

FILED
UNITED STATES DISTRICT COURT CLERK'S OFFICE
FOR THE DISTRICT OF MASSACHUSETTS
CENTRAL DIVISION
2004 AUG 27 P 4: 38

P&M SERVICES, INC.,
Plaintiff
v.
ANDRE LAVALLEE,
Defendant

Civil Action No.:
04-40173 FDS
(Our Docket No. 5270-01)

COMPLAINT AND JURY DEMAND

Plaintiff, P&M Services, Inc. ("P&M"), through its attorneys, states as follows for its Complaint against Defendant Andre Lavallee ("Lavallee"):

Parties

1. P&M is a corporation organized under the laws of the State of Tennessee.
2. Lavallee is an individual who is a resident of Charlton, Massachusetts.

Jurisdiction and Venue

3. This action arises under the Patent Laws of the United States, 35 U.S.C. §§ 1 et seq.
4. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§1331 and 1338(a).

RECEIPT # 404390
AMOUNT \$ 150
SUMMONS ISSUED
LOCAL RULE 4.1
WAIVER FORM
MCF ISSUED
BY DPTY. CLK. RTD
DATE 8-27-04

5. Venue in this action is proper in this district pursuant to 28 U.S.C. §1400(b) because Lavallee resides in this district.

Patents-in-Suit

6. P & M is the owner by assignment of U.S. Patent No. 5,964,024 (the '024 patent) and U.S. Patent No. 6,282,766 (the '766 patent) (collectively the "Patents-in-Suit"). Copies of the patents are attached as **Exhibits 1 and 2**, respectively.

7. The '024 patent practices a method of cutting a cylindrical roll of paper.

8. The '766 patent comprises a device for cutting a cylindrical roll of paper.

Cause of Action for Patent Infringement

9. Subsequent to the issuance date of the '024 patent, Lavallee has infringed at least one of the claims of the '024 patent by manufacturing, using, offering for sale, and selling roll cutters or paper sizing machines that infringe at least one of the claims of the '024 patent.

10. Subsequent to the issuance date of the '766 patent, Lavallee has infringed at least one of the claims of the '766 patent by manufacturing, using, offering for sale, and selling roll cutters or paper sizing machines that infringe at least one of the claims of the '766 patent.

11. Lavallee's infringement of the Patents-in-Suit was willful.

12. Lavallee's actions were and are without authority from P&M or its predecessors.

13. Lavallee has benefited from his infringement of the Patents-in-Suit.

14. P&M has suffered substantial monetary injury and loss as a result of Lavallee's infringements of the Patents-in-Suit.

15. In addition to the activities described above, Lavallee has filed a fraudulent patent application and obtained a patent based on that fraudulent application (Patent No. 6,405,623).

16. Lavallee has been involved in attempts to enforce that patent against P&M in the present lawsuit.

17. As a result of Lavallee's attempts to enforce his fraudulent patent, P&M has been forced to incur substantial expenses, including, but not limited to, attorney's fees and costs, and substantial expenses to develop alternative technologies in order to protect P&M business in the event that Lavallee's fraudulent patent was held to be enforceable.

Cause of Action for Inducement of Patent Infringement

18. Lavallee has actively and knowingly induced infringement of at least one of the claims of the Patents-in-Suit.

19. Lavallee by offering and soliciting the use of roll cutters or paper sizing machines has actively and knowingly induced infringement of at least one of the claims of the Patents-in-Suit.

20. Lavallee actively and knowingly assisted Martin Gubb, Sterling and/or L&P in the sale of a roll cutter or paper sizing machine to Quad Graphics.

21. Lavallee's inducement of infringement of the Patents-in-Suit was willful.

22. Lavallee's actions were and are without authority from P&M or its predecessors.

23. Lavallee has benefited from his inducement of infringement of the Patents-in-Suit.

24. P&M has suffered substantial monetary injury and loss as a result of Lavallee's inducement of infringements of the Patents-in-Suit.

WHEREFORE, P&M requests that the Court grant the following relief:

- A. That it be decreed that the Patents-in-Suit are valid and enforceable.
- B. That it be decreed that Lavallee has infringed the Patents-in-Suit.
- C. That it be decreed that Lavallee has induced infringement of the Patents-in-Suit.

D. That Lavallee be ordered to account for and pay damages adequate to compensate P&M for its damages caused by Lavallee's infringement of the Patents-in-Suit.

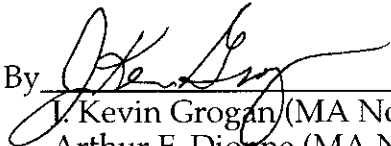
E. That Lavallee be ordered to account for and pay damages adequate to compensate P&M for its damages caused by Lavallee's inducement of infringement of the Patents-in-Suit.

F. That these damages be increased, pursuant to 35 U.S.C. §284, up to three times the actual damages found or assessed by the Court, and interest be paid by Lavallee from the date of his initial infringement (or inducement of infringement).

G. That P&M be awarded its attorneys' fees, pursuant to 35 U.S.C. §285, and assessment of interest, costs and expenses for this suit.

H. That P&M be granted such other and further relief as the Court may deem proper under the circumstances.

Dated: 8/27/04

By 

J. Kevin Grogan (MA No. BBO635089)
Arthur F. Dionne (MA No. BBO125760)
John A. Kramer (MA No. BBO643421)
McCormick, Paulding & Huber LLP
1350 Main Street, 5th Floor
Springfield, MA 01103-1628
Tel: (413) 736-5401
Fax: (413) 733-4543

Of Counsel:

Wm. Tucker Griffith
McCormick, Paulding & Huber LLP
185 Asylum Street
CityPlace II
Hartford, CT 06103-3402
Tel: (860) 549-5290
Fax (860) 527-0464

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS
CENTRAL DIVISION

P&M SERVICES, INC.,)	
)	
Plaintiff)	Civil Action No.
)	
v.)	
)	
ANDRE LAVALLEE,)	(Our Docket No. 5270-01)
)	
Defendant)	

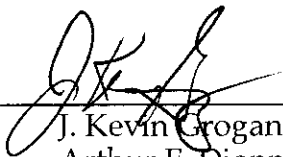
PLAINTIFF'S RULE 7.3 DISCLOSURE STATEMENT

Pursuant to Local Rule 7.3, Plaintiff P&M Services, Inc. hereby states that it has no parent corporation. P&M Services, Inc. further states that no publicly held corporation holds 10% or more of its stock.

Respectfully submitted,

P&M SERVICES, INC.
By Its Attorney

Dated: 8/27/04

By 
J. Kevin Grogan (MA No. BBO635089)
Arthur F. Dionne (MA No. BBO125760)
John A. Kramer (MA No. BBO643421)
McCormick, Paulding & Huber
1350 Main Street
5th Floor
Springfield, MA 01103-1628
Tel: (413) 736-5401
Fax: (413) 733-4543



US005964024A

United States Patent [19]
Wallace

[11] **Patent Number:** 5,964,024
[45] **Date of Patent:** Oct. 12, 1999

[54] **ROLL CUTTER**

[75] **Inventor:** Marcus T. Wallace, Smyrna, Tenn.

[73] **Assignee:** Norkol/Fibercore, Inc., Ill.

[21] **Appl. No.:** 08/896,504

[22] **Filed:** Jun. 25, 1997

[51] **Int. Cl.⁶** B23P 23/00; B26D 3/16

[52] **U.S. Cl.** 29/558; 82/47; 82/122;
83/56; 83/924

[58] **Field of Search** 29/27 R, 27 C;
82/101, 122, 47; 83/801, 466.1, 924, 516,
54, 56

[56] **References Cited**

U.S. PATENT DOCUMENTS

734,444	7/1903	Stenger	83/614
1,151,527	8/1915	Lewis	
1,350,840	8/1920	Robbins	82/122 X
1,485,383	3/1924	Fowl et al.	82/122
2,227,789	1/1941	MacFarren	144/96
2,738,841	3/1956	Jones	144/43
3,090,173	5/1963	Strickland et al.	82/122
3,174,369	3/1965	Denk et al.	82/101
3,522,748	8/1970	Treffner	32/101
3,661,043	5/1972	Voigt	82/101

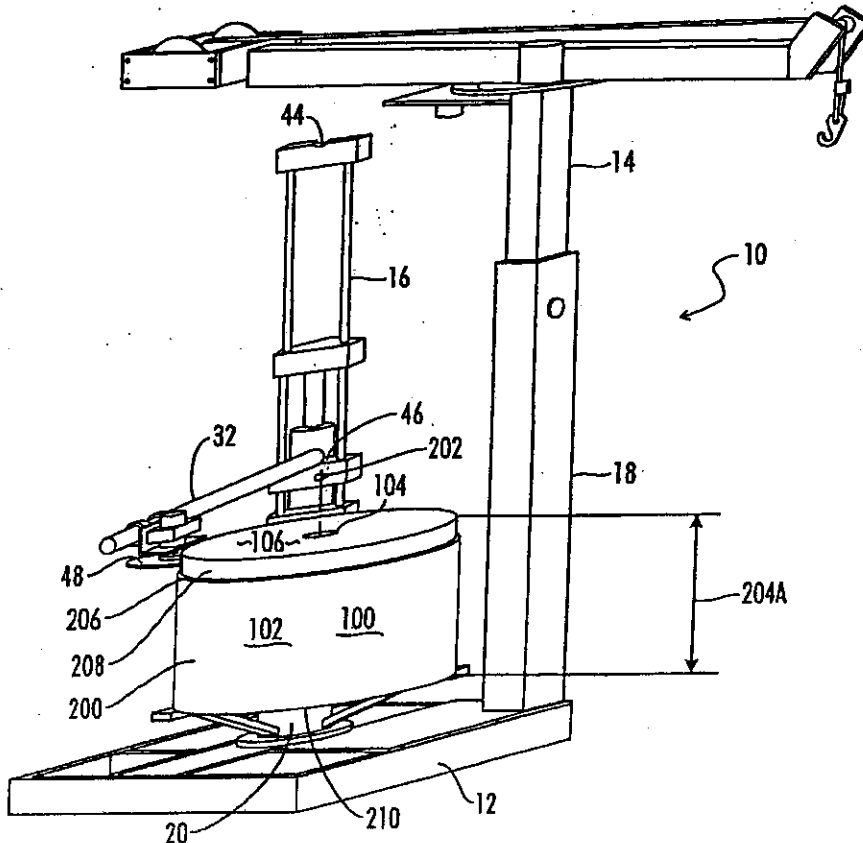
3,938,671	2/1976	Lewey et al.	214/1 R
3,995,747	12/1976	Lewey et al.	214/1 P
4,175,454	11/1979	Goldstein	82/101 X
4,217,799	8/1980	Faris	82/122 X
4,292,867	10/1981	Stoffels	82/47
4,534,151	8/1985	Schneck et al.	82/101 X
4,579,025	4/1986	Fasolak	83/801 X
5,016,429	5/1991	Kubsik	83/425.4
5,038,647	8/1991	Biagiotti	83/466.1 X
5,060,456	10/1991	Wehrli	82/101 X
5,542,623	8/1996	Garand et al.	242/559

Primary Examiner—William Briggs
Attorney, Agent, or Firm—Waddey & Patterson; Lucian Wayne Beavers

[57] **ABSTRACT**

The present invention discloses a roll cutter. The roll cutter has a housing. To the housing, there is attached a base, a cutter assembly, and an optional hoist assembly. The hoist assembly is a telescoping tower that allows the user to engage a roll using a hoist. The hoist can then pick up the roll and move it onto the stand. Once on the stand, the cutting assembly having a cutting tower, a cutting arm, and a saw can be placed at the desired level of cut. A saw can then be used to cut away the roll until it is the desired width. A sanding blade can be used to sand the edge of the roll.

9 Claims, 5 Drawing Sheets



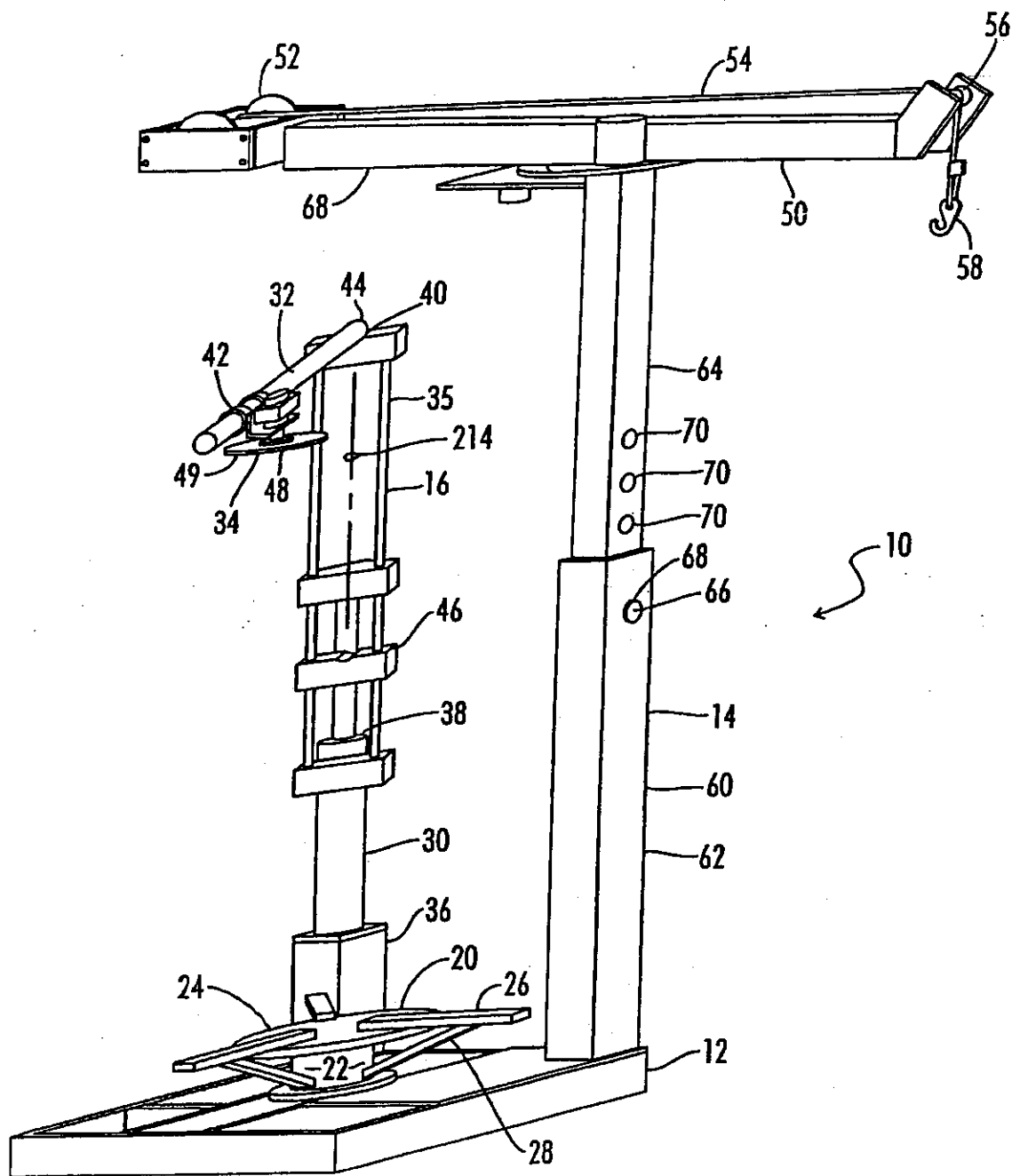


FIG. 1

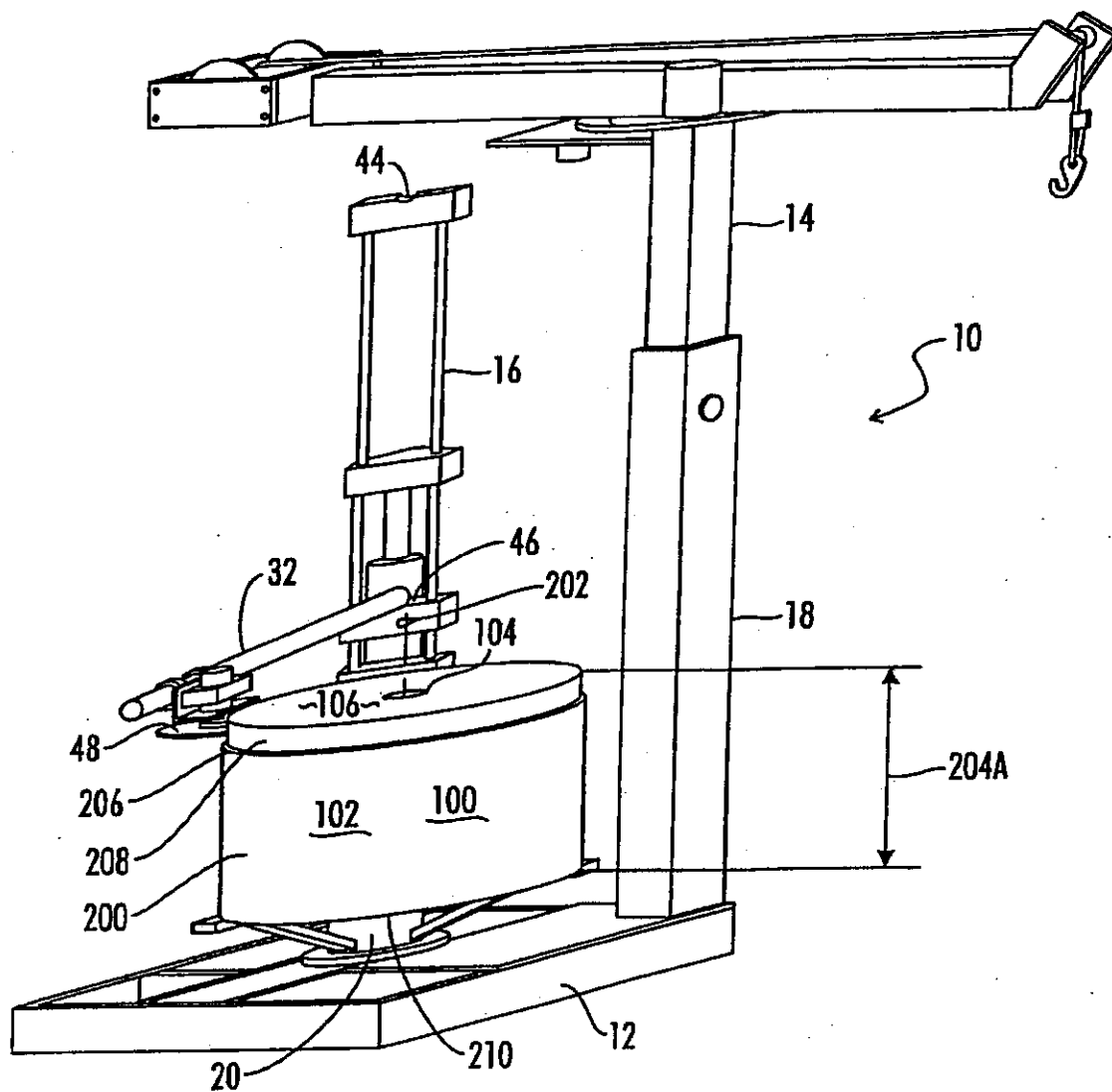


FIG. 2

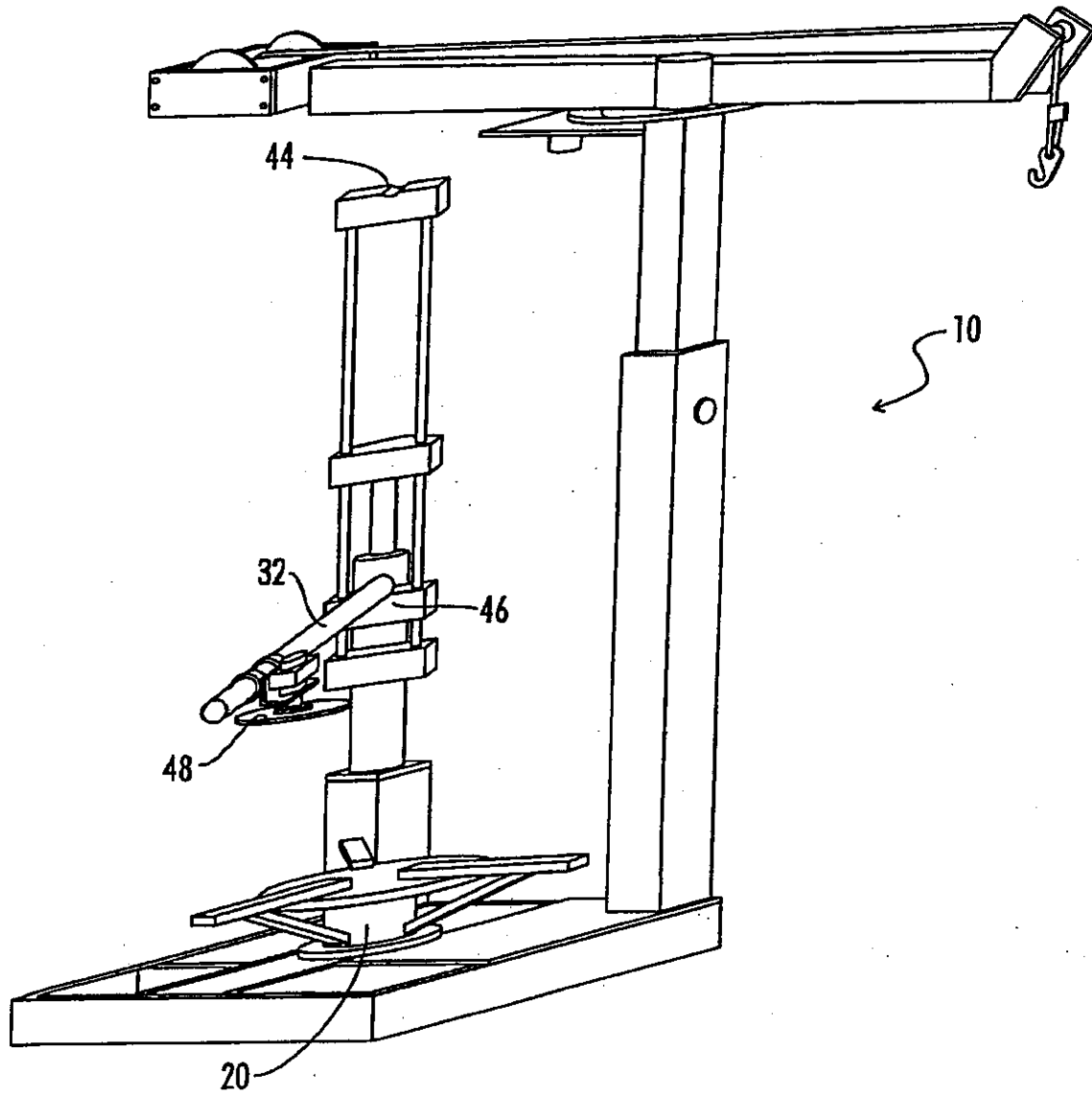


FIG. 3

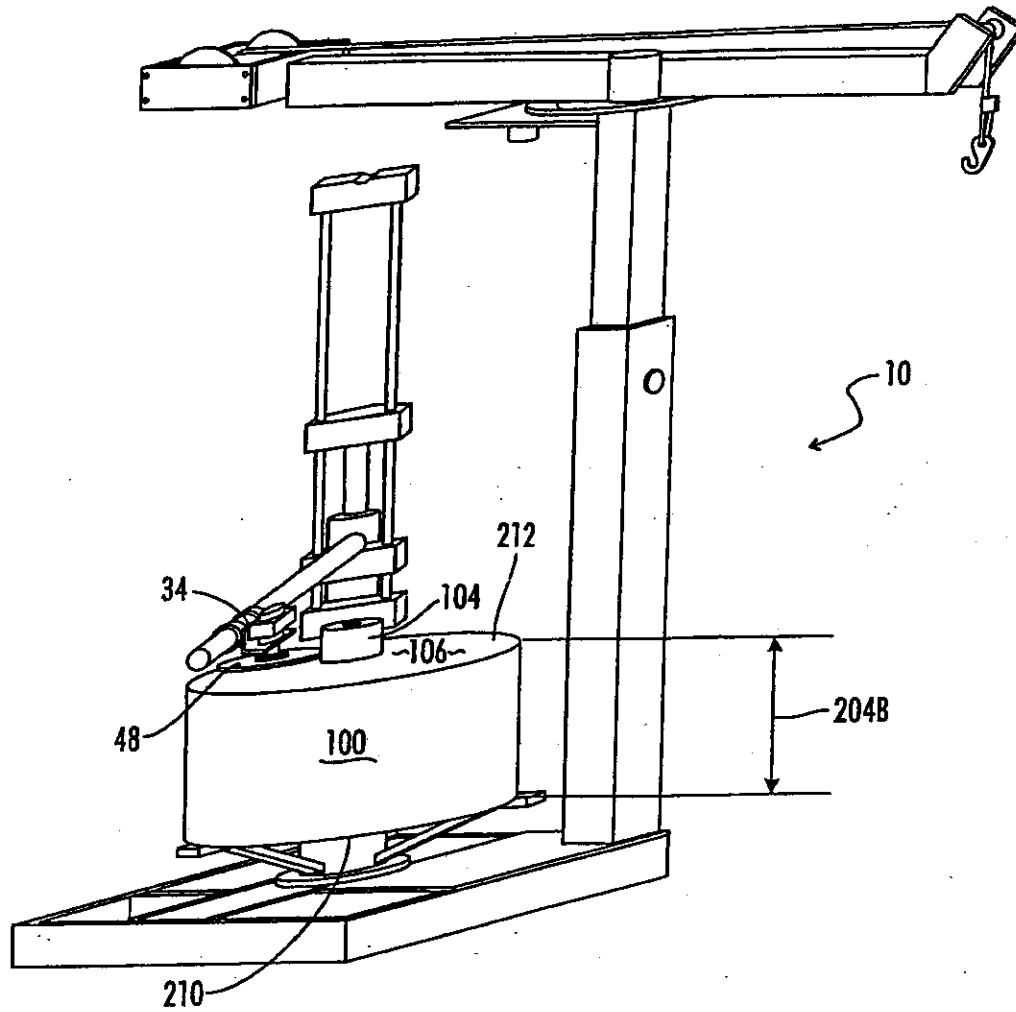


FIG. 4

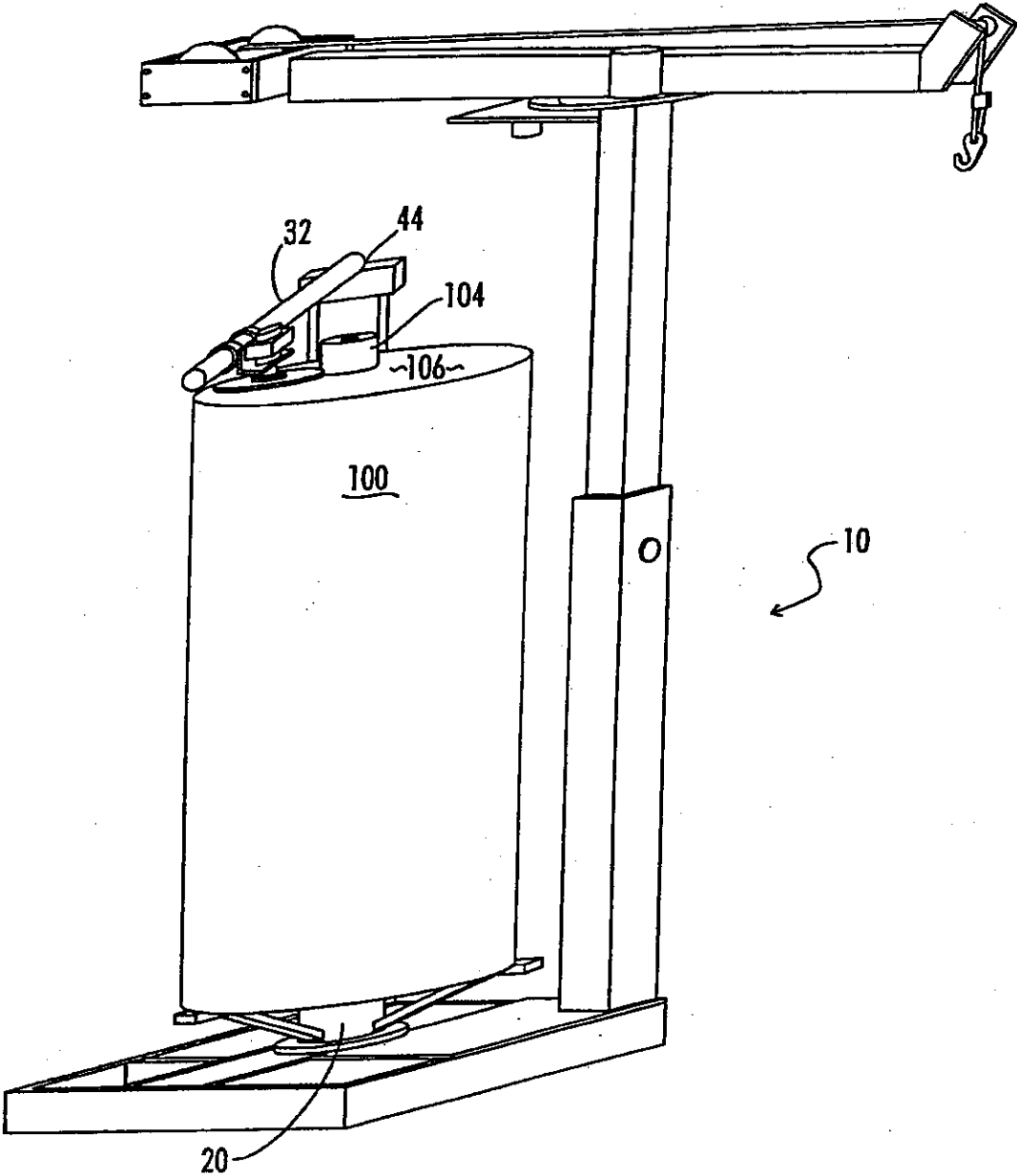


FIG. 5

1

ROLL CUTTER

BACKGROUND OF THE INVENTION

The present invention relates generally to a paper roll machine and more particularly to a device for cutting a paper roll.

It will be appreciated by those skilled in the art that paper rolls tend to be very large, heavy, and bulky. These rolls, such as paper rolls, are not very easy to maneuver and to handle. It will further be appreciated by those skilled in the art that often times, these paper rolls may obtain damage at the end. Other times, rolls, such as paper rolls, may be too wide to be fed into a press to create the desired size and product. For example, the user may wish to have a 32" wide sheet when the only roll available is 36". As a result, at the end of many runs, paper is wasted that can not otherwise be used.

Presently, the only known method of cutting paper is to lug the paper roll onto a band saw and let the band saw slowly work its way through the paper. Unfortunately, this causes the roll to be placed on its side for a long period of time thereby possibly warping the roll out of circle.

What is needed, then, is a system for cutting rolls of materials such as paper. This needed device must be capable of cutting rolls very efficiently and easily. This device must be capable of easily handling the bulky and heavy paper roll. This device must be capable of converting wide rolls into narrower rolls. This needed device must also be capable of sanding the edge of a roll. This device is presently lacking in the prior art.

SUMMARY OF THE INVENTION

The present invention discloses a roll cutter. The roll cutter has a housing. To the housing, there is attached a base, a cutter assembly, and, possibly, a hoist assembly. The optional hoist assembly is a telescoping tower that allows the user to engage a roll using a hoist. The hoist can then pick up the roll and move it onto the stand. Otherwise, the roll may be put in place using external moving devices such as fork lifts. Once on the stand, the cutting assembly having a cutting tower, a cutting arm, and a saw can be placed at the desired level of cut. A saw can then be used to cut away the roll until it is the desired width. The saw blade can have a sanding face, or a sanding wheel can replace the saw blade to sand the surface of the roll.

What is needed, then, is a system for cutting a roll such as paper.

Another object of the present invention is to provide a cutter that has a stand which can easily receive the roll.

Another object of the present invention is to provide a system for moving the roll and handling the roll.

Another object of the present invention is to provide a device which can be adjusted to cut the roll to the desired width.

Another object of the present invention is to provide a system which is economical, easy to use, and easy to manufacture.

Another object of the present invention is to provide a system for sanding the edge of a roll.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the roll cutter of the present invention.

FIG. 2 is a perspective view showing the roll cutter cutting a roll from the lower saw mount.

2

FIG. 3 is a perspective view of the roll cutter of the present invention showing the saw arm mounted to the lower mount.

FIG. 4 is a perspective view showing the saw being mounted to the lower mount and cutting the core of the roll.

FIG. 5 is a perspective view of the roll cutter of the present invention showing the cutter arm attached to the upper saw mount and cutting the core of a roll.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIG. 1, there is shown generally at 10 the roll cutter of the present invention. Roller cutter 10 has housing 12 which is preferably mounted to or placed on ground (not shown). Roll (100 in later Figures) is received by stand 20 which is attached to housing 12. Stand 20 has pier 22 which attaches to housing 12. On top of pier 22, there is placed base 24. Preferably extending from base 24 there are arms 26 which are supported by joist 28. In the preferred embodiment, pier 22 can rotate with respect to housing 12. Preferably, stand 20 lies proximate middle section of housing 12.

Still referring to FIG. 1, in order to move roll (100 in later drawings), there is provided optional hoist assembly 14. Hoist assembly 14 has hoist tower 60 preferably attached to housing 12. Hoist tower 60 preferably consists of lower section 62 and upper section 64 which preferably telescopes with respect to one another. Preferably, upper section 64 is raised with respect to lower section 62 and held in place by pin 60 placed in hole 68 in lower section 62 and orifice 70 in upper section 64. Multiple orifices 70 are provided for adjustment purposes. Proximal upper end of upper section 64 there is placed hoist 50 which has winch 52 which controls cable 54. Cable 54 then runs over pulley 56 and raises and lowers hook 58. Cable 54 can be placed around roll (100 in later drawings) or can be placed through core (104 in later drawings). If no hoist assembly 14 is provided, a fork lift or other external mechanism is used to place roll 100.

Still referring to FIG. 1, there is shown generally at 16 the cutting assembly of the present invention. Cutting assembly 16 has lower portion 36 which preferably attaches to housing 12. Preferably, cutter tower 30 raises upper portion 35 with respect to lower portion 36. This movement is performed by cutter tower piston 38. Upper portion 35 preferably has upper saw mount 44 and lower saw mount 46. Cutter arm 32 is releasibly attached at either upper saw mount 44 or lower saw mount 46 using standard means of attachment such as screws, brackets, and the like. Cutter arm 32 uses slide bracket 42 to attach saw 34 to cutter arm 32. Bracket 42 can either be a fixed bracket or it can be a slide bracket. Blade 48 is a standard saw blade. However, in the preferred embodiment, blade 48 is also provided with sanding edge. If conventional saw blade is used for blade 48, a sanding blade can replace the cutting blade for sanding edge 106.

Referring now to FIG. 2, there is shown generally at 10 the roll cutter of the present invention. In this embodiment, cutter arm 32 is attached to lower saw mount 46 as opposed to upper saw mount 44. This allows device 10 to cut a narrower roll. In this particular embodiment, device 10 is cutting material or paper 102 from roll 100.

Referring now to FIG. 3, there is shown generally at 10 the device of the present invention. This figure shows more clearly cutter arm 32 attached to lower saw mount 46 as opposed to upper saw mount 44.

Referring now to FIG. 4, there is shown generally at 10 the device of the present invention. In this particular embodiment, saw 34 is cutting core 104 of roll 100.

Referring now to FIG. 5, there is shown generally at 10 still another view of the device of the present invention. In this particular view, cutter arm 32 is attached to upper saw mount 44 and is cutting core 104 of roll 100.

In the preferred embodiment, cutter tower piston 38 is either a hydraulic or pneumatic piston. In the preferred embodiment, saw 34 is a hydraulic or pneumatic rotary saw. In the preferred embodiment, winch 52 is a pneumatic or hydraulic winch such as of the type manufactured by Braiden. In the preferred embodiment, hoist bracket 68 pivots about upper section 64.

METHODS OF OPERATION

The methods of utilizing the apparatus 10 to cut the paper roll 100 may be described as follows.

The paper roll 100 may be described as a cylindrical paper roll having a cylindrical outer surface 200 and having a longitudinal central axis 202 along which an initial width 204A of the paper roll is defined. The methods of the present invention may be described as methods of cutting the paper roll 100 to a narrower width.

The method begins with the step of placing the roll 100 on the rotatable stand 20. The rotatable stand 20 may also be referred to as a turntable 20. The longitudinal central axis 202 of roll 100 extends vertically as seen in FIGS. 2, 4 and 5, when the roll 100 is placed upon the rotatable stand 20.

Then, as seen in FIG. 2, the saw blade 48 is engaged with the outer cylindrical surface 200 of the roll 100. It is noted that the saw blade 48 is oriented horizontally in FIG. 2 and is there shown making a horizontal cut into the roll 100. In FIG. 1, the saw blade 48 has cut partially into the roll 100 thus creating a step 206 in the roll. As is apparent in FIG. 2, the roll 100 has been rotated upon rotatable stand 20 while cutting with the saw blade 48 thus cutting the step 206 around the entire periphery of the roll 100. As is seen in comparing FIGS. 2 and 4, the saw blade 48 continues to cut as the roll 100 rotates thus cutting the entire upper end portion 208 off of the roll 100 thus resulting in a roll as shown in FIG. 4 having a narrower width 204B than did the original roll in FIG. 2.

As described above, the rotary saw blade 48 is mounted upon the cutter arm 32 which extends laterally from the vertical cutter tower 30. The cutter arm 32 pivots relative to the vertical longitudinal axis 214 of tower 30, between the positions shown in FIG. 2 and 4, as the saw blade 48 moves inwardly toward the central longitudinal axis 202 of the paper roll 100 to cut the upper end portion 208 off of the roll 100.

As shown in FIG. 4, and as described above, the saw blade 48 continues its inward motion to cut the core 104 of the paper roll 100.

The method can generally be described as standing the roll 100 on its lower end 210 with its longitudinal axis 202 extending vertically, thereby avoiding warping of the cylindrical shape of the roll, and then cutting off the upper end portion 208 of the roll 100.

While the roll remains standing on its lower end, a newly cut upper end surface 212 (see FIG. 4) is sanded. As previously discussed, this is accomplished by replacing the standard cutting blade 48 with a sander.

Thus, although there have been described particular embodiments of the present invention of a new and useful roll cutter, it is not intended that such references be construed as limitations upon the scope of this invention except as set forth in the following claims. Further, although there

have been described certain dimensions used in the preferred embodiment, it is not intended that such dimensions be construed as limitations upon the scope of this invention except as set forth in the following claims.

What I claim is:

1. A method of cutting a cylindrical paper roll to a narrower width, the cylindrical paper roll having an outer cylindrical surface and having a longitudinal central axis along which the width of the paper roll is defined; said method comprising the steps of:

(a) providing a rotatable stand with a horizontal support surface comprising the primary support for the roll and placing the roll on said rotatable stand with the longitudinal central axis of the roll extending vertically thereby avoiding warping of the cylindrical shape of the roll;

(b) engaging the outer cylindrical surface of the roll with a horizontally oriented rotary saw blade to make a horizontal cut into the roll; and

(c) rotating the stand and thereby rotating the roll while sawing the roll with the saw blade thereby cutting an upper end portion off of the roll resulting in a paper roll of narrower width.

2. The method of claim 1, wherein:

in step (b), the horizontally oriented rotary saw blade is mounted upon a cutter arm which extends laterally from a vertical cutter tower; and

during step (c), pivoting the cutter arm and the attached saw blade about the cutter tower so that the saw blade moves inwardly toward the longitudinal central axis of the paper roll as the upper end portion is cut off the roll.

3. The method of claim 2, further comprising: during step (c), cutting a core of the paper roll.

4. A method of cutting an end off of a cylindrical paper roll to provide a roll of narrower width, comprising:

(a) providing a rotatable stand with a horizontal support surface and standing the roll on its lower end upon the horizontal support surface with its longitudinal axis extending vertically, so that the horizontal support surface comprises the primary support for the roll thereby avoiding warping of the cylindrical shape of the roll; and

(b) cutting off the upper end of the roll.

5. The method of claim 4, further comprising:

after step (b) and while the roll remains standing on its lower end, sanding the newly cut upper end of the roll.

6. The method of claim 4, wherein:

step (b) includes cutting off an upper end portion of a core of the roll.

7. The method of claim 4, wherein step (b) further comprises:

engaging an outer cylindrical surface of the roll with a saw blade; and

advancing the saw blade radially inward from the outer cylindrical surface of the roll toward a core of the roll, while rotating the roll.

8. The method of claim 7 wherein:

the saw blade is a horizontally oriented rotary disc saw blade.

9. The method of claim 7, wherein:

the saw blade is mounted upon a pivotal arm; and

the advancing step includes pivoting the pivotal arm toward the core of the roll.



US006282766B1

(12) **United States Patent**
Wallace

(10) Patent No.: **US 6,282,766 B1**
(45) Date of Patent: ***Sep. 4, 2001**

(54) **ROLL CUTTER**

(75) Inventor: **Marcus T. Wallace, Smyrna, TN (US)**

(73) Assignee: **Fibercore Equipment Co.,
Murfreesboro, TN (US)**

(*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/306,138**

(22) Filed: **May 6, 1999**

Related U.S. Application Data

(62) Division of application No. 08/896,504, filed on Jun. 25, 1997, now Pat. No. 5,964,024.

(51) Int. Cl.⁷ **B23P 23/02; B23B 5/14;
B26D 5/34**

(52) U.S. Cl. **29/27 C; 29/38 A; 82/122;
83/411.1; 83/924; 409/166**

(58) Field of Search **29/27 R, 27 C,
29/33 R, 38 A; 409/165, 166; 82/101, 122,
47, 99.2; 83/801, 466.1, 924, 796, 54, 56,
614, 425.4, 733, 411.1, 411.3, 411.7**

(56) **References Cited**

U.S. PATENT DOCUMENTS

Re. 10,437 *	1/1884	Hubel	82/99.1
734,444	7/1903	Stenger	83/614
1,151,527	8/1915	Lewis	
1,350,840 *	8/1920	Robbins	82/122 X
1,485,383	3/1924	Fowl et al.	82/122
2,227,789	1/1941	MacFarren	144/96
2,738,841	3/1956	Jones	144/43
3,522,748	8/1970	Treffner	32/101

3,738,205 *	6/1973	Harris et al.	82/122 X
3,938,671	2/1976	Lewey et al.	214/1 R
3,995,747	12/1976	Lewey et al.	214/1 P
4,063,482 *	12/1977	Pizley et al.	83/207
4,209,005 *	6/1980	Tremeau	83/411.1
4,209,910 *	7/1980	Rathsack et al.	409/220
4,783,982 *	11/1988	Hahn et al.	83/180 X
4,962,748	10/1990	Schweickhardt	125/113.01
5,347,903 *	9/1994	Stolzer	83/796
5,410,929 *	5/1995	Wallace	83/160
5,542,623	8/1996	Garand et al.	242/559

FOREIGN PATENT DOCUMENTS

3009609 *	9/1981	(DE)	82/122
2037212 *	7/1980	(GB)	82/122
610178 *	10/1960	(IT)	82/122
139107 *	5/1990	(JP)	82/122
404315501 *	11/1992	(JP)	82/122

OTHER PUBLICATIONS

German Patent No. DE 44 39 605 to Enzinger.

Japanese Patent Abstract No. 08155948.

* cited by examiner

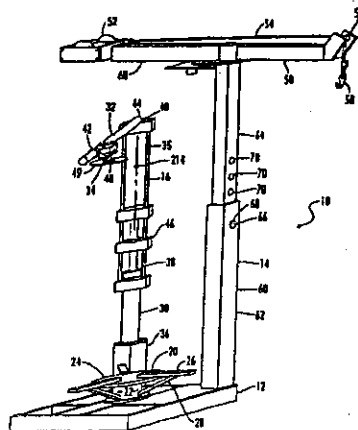
Primary Examiner—William Briggs

(74) Attorney, Agent, or Firm—Waddey & Patterson;
Lucian Wayne Beavers

(57) **ABSTRACT**

The present invention discloses a roll cutter. The roll cutter has a housing. To the housing, there is attached a base, a cutter assembly, and an optional hoist assembly. The hoist assembly is a telescoping tower that allows the user to engage a roll using a hoist. The hoist can then pick up the roll and move it onto the stand. Once on the stand, the cutting assembly having a cutting tower, a cutting arm, and a saw can be placed at the desired level of cut. A saw can then be used to cut away the roll until it is the desired width. A sanding blade can be used to sand the edge of the roll.

16 Claims, 5 Drawing Sheets



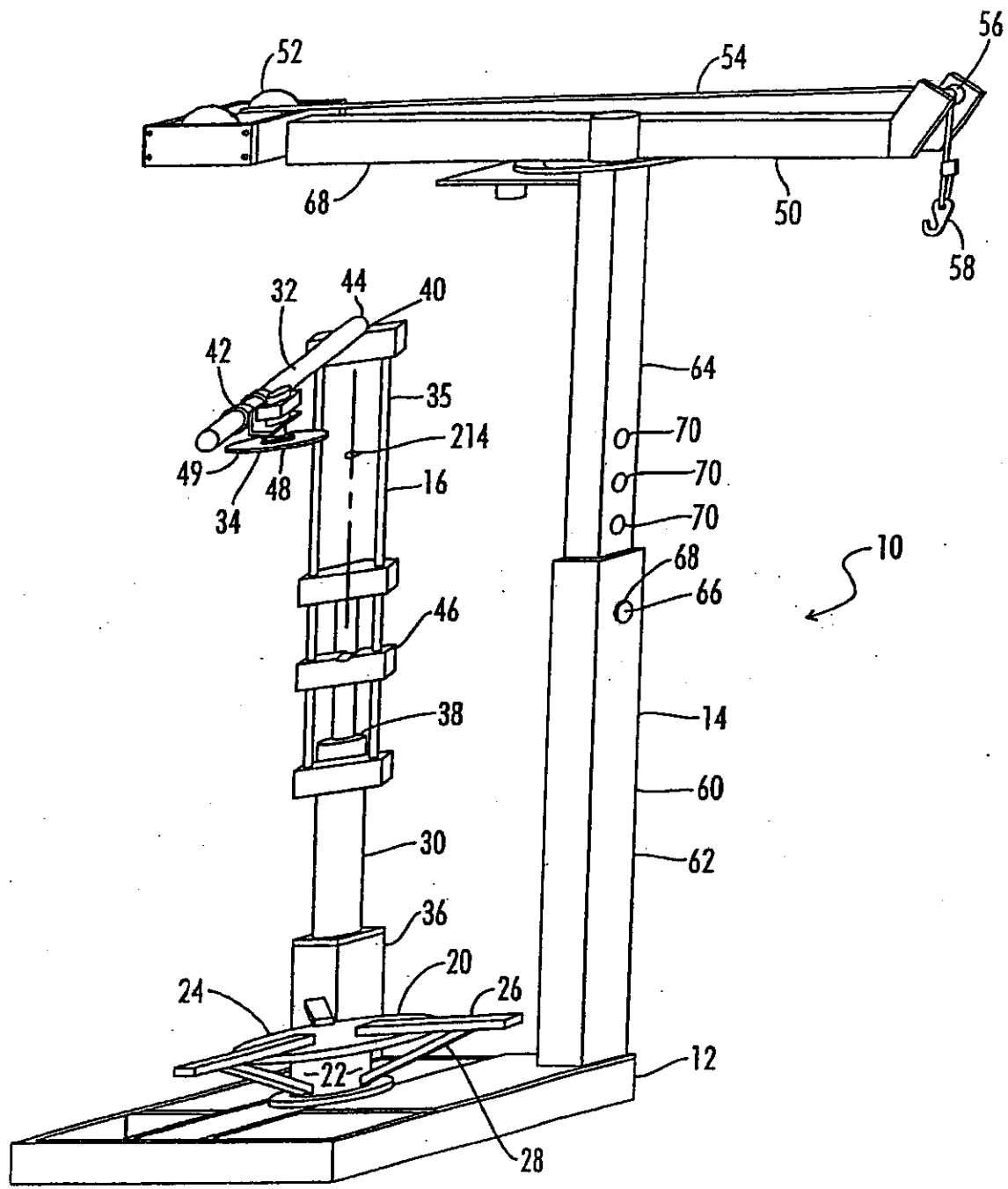


FIG. 1

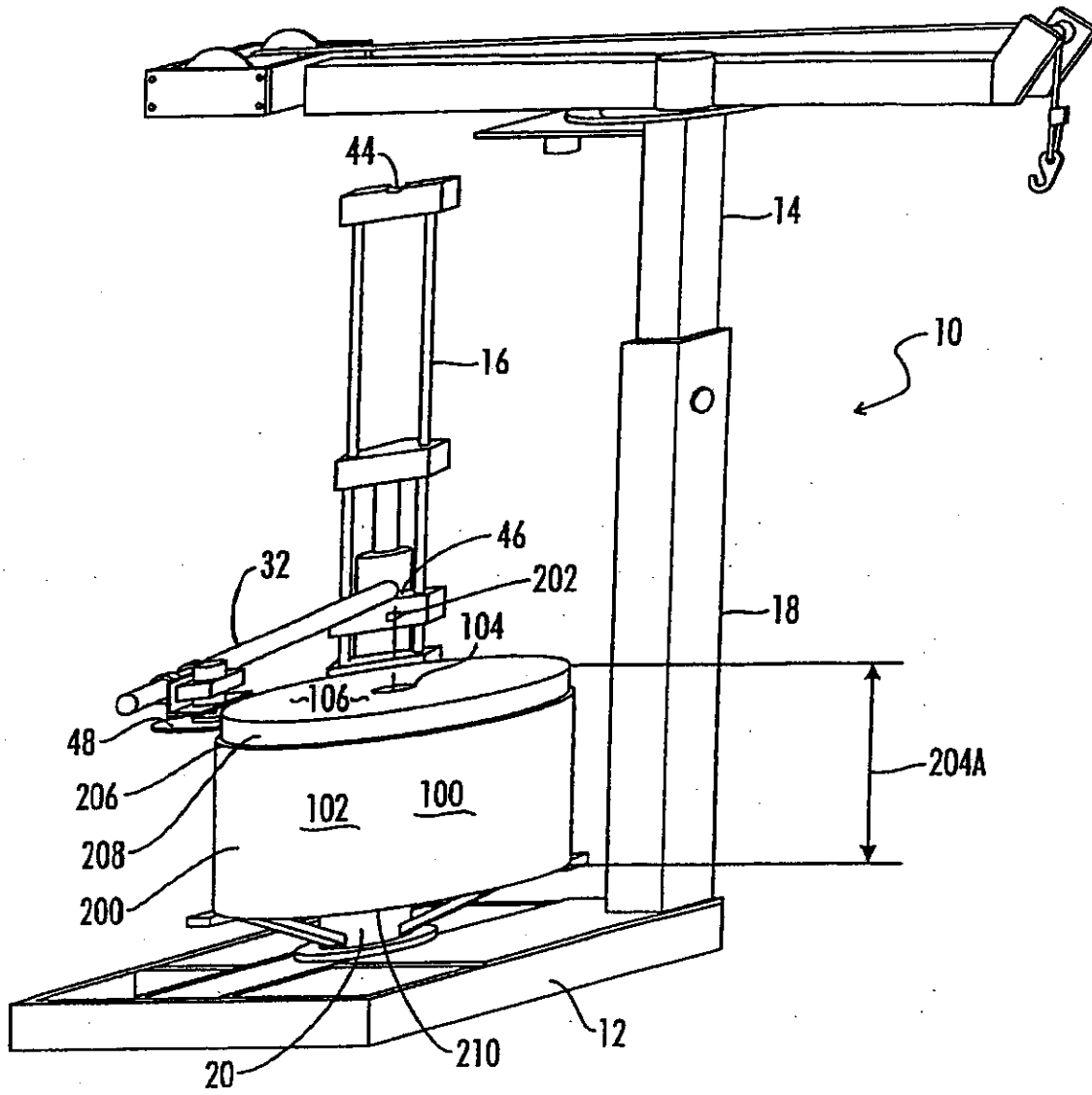


FIG. 2

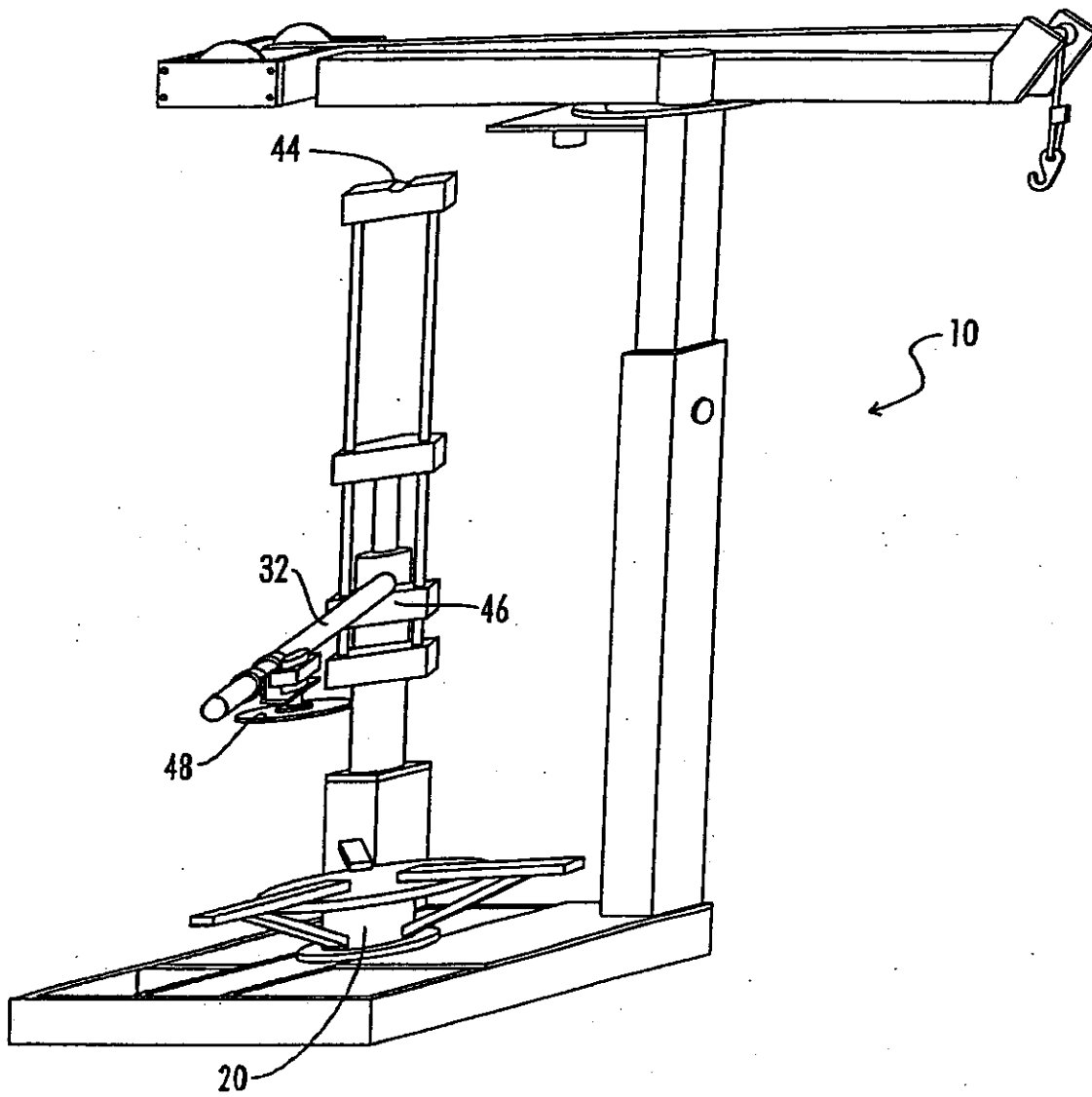


FIG. 3

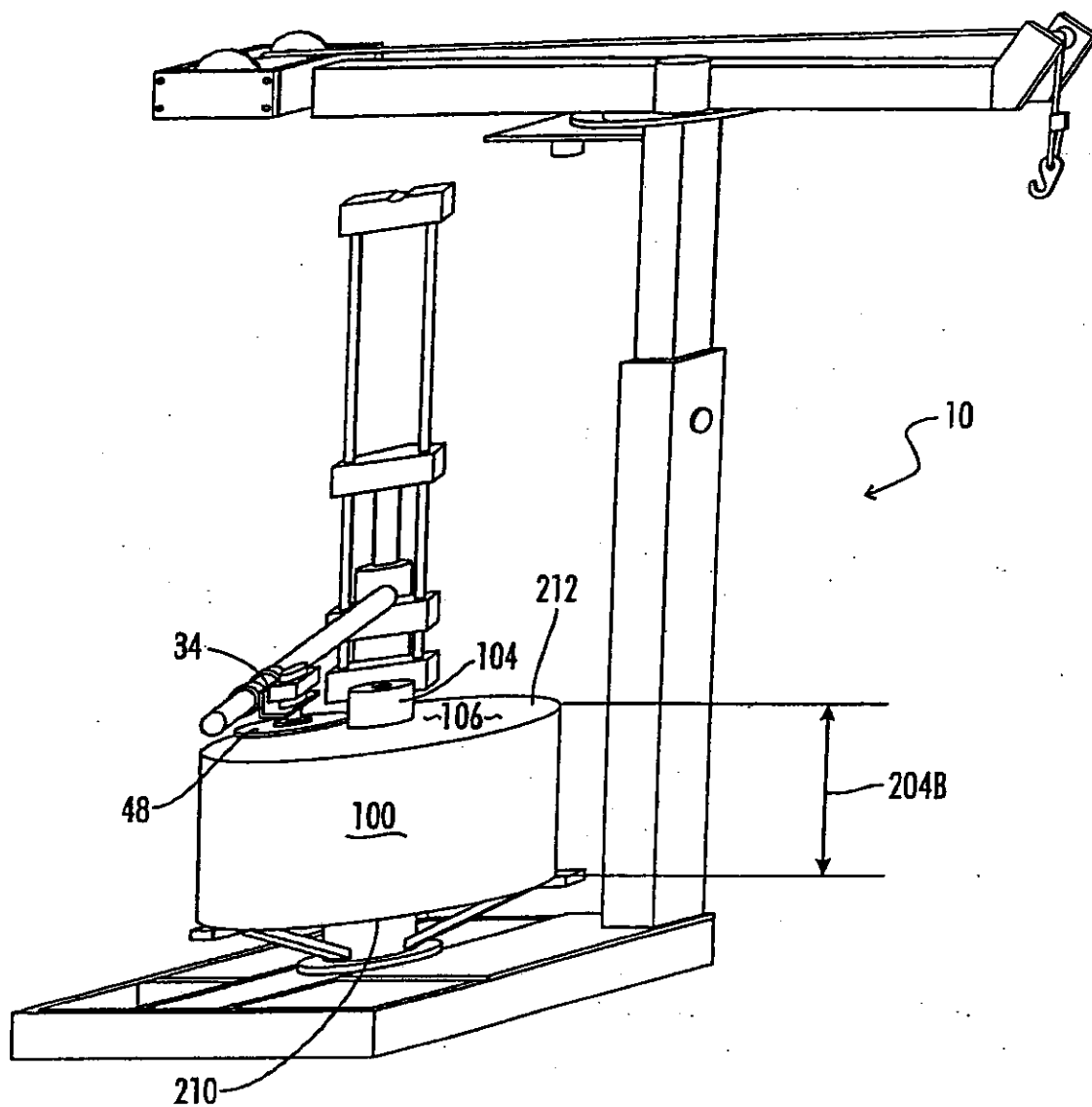


FIG. 4

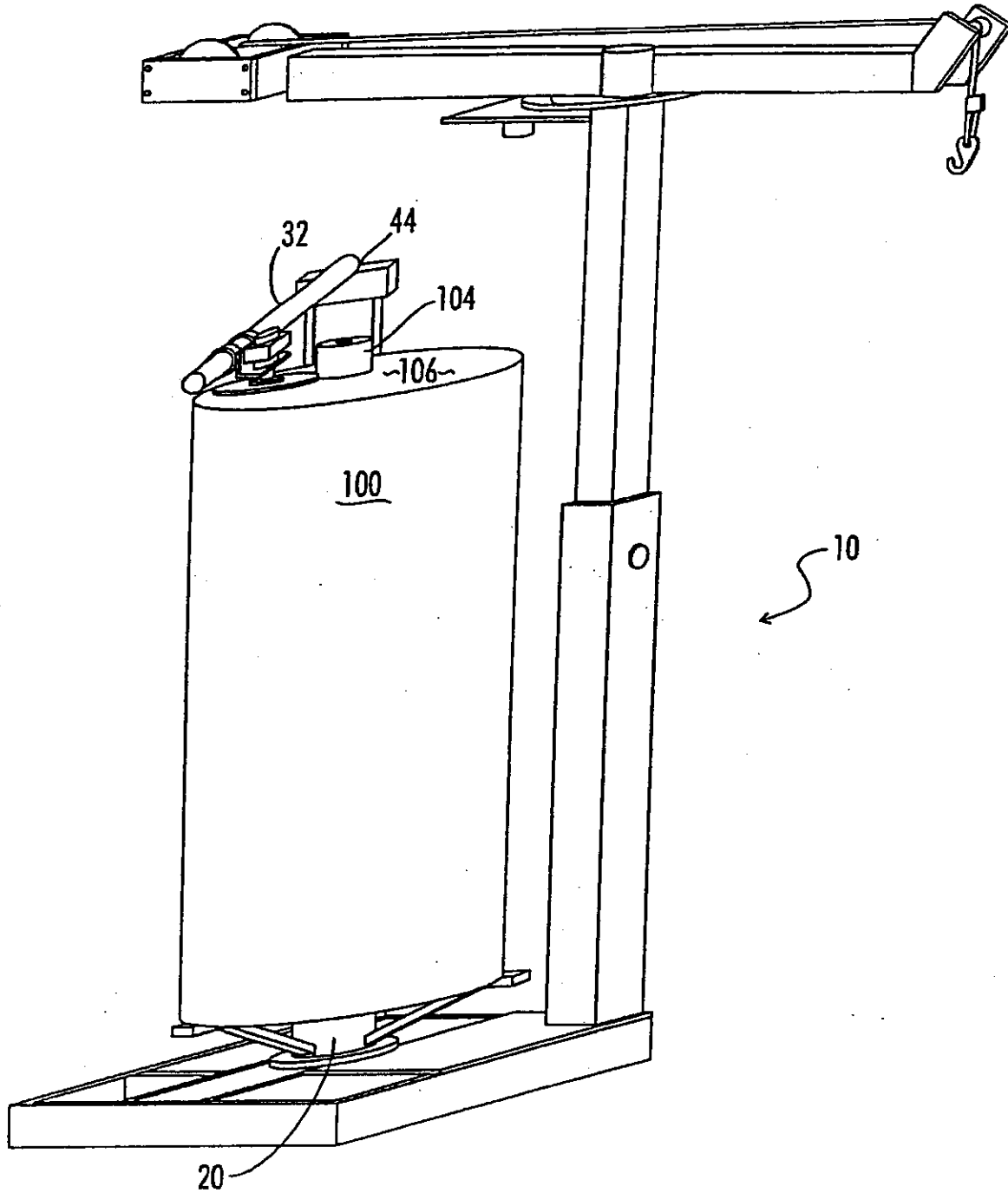


FIG. 5

1
ROLL CUTTER

This is a division of my prior U.S. patent Application Ser. No. 08/896,504 titled ROLL CUTTER filed Jun. 25, 1997, now U.S. Pat. No. 5,964,024.

Be it known that I, Marcus T. Wallace, a citizen of the United States, residing at 530 Carter Lane, Smyrna, Tenn., have invented a new and useful "Roll Cutter."

BACKGROUND OF THE INVENTION

The present invention relates generally to a paper roll machine and more particularly to a device for cutting a paper roll.

It will be appreciated by those skilled in the art that paper rolls tend to be very large, heavy, and bulky. These rolls, such as paper rolls, are not very easy to maneuver and to handle. It will further be appreciated by those skilled in the art that often times, these paper rolls may obtain damage at the end. Other times, rolls, such as paper rolls, may be too wide to be fed into a press to create the desired size and product. For example, the user may wish to have a 32", wide sheet when the only roll available is 36". As a result, at the end of many runs, paper is wasted that can not otherwise be used.

Presently, the only known method of cutting paper is to lug the paper roll onto a band saw and let the band saw slowly work its way through the paper. Unfortunately, this causes the roll to be placed on its side for a long period of time thereby possibly warping the roll out of circle.

What is needed, then, is a system for cutting rolls of materials such as paper. This needed device must be capable of cutting rolls very efficiently and easily. This device must be capable of easily handling the bulky and heavy paper roll. This device must be capable of converting wide rolls into narrower rolls. This needed device must also be capable of sanding the edge of a roll. This device is presently lacking in the prior art.

SUMMARY OF THE INVENTION

The present invention discloses a roll cutter. The roll cutter has a housing. To the housing, there is attached a base, a cutter assembly, and, possibly, a hoist assembly. The optional hoist assembly is a telescoping tower that allows the user to engage a roll using a hoist. The hoist can then pick up the roll and move it onto the stand. Otherwise, the roll may be put in place using external moving devices such as fork lifts. Once on the stand, the cutting assembly having a cutting tower, a cutting arm, and a saw can be placed at the desired level of cut. A saw can then be used to cut away the roll until it is the desired width. The saw blade can have a sanding face, or a sanding wheel can replace the saw blade to sand the surface of the roll.

What is needed, then, is a system for cutting a roll such as paper.

Another object of the present invention is to provide a cutter that has a stand which can easily receive the roll.

Another object of the present invention is to provide a system for moving the roll and handling the roll.

Another object of the present invention is to provide a device which can be adjusted to cut the roll to the desired width.

Another object of the present invention is to provide a system which is economical, easy to use, and easy to manufacture.

Another object of the present invention is to provide a system for sanding the edge of a roll.

2
BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the roll cutter of the present invention.

FIG. 2 is a perspective view showing the roll cutter cutting a roll from the lower saw mount.

FIG. 3 is a perspective view of the roll cutter of the present invention showing the saw arm mounted to the lower mount.

FIG. 4 is a perspective view showing the saw being mounted to the lower mount and cutting the core of the roll.

FIG. 5 is a perspective view of the roll cutter of the present invention showing the cutter arm attached to the upper saw mount and cutting the core of a roll.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIG. 1, there is shown generally at 10 the roll cutter of the present invention. Roller cutter 10 has housing 12 which is preferably mounted to or placed on ground (not shown). Roll (100 in later Figures) is received by stand 20 which is attached to housing 12. Stand 20 has pier 22 which attaches to housing 12. On top of pier 22, there is placed base 24. Preferably extending from base 24 there are arms 26 which are supported by joist 28. In the preferred embodiment, pier 22 can rotate with respect to housing 12. Preferably, stand 20 lies proximate middle section of housing 12.

Still referring to FIG. 1, in order to move roll (100 in later drawings), there is provided optional hoist assembly 14. Hoist assembly 14 has hoist tower 60 preferably attached to housing 12. Hoist tower 60 preferably consists of lower section 62 and upper section 64 which preferably telescopes with respect to one another. Preferably, upper section 64 is raised with respect to lower section 62 and held in place by pin 60 placed in hole 68 in lower section 62 and orifice 70 in upper section 64. Multiple orifices 70 are provided for adjustment purposes. Proximal upper end of upper section 64 there is placed hoist 50 which has winch 52 which controls cable 54. Cable 54 then runs over pulley 56 and raises and lowers hook 58. Cable 54 can be placed around roll (100 in later drawings) or can be placed through core (104 in later drawings). If no hoist assembly 14 is provided, a fork lift or other external mechanism is used to place roll 100.

Still referring to FIG. 1, there is shown generally at 16 the cutting assembly of the present invention. Cutting assembly 16 has lower portion 36 which preferably attaches to housing 12. Preferably, cutter tower 30 raises upper portion 35 with respect to lower portion 36. This movement is performed by cutter tower piston 38. Upper portion 35 preferably has upper saw mount 44 and lower saw mount 46. Cutter arm 32 is releasably attached at either upper saw mount 44 or lower saw mount 46 using standard means of attachment such as screws, brackets, and the like. Cutter arm 32 uses slide bracket 42 to attach saw 34 to cutter arm 32. Bracket 42 can either be a fixed bracket or it can be a slide bracket. Blade 48 is a standard saw blade. However, in the preferred embodiment, blade 48 is also provided with sanding edge. If conventional saw blade is used for blade 48, a sanding blade can replace the cutting blade for sanding edge 106.

Referring now to FIG. 2, there is shown generally at 10 the roll cutter of the present invention. In this embodiment, cutter arm 32 is attached to lower saw mount 46 as opposed to upper saw mount 44. This allows device 10 to cut a

3

narrower roll. In this particular embodiment, device 10 is cutting material or paper 102 from roll 100.

Referring now to FIG. 3, there is shown generally at 10 the device of the present invention. This figure shows more clearly cutter arm 32 attached to lower saw mount 46 as opposed to upper saw mount 44.

Referring now to FIG. 4, there is shown generally at 10 the device of the present invention. In this particular embodiment, saw 34 is cutting core 104 of roll 100.

Referring now to FIG. 5, there is shown generally at 10 still another view of the device of the present invention. In this particular view, cutter arm 32 is attached to upper saw mount 44 and is cutting core 104 of roll 100.

In the preferred embodiment, cutter tower piston 38 is either a hydraulic or pneumatic piston. In the preferred embodiment, saw 34 is a hydraulic or pneumatic rotary saw. In the preferred embodiment, winch 52 is a pneumatic or hydraulic winch such as of the type manufactured by Braidea. In the preferred embodiment, hoist bracket 68 pivots about upper section 64.

METHODS OF OPERATION

The methods of utilizing the apparatus 10 to cut the paper roll 100 may be described as follows.

The paper roll 100 may be described as a cylindrical paper roll having a cylindrical outer surface 200 and having a longitudinal central axis 202 along which an initial width 204A of the paper roll is defined. The methods of the present invention may be described as methods of cutting the paper roll 100 to a narrower width.

The method begins with the step of placing the roll 100 on the rotatable stand 20. The rotatable stand 20 may also be referred to as a turntable 20. The longitudinal central axis 202 of roll 100 extends vertically as seen in FIGS. 2, 4 and 5, when the roll 100 is placed upon the rotatable stand 20.

Then, as seen in FIG. 2, the saw blade 48 is engaged with the outer cylindrical surface 200 of the roll 100. It is noted that the saw blade 48 is oriented horizontally in FIG. 2 and is there shown making a horizontal cut into the roll 100. In FIG. 1, the saw blade 48 has cut partially into the roll 100 thus creating a step 206 in the roll. As is apparent in FIG. 2, the roll 100 has been rotated upon rotatable stand 20 while cutting with the saw blade 48 thus cutting the step 206 around the entire periphery of the roll 100. As is seen in comparing FIGS. 2 and 4, the saw blade 48 continues to cut as the roll 100 rotates thus cutting the entire upper end portion 208 off of the roll 100 thus resulting in a roll as shown in FIG. 4 having a narrower width 204B than did the original roll in FIG. 2.

As described above, the rotary saw blade 48 is mounted upon the cutter arm 32 which extends laterally from the vertical cutter tower 30. The cutter arm 32 pivots relative to the vertical longitudinal axis 214 of tower 30, between the positions shown in FIG. 2 and 4, as the saw blade 48 moves inwardly toward the central longitudinal axis 202 of the paper roll 100 to cut the upper end portion 208 off of the roll 100.

As shown in FIG. 4, and as described above, the saw blade 48 continues its inward motion to cut the core 104 of the paper roll 100.

The method can generally be described as standing the roll 100 on its lower end 210 with its longitudinal axis 202 extending vertically, thereby avoiding warping of the cylindrical shape of the roll, and then cutting off the upper end portion 208 of the roll 100.

4

While the roll remains standing on its lower end, a newly cut upper end surface 212 (see FIG. 4) is sanded. As previously discussed, this is accomplished by replacing the standard cutting blade 48 with a sander.

Thus, although there have been described particular embodiments of the present invention of a new and useful roll cutter, it is not intended that such references be construed as limitations upon the scope of this invention except as set forth in the following claims. Further, although there have been described certain dimensions used in the preferred embodiment, it is not intended that such dimensions be construed as limitations upon the scope of this invention except as set forth in the following claims.

What I claim is:

1. A device for cutting a roll on a core comprising:
 - a housing;
 - means attached to said housing for receiving said roll, the core being aligned vertically;
 - a cutter assembly attached to said housing for cutting said roll, said cutter assembly including:
 - a cutter tower extending from said housing; and
 - a cutter arm carrying a power saw, said cutter arm being pivotally supported from said cutter tower to be selectively infed toward the means attached to said housing for receiving said roll.
2. Cutter support column mounted upon the base;
- a laterally extending cutter arm support from the support column, the cutter arm being pivotal about a vertical axis and vertically adjustable in elevation relative to the base; and
- a power saw mounted on the cutter arm, the saw having a rotary saw blade mounted in a horizontal plane.
3. The device of claim 1 wherein said means attached to said housing for receiving said roll comprises a stand attached to said housing.
4. The device of claim 3 wherein said stand comprises:
 - a. a pier attached to said housing;
 - b. a base attached to said pier;
 - c. arms attached to said base; and
 - d. supports attached to said arms.
5. The device of claim 1 further comprising means for sanding an edge of said roll.
6. The device of claim 5 wherein said means for sanding said edge of said roll comprises a blade having a sanding edge.
7. The device of claim 1 wherein said cutter tower is a telescoping tower.
8. The device of claim 1 wherein said cutter tower comprises:
 - a. a lower portion attached to said housing;
 - b. an upper portion slidably attached to said lower portion; and
 - c. means attached to said lower portion for raising said upper portion.
9. The device of claim 8 wherein said means attached to said lower portion for raising said upper portion comprises a cutter tower piston.
10. A roll cutter apparatus; comprising:
 - a base;
 - a turntable having a horizontal support surface for supporting a lower end of a cylindrical paper roll with a longitudinal axis of the paper roll extending vertically

5

upward, the turntable being mounted upon the base to rotate about a vertical axis.

11. The device of claim 1 wherein said saw is slidably attached to said cutter arm.

12. The device of claim 1 wherein said cutter tower has an upper saw mount and a lower saw mount.

13. The device of claim 2 wherein said means attached to said housing for moving said roll comprises a hoist assembly.

6

14. The device of claim 13 wherein said hoist assembly comprises a hoist.

15. The device of claim 14 wherein said hoist assembly comprises means attached to said housing for raising said hoist.

16. The device of claim 14, wherein said means attached to said housing for raising said hoist comprises a hoist tower.

* * * * *

04-40173

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

1. TITLE OF CASE (NAME OF FIRST PARTY ON EACH SIDE ONLY) P & M SERVICES, INC. v. ANDRE LAVALLEE

2. CATEGORY IN WHICH THE CASE BELONGS BASED UPON THE NUMBERED NATURE OF SUIT CODE LISTED ON THE CIVIL COVER SHEET. (SEE LOCAL RULE 40.1(A)(1)).

- I. 160, 410, 470, R.23, REGARDLESS OF NATURE OF SUIT.
- II. 195, 368, 400, 440, 441-444, 540, 550, 555, 625, 710, 720, 730, 740, 790, 791, 820*, 830*, 840*, 850, 890, 892-894, 895, 950. * Also complete AO 120 or AO 121 for patent, trademark or copyright cases
- III. 110, 120, 130, 140, 151, 190, 210, 230, 240, 245, 290, 310, 315, 320, 330, 340, 345, 350, 355, 360, 362, 365, 370, 371, 380, 385, 450, 891.
- IV. 220, 422, 423, 430, 460, 510, 530, 610, 620, 630, 640, 650, 660, 690, 810, 861-865, 870, 871, 875, 900.
- V. 150, 152, 153.

3. TITLE AND NUMBER, IF ANY, OF RELATED CASES. (SEE LOCAL RULE 40.1(E)).

4. HAS A PRIOR ACTION BETWEEN THE SAME PARTIES AND BASED ON THE SAME CLAIM EVER BEEN FILED IN THIS COURT?
YES NO

5. DOES THE COMPLAINT IN THIS CASE QUESTION THE CONSTITUTIONALITY OF AN ACT OF CONGRESS AFFECTING THE PUBLIC INTEREST? (SEE 28 USC 2403)
IF SO, IS THE U.S.A. OR AN OFFICER, AGENT OR EMPLOYEE OF THE U.S. A PARTY?
YES NO

6. IS THIS CASE REQUIRED TO BE HEARD AND DETERMINED BY A DISTRICT COURT OF THREE JUDGES PURSUANT TO TITLE 28 USC 2284?
YES NO

7. DO ALL PARTIES IN THIS ACTION RESIDE IN THE CENTRAL DIVISION OF THE DISTRICT OF MASSACHUSETTS WORCESTER COUNTY - (SEE LOCAL RULE 40.1(C)).
OR IN THE WESTERN DIVISION (BERKSHIRE, FRANKLIN, HAMPDEN OR HAMPSHIRE COUNTIES)?(SEE LOCAL RULE 40.1(D)).
YES NO

8. DO ALL OF THE PARTIES RESIDING IN MASSACHUSETTS RESIDE IN THE CENTRAL AND/OR WESTERN DIVISIONS OF THE DISTRICT?
(a) IF YES, IN WHICH DIVISION DOES THE PLAINTIFF RESIDE? PLAINTIFF IN CORPORATION

9. IN WHICH DIVISION DO THE ONLY PARTIES RESIDING IN MASSACHUSETTS RESIDE? CENTRAL

10. IF ANY OF THE PARTIES ARE THE UNITED STATES, COMMONWEALTH OF MASSACHUSETTS, OR ANY GOVERNMENTAL AGENCY OF THE U.S.A. OR THE COMMONWEALTH, DO ALL OTHER PARTIES RESIDE IN THE
CENTRAL DIVISION; YES NO OR WESTERN DIVISION; YES NO

11. ALTERNATIVE DISPUTE RESOLUTION - IS THIS CASE SUITABLE FOR ADR? IF SO, BY WHICH ADR?
EARLY NEUTRAL EVALUATION MEDIATION SUMMARY JURY/BENCH TRIAL
MINI-TRIAL OTHER

(PLEASE TYPE OR PRINT)
ATTORNEY'S NAME J. KEVIN GROGAN
ADDRESS MCCORMICK, PAULDING & HUBER LLP, 1350 MAIN STREET, SPRINGFIELD,
TELEPHONE NO. (413) 736-5401 MA 01103

CIVIL COVER SHEET

The JS-44 civil cover sheet and the information contained herein neither replace nor supplement the filing and service of pleadings or other papers as required by law...

I. (a) PLAINTIFFS

P & M SERVICES, INC.

DEFENDANTS

ANDRE LAVALLEE

(b) County of Residence of First Listed Plaintiff COFFEE (TN) (EXCEPT IN U.S. PLAINTIFF CASES)

County of Residence of First Listed WORCESTER (IN U.S. PLAINTIFF CASES ONLY)

NOTE: IN LAND CONDEMNATION CASES, USE THE LOCATION OF THE LAND INVOLVED.

(c) Attorney's (Firm Name, Address, and Telephone Number) MCCORMICK, PAULDING & HUBER LLP 1350 Main Street, 5th Floor Springfield, MA 01103 (413) 736-5401

Attorneys (If Known) Unknown

II. BASIS OF JURISDICTION (Place an "X" in One Box Only)

- 1 U.S. Government Plaintiff
2 U.S. Government Defendant
3 Federal Question (U.S. Government Not a Party)
4 Diversity (Indicate Citizenship of Parties in Item III)

III. CITIZENSHIP OF PRINCIPAL PARTIES (Place an "X" in One Box for Plaintiff and One Box for Defendant)

- Citizen of This State
Citizen of Another State
Citizen or Subject of a Foreign Country
Incorporated or Principal Place of Business In This State
Incorporated and Principal of Business In Another State
Foreign Nation

IV. NATURE OF SUIT (Place an "X" in One Box Only)

Table with columns: CONTRACT, REAL PROPERTY, TORTS, CIVIL RIGHTS, PRISONER PETITIONS, FORFEITURE/PENALTY, LABOR, SOCIAL SECURITY, FEDERAL TAX SUITS, BANKRUPTCY, OTHER STATUTES.

V. ORIGIN (PLACE AN "X" IN ONE BOX ONLY)

- 1 Original Proceeding
2 Removed from State Court
3 Remanded from Appellate Court
4 Reinstated or Reopened
5 Transferred from another district (specify)
6 Multidistrict Litigation
7 Appeal to District Judge from Magistrate Judgment

VI. CAUSE OF ACTION (Cite the U.S. Civil Statute under which you are filing and write brief statement of cause. Do not cite jurisdictional statutes unless diversity.)

Patent laws of the United States 35 U.S.C. 1 et seq...Patent Infringement

VII. REQUESTED IN COMPLAINT: CHECK IF THIS IS A CLASS ACTION DEMAND UNDER F.R.C.P. 23. CHECK YES only if demanded in complaint: JURY DEMAND: Yes No

VIII. RELATED CASE(S) IF ANY (See instructions): JUDGE DOCKET NUMBER

DATE SIGNATURE OF ATTORNEY FOR PLAINTIFF

FOR OFFICE USE ONLY

RECEIPT # AMOUNT APPLYING IFP JUDGE MAG. JUDGE