United States Patent

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[54] **YARDAGE APPARATUS**
13 Claims, 14 Drawing Figs.

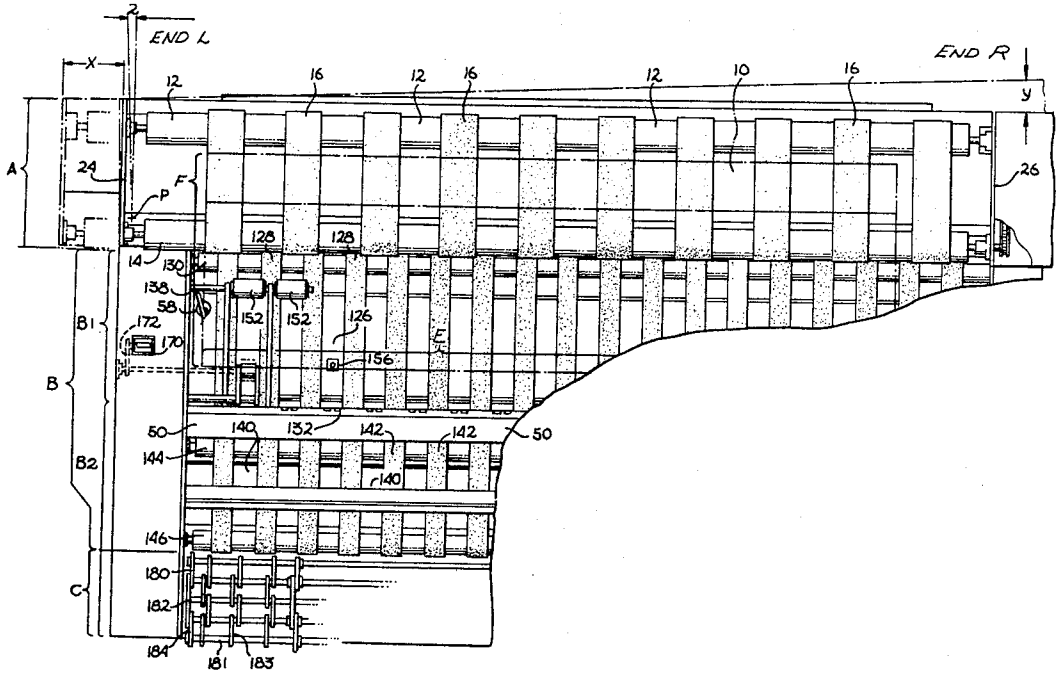
[52] **U.S. Cl.** **242/57.1**
[51] **Int. Cl.** **B65h 25/10,** B65h 25/26
[50] **Field of Search** 242/57.1, 56, 55, 57; 226/15, 18, 19, 20, 21, 22, 23

[56] **References Cited**
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Primary Examiner—George F. Mautz
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ABSTRACT: A yardage apparatus having a laterally movable and pivotable receptacle for supporting and unwinding a source roll of sheet material; a feed table having photoelectric means for laterally aligning the material to keep the edges continuously even to eliminate "coning" on the generation of a new roll; a control system for pivoting the receptacle to compensate for any skewness in the position of the source roll; and, a reroll mechanism. Both the receptacle and the reroll mechanism are capable of dumping their respective rolls when desired without manual handling.



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SHEET 1 OF 4

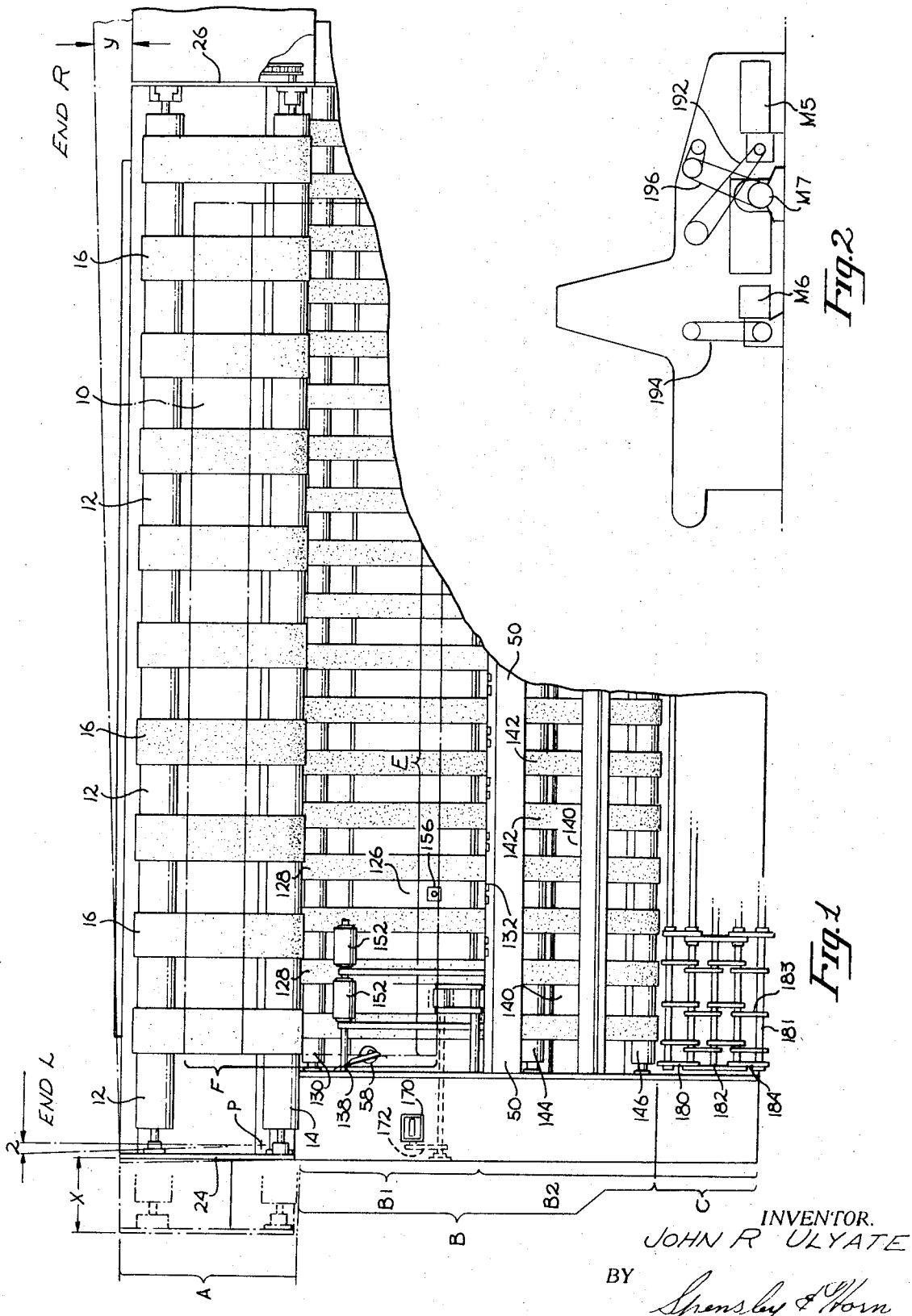
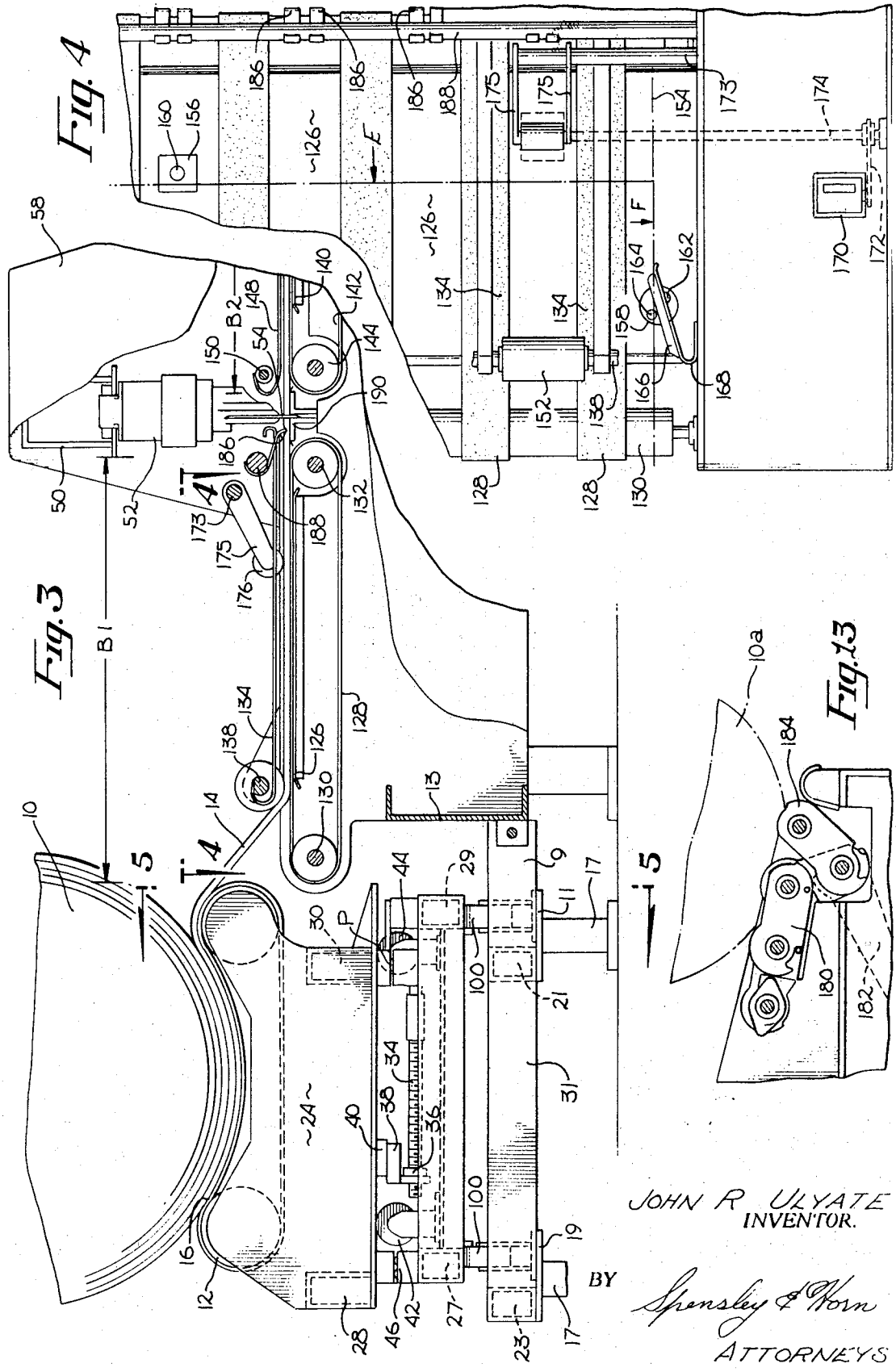


Fig. 2

Fig. 1

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Fig. 4
Fig. 3
Fig. 13
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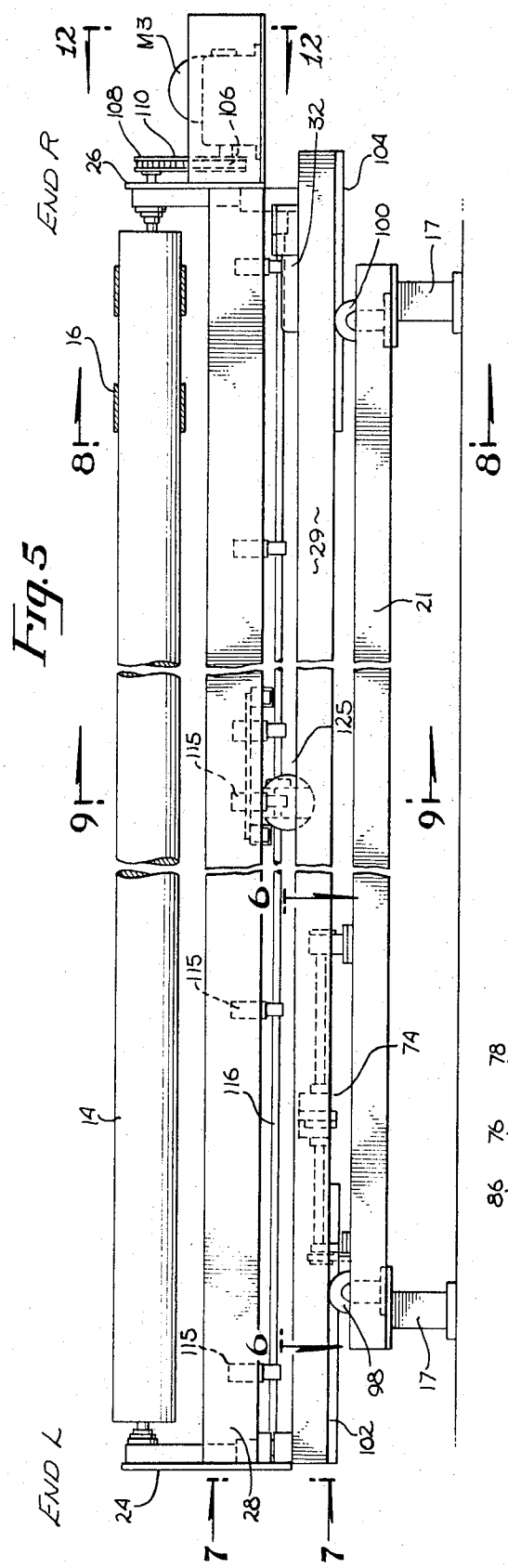


Fig. 5

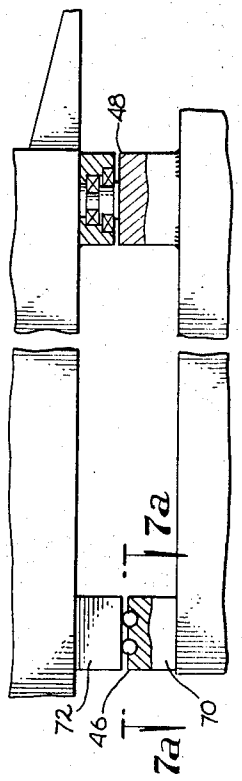


Fig. 7

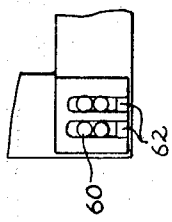


Fig. 7a

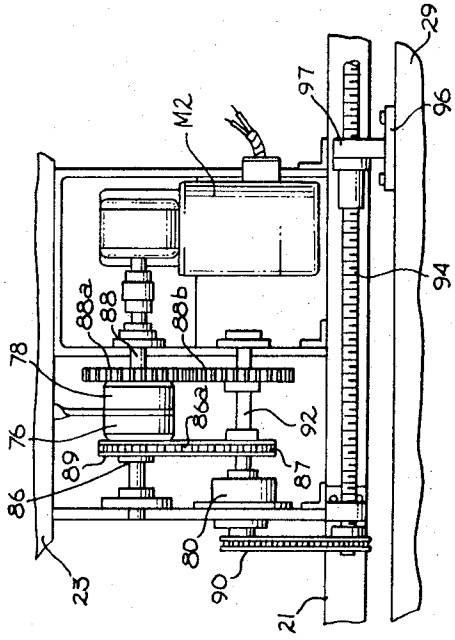


Fig. 6

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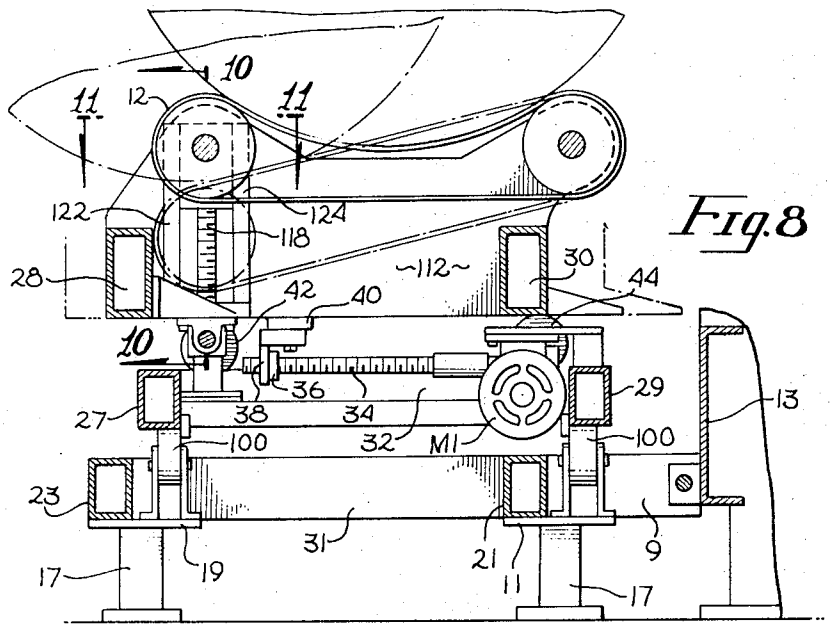
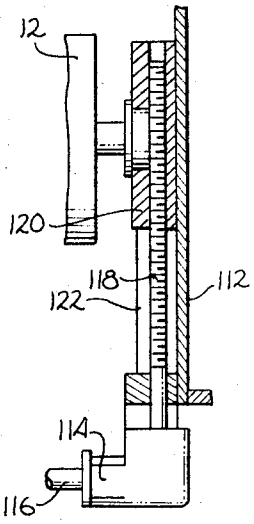


Fig. 8

Fig. 10



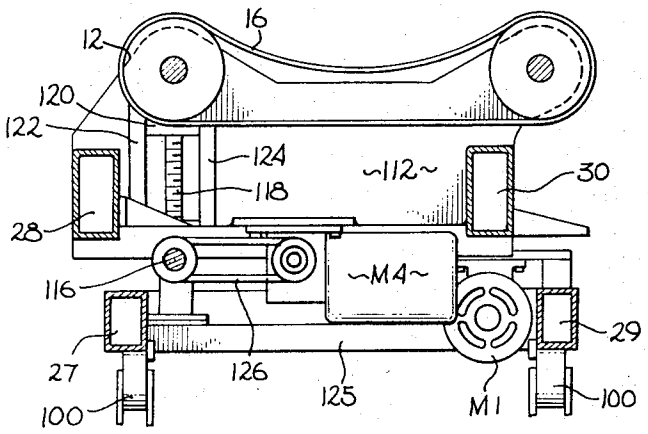


Fig. 9

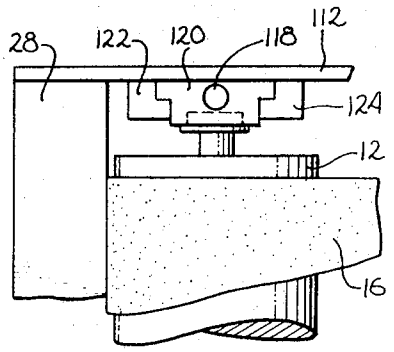


Fig. 11

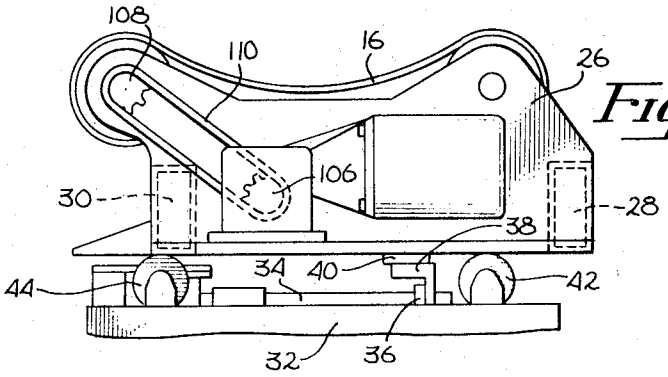


Fig. 12

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YARDAGE APPARATUS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a yardage handling apparatus and more particularly to a machine for unwinding, measuring, severing and rolling sheet material. It is particularly suited for handling carpet material, textile fabrics, paper, plastic and other rollable sheet materials.

2. Description of the Prior Art

In the past, yardage on bolts had to be manually lifted onto suitable supports for unwinding, the material was then cut by hand, spread on a flat surface where it was rerolled or folded as required.

The above procedure was replaced by yardage handling systems such as the one described in U.S. Pat. Ser. No. 3,228,620 in which most of the manual handling such as the unwinding, cutting and rerolling was replaced by automatic means including a mechanism for rerolling the unwound material. The problems with this latter apparatus were that it was difficult to keep the new roll which was generated on the reroll mechanism square (no "coning"), especially, if the original bolt or source roll had uneven edges. Also, it was usually difficult to place the heavy source rolls in precisely the desired position on the receptacle so that the material could be unwound evenly and cut perpendicularly to the side edges of the material. Further, the source rolls and newly generated rolls had to be manually removed from the machine.

SUMMARY OF THE INVENTION

The present invention introduces a new and improved yardage handling apparatus which allows the unwound material to be easily aligned without regard to the position of the source roll and automatically eliminates "coning" effects by utilization of photoelectric detection means. The improved apparatus also allows for automatic "dumping" of the source rolls and for the newly generated rolls when desired, thereby eliminating time consuming manual handling and making the yardage machine more efficient.

This and other advantages of the present invention will become apparent from a reading of the following description and claims in view of the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a partial plan view of the yardage machine also showing in phantom lines the movement of the bucket assembly;

FIG. **2** is a diagrammatic left side elevational view of the yardage machine showing the feed table drive mechanisms and the reroll drive mechanism;

FIG. **3** is a left end view of the bucket and part of the feed table assembly also showing part of the cutter housing assembly cut away;

FIG. **4** is a partial plan view taken along line **4–4** of FIG. **3**;

FIG. **5** is a vertical sectional view taken along line **5–5** of FIG. **3**;

FIG. **6** is a partial plan view of the lateral drive mechanism taken along line **6–6** of FIG. **5**;

FIG. **7** is a partial end view taken along line **7–7** of FIG. **5**;

FIG. **7***a* is a sectional plan view taken along line **7***a*–**7***a* of FIG. **7**;

FIG. **8** is a vertical sectional view showing the angular drive mechanism taken along line **8–8** of FIG. **5**;

FIG. **9** is a vertical sectional view showing the bucket roller vertical drive mechanism taken along line **9–9** of FIG. **5**;

FIG. **10** is a vertical sectional view taken along line **10–10** of FIG. **8**;

FIG. **11** is a partial plan view taken through the line **11–11** of FIG. **10**;

FIG. **12** is a partial right end view of the bucket showing the bucket drive mechanism; and

FIG. **13** is a partial end view of the reroll mechanism showing the dump position.

DESCRIPTION OF THE PREFERRED EMBODIMENT

FIG. **1** illustrates the overall configuration of the machine which comprises a bucket section A, a feed table B and the reroll portion C.

The bucket section A serves as the receptacle for a source roll of material **10**. The bucket A is shown by phantom lines in the various typical positions it may assume. The bucket may be moved laterally as shown by the dimension X to compensate for "coned" edges that may be present on the source roll. The "coned" edges are formed when material is rolled without keeping the edges of the material coincident with the previously rolled layer. The bucket may be pivoted about the point P to cause angular movement Y to compensate for the position of the source roll in the bucket. For example, if the source roll **10** is placed on the bucket in a skew position and not parallel to the axis of bucket rollers **12** and **14** it is necessary to pivot the bucket so that the leading carpet edge E will be parallel to the cutter rail **50**, as will be described below.

The bucket has two movable rollers **12** and **14** on which are positioned a plurality of drive belts **16**. The rollers **12** and **14** and belts **16** provide means in accordance with the present invention for partially causing the source roll **10** (shown in dotted lines in FIG. **1**) to rotate and to unwind with leading edge E driven toward the feed table B as described in detail hereinafter.

The bucket will be controlled, as described in detail hereinafter, to allow the material unwound from the source roll to be rerolled to a given length in such a manner that the edges are even and do not exhibit any of the "coning" effect previously mentioned. Also, the bucket A is controlled, as described in detail hereinafter, so that when a given length is rerolled and cut away from the source roll **10** the newly cut edge will be parallel with the leading edge E thereby yielding a square sheet of material in rolled form.

The operation and structure of the machine will be described simultaneously to simplify the description and explanation of a preferred embodiment of the present invention.

The bucket A is made up of three main assemblies. (See FIGS. **3**, **5** and **8**). The first is a lower platform **18** which remains stationary and serves as the main bucket support. The second is the laterally movable intermediate assembly **20** which provides the movement shown by the X dimension in FIG. **1** to eliminate the "coning" effect. The third is the angularly movable upper assembly **22** which pivots about the point P and yields the motion Y shown in FIG. **1** to compensate for skewness in the source roll of material.

The feed table B, as shown particularly in FIGS. **1** and **3**, is made up of two stages B1 and B2 which are separated by the cutter assembly **52**.

The reroll portion C is described in U.S. Pat. No. 3,228,620 and does not per se form a part of the present invention, except for the improved feature concerning the dumping of the reroll **10***a*. (See FIG. **13**)

The overall function of the present invention is basically to have a source roll **10** placed in the bucket A, to cause the source roll to be rerolled into rolls of a given length, (or to reroll a source roll in its entirety to remove "coning"); and to "dump" the rerolled material from the reroll portion C when the operation is complete. The source roll **10** may also be dumped from the bucket making it unnecessary to manually lift either the source roll or the reroll from the machine manually, (See FIG. **8**). With a suitable loading device the machine may be operated on essentially a continuous basis making the apparatus even more efficient.

The bucket A has the upper angularly movable assembly **22** which is comprised of housing members **24** and **26** between which are mounted movable rollers **12** and **14** and support members **28** and **30**. A plurality of endless belts **16** are driven by the rollers **12** and **14**. The moving belts **16** serve as supports for the source roll **10** and cause it to rotate and to unwind. The angular movement is initiated by the worm drive mechanism **32** which comprises a threaded shaft **34** which is threaded through a bearing **36**. (See FIGS. **3** and **8**) The bearing **36** and

shaft 34 are engaged with bracket 38 which is securely mounted to a flange 40 on the underside of the bucket housing. The motor M_1, drives the threaded shaft 34 through the bearing 36. The whole worm drive mechanism 32 is mounted on the intermediate assembly 20 at end R except for the bracket 38 and flange member 40 which are mounted on the upper assembly 22. When the motor M_1, drives the shaft it forces the upper assembly 22 to move angularly around the pivot point P located at the other end L of assembly 22. The motion of the upper assembly is aided by the rollers 42 and 44 which are located at the same end of the bucket as the worm drive mechanism 32. The rollers 42 and 44 provide a relatively low friction contact surface for moving assembly 22 angularly with respect to the rest of the bucket A. FIG. 1 illustrates the operation of the angular movement caused by the worm drive mechanism 32. By causing the pivots at end L of the bucket to move a distance Z; the R end of the bucket, where the worm drive mechanism is located, will move a distance Y. It has been found that about 4 inches of movement in the Z distance will usually be adequate for most applications.

The pivot and bearing at end L are shown in FIGS. 7 and 7*a*. Bearing member 46 and pivot 48 are located between the intermediate and upper assemblies 20 and 22, respectively, and cause the upper assembly 22 to move angularly about the pivot 46 with respect to the intermediate assembly 20 which cannot move angularly since the bracket 38 and flange 40, upon which the worm drive mechanism 32 operates, are permanently secured to the upper assembly 22 at the R end of the bucket. The pivot 46 is shown in FIG. 1 as pivot point P. The bearing 46 may be made up of a plurality of ball bearings 60, such as those shown in FIG. 7*a*, which provide a low friction surface that allows the upper assembly 22 to slide easily about the pivot 48. The ball bearings are seated in elongated slots 62 which are located in blocks 70 and 72 which are attached to assemblies 20 and 22 respectively.

The intermediate assembly 20 is comprised of support members 27 and 29 and is mounted so that it may move laterally in the direction X shown in FIG. 1. This is accomplished by providing a lateral drive mechanism 74 which comprises a drive motor M_2, two standard electrical clutches 76 and 78 to allow lateral movement to both the right and the left and a standard brake 80 which prevents coasting or override. (See FIG. 6) The lateral drive mechanism is mounted on the stationary assembly 18 between the support rails 21 and 23. When either of the clutches 76 and 78 is actuated the drive members 86 and 88 are driven which causes the shaft 92 to drive the chain 99 thereby driving the jack screw 94 either to the right or left depending on which of the clutches has been actuated. The drive member 88 is shown as two meshing gears 88*a*. and 88*b*. while the drive mechanism 86 is shown as chain 86 mounted on sprocket wheels 87 and 89. However, the drive members or mechanisms may be of any other conventional type. The screw jack 94 is mounted to the intermediate assembly 20 by means of flange 96 which is mounted to support member 29. Therefore, as the rotation of the screw proceeds, the entire intermediate assembly 20 will be driven laterally since the threaded block portion 97 of the screw jack 94 is securely mounted to the support 29 of the assembly 20.

The lateral movement of the intermediate assembly is effected by two rollers 98 and 100 (total of 4 rollers) on each end of the lower assembly 18. Guide rails 102 and 104 attached on each end of the intermediate assembly 20 keep the assembly firmly fixed on the rollers 98 and 100.

The bucket roller 14 is driven in a conventional manner by motor M_3, sprocket wheels 106 and 108 and belt 110. The bucket roller drive may be mounted in a conventional manner by means of brackets or the like such as shown in FIG. 5. The bucket roller 12 is driven by virtue of the belts 16. The belts 16 being in contact with the source roll 10 cause it to unwind.

The lower assembly 18 is comprised of support members 21 and 23 mounted on platforms 11 and 19 which in turn are supported by four legs 17 (one of each corner of the assembly 18). The assembly 18 is secured to the feed table support member 13 by means of members 9 with belts or other suitable fastening means as shown in FIGS. 3 and 8.

The bucket A also has another screw jack mechanism 112 which allows the rear bucket roller 12 to be raised and lowered thereby allowing the source roll 10 to be dumped into a receptacle and raised to accept a new source roll from a suitable loading device (not shown). The phantom lines in FIG. 8 show the rear roller 12 and the source roll 10 in the "dumping" position.

The raising and lowering mechanism 112 for the rear bucket roller 12 comprises two right angle drives 114 (located at each end of assembly 22) which have a shaft 116 drive by motor M_4. The turning screw 118 causes the movable bearing mounts 120 connected to roller 12 to move in guide rails 122 and 124. (See FIGS. 8 through 11) The movement of the screw 118 causes the roller 12 to move vertically and when desired the source roll can be dumped as shown by the phantom lines in FIG. 8.

The right angle screw mechanisms 114 are driven by a drive assembly 125 which comprises a shaft 116 which is coupled to a reversible motor M_4 by means of a belt 126 and drive in a conventional manner. As the shaft 116 rotates it causes the right angle drive 114 to rotate the screw 118 thereby driving the bearing 120 up or down depending on the direction of rotation of the motor M_4. The direction of rotation of the motor M_4 is controlled by an operator by means of an ordinary switching circuit.

The shaft 116 is secured to support member 28 by brackets 115 which are spaced at convenient locations. (See FIG. 5)

The bucket A is adjacent to the feed table B and may be bolted as shown in FIGS. 3 and 8 to the supporting member 13 of the feed table as previously described.

As the source roll 10 is unwound by virtue of the action of rollers 12 and 14 and belts 16 it is fed onto the first stage of the feed table B_1. (See FIGS. 1, 3 and 4). The first stage of the feed table B_1 is comprised of a plurality of flat metal strips 126 separated from each other by belts 128 which surround and are driven by movable rollers 130 and 132. The strips 126 are of lesser length than the distance between rollers 130 and 132 and are suitably supported such that the belts and strips form the surface upon which the material is supported while passing over the feed table section B_1. (See FIG. 4) A plurality of metallic bands 134 are spaced at suitable distances and above the feed table B_1 surface formed by the strips 126 and belts 128 and serve to keep the material coming from the source roll 10 flat on the feed table. The bands 134 are fastened to rod 138 and are positioned a given distance above the feed table surface to allow the material to pass therebetween smoothly without bulging. The bands 134 also act as guides so that the material is fed toward the second stage of the feed table B_2.

The B_2 stage of the feed table is comprised of a plurality of flat metal strips 140 separated from each other by belts 142 which surround and are driven by movable rollers 144 and 146 in a manner similar to the structure described for the B_1 stage. The B_2 stage of the feed table also has bands 148 attached to rod 150 to hold the material flat on the feed table. (See FIG. 3) The first and second stages of the feed table B are driven independently for reasons that will be discussed below. (See FIG. 2)

To further aid in holding the material flat on the feed table stage B_1 a number of hold down rollers 152 may be positioned along the rod 138. When the leading edge E of the material enters the feed table B an operator, by means of switching circuits (not shown) may stop the bucket drive motor M_3 and/or the feed table drive motors M_5 and M_6 (FIG. 2), causing the upper assembly 22 of the bucket assembly A to pivot above the point P to compensate for any skewness of the source roll 10 as it was placed on the bucket. The operator stops the pivotal movement of the assembly 22 when the edge F of the material is coincident with a scribed line 154 which is placed on the feed table surface for alignment purposes (See FIG. 4).

If the edge F is too far to the right of the scribed lined **154**, (See FIGS. **1** and **4**) the operator may by means of an additional switching circuit (not shown) cause the intermediate bucket assembly **20** to move laterally to the left by actuating clutch **78**. A manually operated pushbutton which directly actuates clutch **78** may be utilized for laterally driving the bucket assembly until the automatic system, described below, takes over control. These alignments insure that the material be fed onto the feed table in such a manner that the leading edge E of the material is parallel to the axis of the cutting rail **50** and perpendicular to the scribed line **154**.

When the initial alignments described above are complete, the operator then proceeds to start the bucket drive motor M_3 and the feed table drive motors M_5 and M_6.

At this stage of operation the machine begins to automatically keep the edge F coincident to the scribed line **154** thereby insuring that the material will roll up on the reroll without any of the "coning" effects previously described. The automatic control against "coning" is accomplished by means of two photocell assemblies **156** and **158** electrically coupled to the lateral drive mechanism **74**.

The first photocell assembly **156** is comprised of a single photocell **160** which is exposed to the ambient light and which will be covered whenever the unwound material reaches its location on the feed table. The photocell **160** acts as an on-off switch thereby actuating the automatic lateral control system by signaling that the material is on the feed table ready to be rerolled.

The second photocell assembly **158** is comprised of two photocells **162** and **164**. The photocells **162** and **164** are actually single pole double throw light actuated photo relays. Once photocell **160** is actuated indicating that material is on the feed table the photocells **162** and **164** take over the control of keeping edge F of the material coincident with the scribed line **154**. The photocells **162** and **164** are positioned on the feed table B, in such a manner that when both cells are open to light (the material being to the right of the scribed line **154**) clutch **78** is actuated by the photorelays and the intermediate bucket assembly **20** moves left toward the scribed line **154**. As the edge F comes within proximity of the photocell assembly **158**, a portion of edge F will make contact with a lever **166** which is pivoted at **168**. The lever **166** traverses the photocell assembly **158** in conjunction with the movement of edge F which is in contact with lever **166**. When the edge F is coincident with scribed line **154** the photocells **162** and **164** are balanced, that is cell **162** is open to the light and the other cell **164** is covered by lever **166** which is in contact with a portion of edge F of the material. At the balanced position there is no lateral movement of the intermediate bucket assembly **20**. When edge F overshoots the scribed line **154** and goes too far to the left of the line, both cells **162** and **164** are closed to light since the lever **166** in contact with a portion of edge F covers both cells. When both photocells **162** and **164** are closed to light, clutch **76** is actuated by the photorelays and the intermediate bucket assembly **20** moves right toward the scribed line **154** and the balanced condition.

In order to avoid coasting or override and position hunting, a brake **80** is utilized. The brake **80** keeps the assembly **20** in a fixed position until one of the clutches **76** or **78** is positively actuated, at which time the brake disengages. The brake **80** provides positive stopping action thereby preventing assembly **20** from coasting and position hunting which would be caused by the inertia of assembly **20**.

The upper assembly **22** and the intermediate assembly **20** are mounted so that although the upper assembly **22** may pivot with respect to assembly **20**, both assemblies **20** and **22** are moved laterally when the lateral drive mechanism **74** is energized. As the material is fed through the feed table B, a counter **170** indicates the length of material that has passed the cutter assembly **52** which is located between the B_1 and B_2 stages of the feed table.

The counter **170** is linked by means of a chain **172** to a rod **174** which is driven by rollers **176** and **178**. Roller **176** is mounted on supports **175** and rod **173** and is positioned above the top surface of the material and holds the material against the bottom roller **176**. This arrangement insures that the material will cause the bottom roller **178** to rotate without slipping. The bottom roller **178** is mounted on the surface of the feed table so that about one half of the roller extend above the table surface and it is rotated by the bottom surface of the material as it passes through the feed table and over the roller. The bottom roller **178** rotates the rod **174** which actuates the mechanical counter **170**. (See FIG. **4**)

The material leaving the B_2 stage is fed into the reroll section C. The basic manner in which the reroll mechanism operates is described in detail in U.S. Pat. No. 3,228,620. Briefly, however, the reroll mechanism is made up of a number of material conveying segments such as **180**, **182** and **184** which are capable of taking the leading edge E of material and turning it upon itself to form a new roll **10***a*. The segments **180**, **182** and **184** form a "troughlike" position which allows the reroll to develop itself to the desired length.

The material conveying segments are made up of shafts **181** and drive belts **183** which are driven by motor M_7 and drive means **196**. The drive belts cause the new roll to rotate merely generating a new roll of material in the reroll section C.

After a given amount of material has been unrolled from the source roll and passed the counting device, previously described, the operator may stop all the drive motors and initiate the cutting mechanism **52**. By means of a pushbutton linked to a conventional solenoid mechanism (not shown) a plurality of metallic fingers **186** are caused to be lowered onto the top surface of the material thereby holding the material tightly against the flat cutting surface **190**. (See FIG. **3**) Simultaneously the solenoid further actuates the cutter **52** assembly which is comprised up of a motor driven rotary blade **54** which traverses the entire width of the feed table B. The cutter assembly is mounted on a horizontal rail **50** located above the surface of the feed table. The cutter assembly **52** and rail **50** are suspended in a housing **58** above the feed table. The rail **50** extends the entire width of the feed table.

After the rotary blade **54** has traversed the width of the feed table thereby severing the material, the operator may then selectively and independently drive the belts of two stages B_1 and B_2 as desired. By driving the belts **142** of the B_2 stage forward by means of drive **192** the material attached to the reroll **10***a* may be taken up on the reroll.

By actuating a switching circuit the operator may cause the segments **180**, **182** and **184** to shift from the "troughlike" position to the dump position shown in FIG. **13**. The main feature of the dump feature is to cause the segment **184** which acts as a back stop for the roll **10***a* to tuck itself below the roll **10***a*. The belts **183** which cause the material to wind onto the reroll **10***a* and rotate the reroll **10***a* are kept moving. As the segment **184** takes on the position shown in FIG. **13** the entire reroll section is sloped downward and the reroll **10***a* is spun off the machine by virtue of the slope and the inertia provided by the moving belts **183**.

If a new roll from the same source roll is not desired, the drive means **194** and the motor M_3 may then be driven in the reverse direction to cause the material on the feed table connected to the source roll **10** to be rewound onto the source roll **10**. After the material is rewound the drive mechanism **125** may be actuated by the operator to lower roller **12** while the belts **16** continue to spin, thereby causing the source roll **10** to fall from the bucket as shown by the phantom lines in FIG. **8**. The drive mechanism **125** would then be reversed to bring the roller **12** back to its normal position ready for a new source roll.

If after severing the material from the source roll it was desired to start another reroll **10***a* from the same source it would not be necessary to reverse the motor M_3 and drive means **194** as described above. The operator would merely reset the counter **170** and allow the machine to continue operating as described previously before the cutting operation.

By utilizing separate feed table drives **192** and **194** it is possible to drive the B_1 and B_2 phases independently thereby making the takeup operations on the source roll and reroll simple to accomplish without any manual manipulation. Also, slack on the feed table may be taken up by manipulating the separate drive mechanism, as desired.

While the yardage handling apparatus described above has been set forth in specific detail it will be appreciated by those skilled in the art than the same may be susceptible to other modifications without departing from the spirit of the invention. Therefore, my invention should be limited only by the scope of the following claims.

I claim:

1. A yardage handling apparatus comprising:

a. A receptacle means for supporting a source roll of material, said receptacle means having drive means for causing the source roll to unwind, drive means for causing said receptacle to move laterally and drive means causing said receptacle to pivot about one of its ends;

b. a feed table adjacent said receptacle means and having means for causing said unwound material to be driven, aligned, measured and severed from said source roll; said feed table having first photoelectric means for detecting the presence of material on said feed table and second photoelectric means actuated by said first photoelectric means and coupled to a control circuit for causing said receptacle means to move laterally with respect to said feed table as required to keep the material on the feed table aligned thereby compensating for any side edge unevenness present in the source roll; and

c. means for pivoting said receptacle means about one of its ends, thereby compensating for any skewness in the placement of the source roll on the receptacle and providing ease in the alignment of said material on said feed table.

2. The apparatus of claim **1** in which said second photoelectric means comprises two photocells positioned in such a manner that when the material side edge closest to said photocells is properly aligned said photocells are in a balanced condition and the receptacle means remain laterally stationary and when the edge is not aligned the receptacle means will be driven laterally until said material side edge causes the photocells to achieve a balanced condition.

3. The apparatus of claim **1** in which said receptacle means comprises at least two parallelly spaced rollers and a plurality of endless belts positioned around said rollers, drive means coupled to one of said rollers for causing it to move vertically with respect to said other roller to form an inclined slope in said belts whereby the source roll can be caused to be dropped from said receptacle and said vertically driven roller may then be raised to accept another source roll.

4. The apparatus of claim **2** in which said second photoelectric means and said control circuit actuate clutch means coupled to said lateral drive means whereby said clutch means causes said receptacle means to be driven laterally in the direction required to restore balance in said control circuit.

5. The apparatus of claim **2** in which a lever means is secured to said feed table and contacts said side edge of material, said lever means being pivoted at one end and free to move with said side edge so as to traverse said second photoelectric means in such a manner that the control circuit responds to the position of said lever means.

6. The apparatus of claim **4** in which said lateral drive means comprise brake means to prevent coasting when the receptacle means have been driven to a position causing the control circuit to be balanced.

7. A yardage handling apparatus comprising:

a. a receptacle means for supporting a source roll of material, said receptacle means having drive means for causing the source roll to unwind, drive means for causing said receptacle to move laterally and drive means causing said receptacle to pivot about one of its ends;

b. a feed table adjacent said receptacle means and having means for causing said unwound material to be driven, aligned, measured and severed from said source roll; said feed table having first photoelectric means for detecting the presence of material on said feed table and second photoelectric means actuated by said first photoelectric means and coupled to a control circuit for causing said receptacle means to move laterally with respect to said feed table as required to keep the material on the feed table aligned thereby compensating for any side edge unevenness present in the source roll;

c. means for pivoting said receptacle means about one of its ends, thereby compensating for any skewness in the placement of the source roll on the receptacle and providing ease in the alignment of said material on said feed table; and

d. reroll means adjacent said feed table for causing the material to be rewound into a roll having the desired length of material and even edges.

8. The apparatus of claim **7** in which said feed table is comprised of two sections with a means for severing the unwound material from said source roll positioned between said two sections and independently controlled reversible drive means on each of said sections for allowing the material on one side of said severing means to be rolled back onto the source roll and allowing the material on the other side of said severing means to be rolled by the reroll means into a roll of desired length.

9. The apparatus of claim **7** in which said second photoelectric means comprises two photocells positioned in such a manner that when the material side edge closest to said photocells is properly aligned said photocells are in a balanced condition and the receptacle means remain laterally stationary and when the edge is not aligned the receptacle means will be driven laterally until said material side edge causes the photocells to achieve a balanced condition.

10. The apparatus of claim **7** in which said receptacle means comprises at least two parallelly spaced rollers and a plurality of endless belts positioned around said rollers, drive means coupled to one of said rollers for causing it to move vertically with respect to said other roller to form an inclined slope in said belts whereby the source roll can be caused to be dropped from said receptacle and said vertically driven roller may then be raised to accept another source roll.

11. The apparatus of claim **9** in which said second photoelectric means and said control circuit actuate clutch means coupled to said lateral drive means whereby said clutch means causes said receptacle means to be driven laterally in the direction required to restore balance in said control circuit.

12. The apparatus of claim **9** in which a lever means is secured to said feed table and contacts said side edge of material, said lever means being pivoted at one end and free to move with said side edge so as to traverse said second photoelectric means in such a manner that the control circuit responds to the position of said lever means.

13. The apparatus of claim **11** in which said lateral drive means comprise brake means to prevent coasting when the receptacle means have been driven to a position causing the control circuit to be balanced.