2009CP1400405 Channel Group Inc VS Carl Jackson Jr	Debt Collections 110	Richard L. Jackson (803) 454-3540	Scott Lamar Robinson (803) 435-0909	(2)
10/08/2010	11		0:15	Motion/Stay	Kenneth R Leydig-DEF	07/27/2010	2010CP1400002 John Robert Howard VS Kenneth R Leydig , defendant, et al	Motor Veh Accid 320	George David Jebaily (843) 667-0400	Daniel Roy Settana Jr. (803) 256-4645	X
10/08/2010	12		0:15	Motion/Summary Judgment and Service By Mail	Baker Transportation Inc-PLT	07/15/2010	2010CP1400136 Baker Transportation, Inc VS CR Farms, Inc	Debt Collections 110	Samuel L. Floyd (843) 264-8833		(3)
10/08/2010	13		0:15	Motion/Motion to Correct a Misnomer	National Grange Mutual-PLT	08/05/2010	2010CP1400163 National Grange Mutual VS Bob Davis	Debt Collections 110	Trace M. Dillon (770) 638-3231	William H. Johnson (803) 435-0909	?
10/08/2010	14		0:15	Motion/Compel/Interrogatories/Request for Production	Tara Guardian Maness-PLT	08/03/2010	2010CP1400177 Tara Guardian Maness plaintiff, et al VS Clemson University, defendant, et al	Personal Injury 350	David L. Savage (843) 720-7470 Michael A. Timbes (843) 937-8000	Clemson University D Malloy McEachin Jr. (843) 665-0135	
10/08/2010	15		0:15	Motion/Summary Judgment and Affidavit	Comprehensive Legal Solutions Inc-PLT	09/10/2010	2010CP1400320 Comprehensive Legal Solutions Inc VS Cecil Hilton	Debt Collections 110	Richard L. Jackson (803) 454-3540		(4)
10/08/2010	16		0:15	Motion/Consolidate and Service	Shelbi D Thigpen-DEF	07/20/2010	2010CP1400349 Lynette Alston VS	Motor Veh Accid 320	Joseph Brooks Fisher (843) 569	Robert Charles Brown (803) 777-1	

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Clarendon County Third Judicial Circuit - Roster Details
Motion's Roster-Friday, October 8, 2010

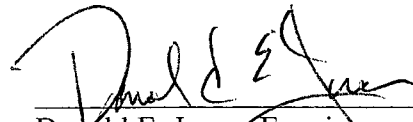
Court/Agency		Common Pleas		Judge		James		Roster/Id		6	
Roster/Type		Motion		Roster/Begin/Date		10/08/2010		Roster/End/Date		10/08/2010	
Number of motions = 19											
Scheduled	#	Time	hr:mn	Description	Filing Party	Filed Date	Case	Case Sub Type	Plaintiff Attorney	Defendant Attorney	Notes
							Shelbi D Thigpen		1700	6600	
10/08/2010	17		0:15	Motion/Consolidate and Service	Lynette Gal Alston-PLT	07/26/2010	2010CP1400350 Lynette Gal Alston , plaintiff, et al VS Shelbi D Thigpen	Motor Veh Accid 320	Joseph Brooks Fisher (843) 569-1700	Robert Charles Brown (803) 771-6600	
10/08/2010	18		0:15	Motion/Summary Judgment	Stokes Craven Holding Corp-PLT	08/27/2010	2010CP1400457 Stokes Craven Holding Corp., plaintiff, et al VS Scott L Robinson, defendant, et al	Legal Malpractice 210	Michelle N. Endemann (843) 377-1871 Andrew K. Epling Jr. (843) 377-1871		
10/08/2010	19		0:15	Motion/Notice of Motion and Motion for Temporary Injunction	Jason Lowder-PLT	09/16/2010	2010CP1400523 Jason Lowder VS Everette Ray Geddings	Contract/Other 199	William H. Johnson (803) 435-0909		

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Certification As To SCRAP 210

The Record On Appeal complies with SCRAP 210 (g), and contains the materials proposed to be included in the record on appeal.

December 16, 2012

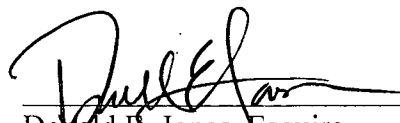


Donald E. Jonas, Esquire
Attorney for Appellant

Certification As To SCRAP 210

The Record On Appeal complies with SCRAP 210 (g), and contains the materials proposed to be included in the record on appeal.

December 16, 2012


Donald E. Jonas, Esquire
Attorney for Appellant