

M. F. ANDERSON.
PACKAGING MACHINE.
APPLICATION FILED JULY 5, 1910.

995,939.

Patented June 20, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

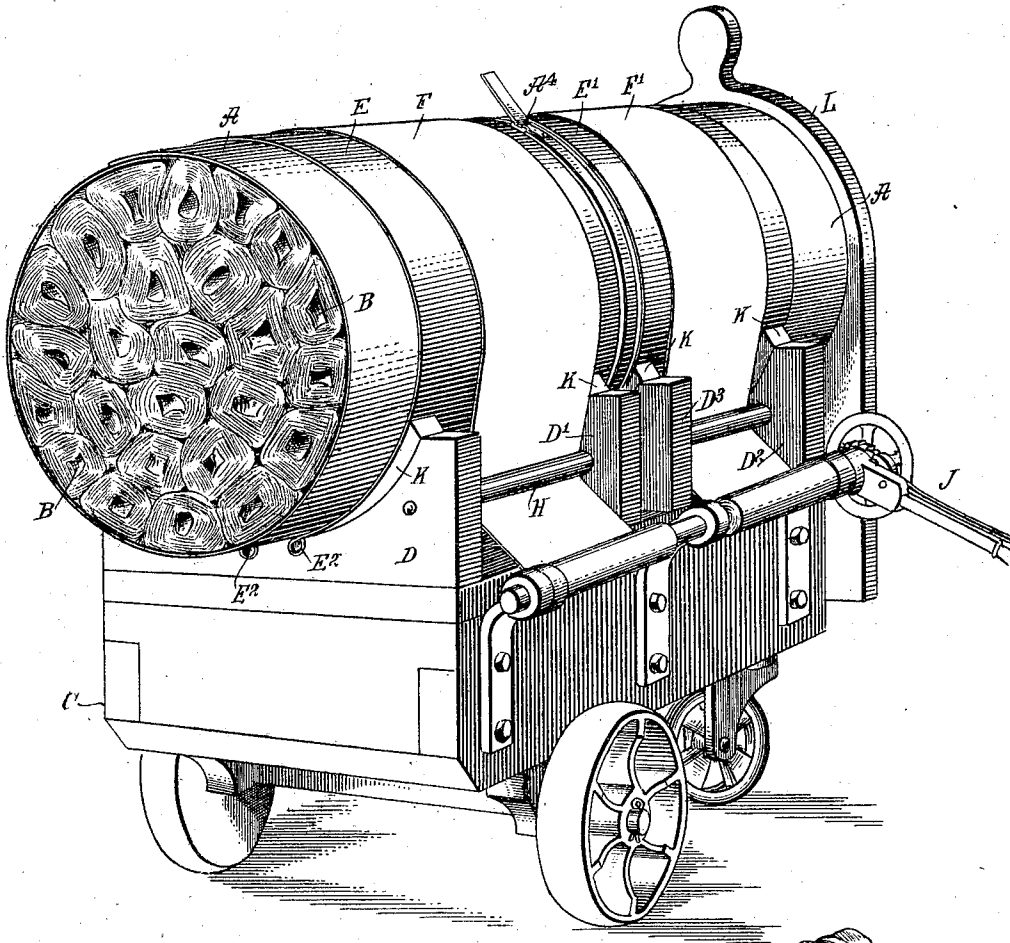
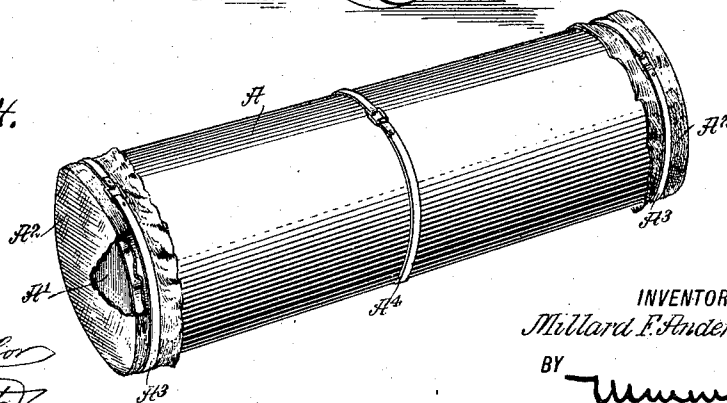


Fig. 4.



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2 SHEETS—SHEET 2.

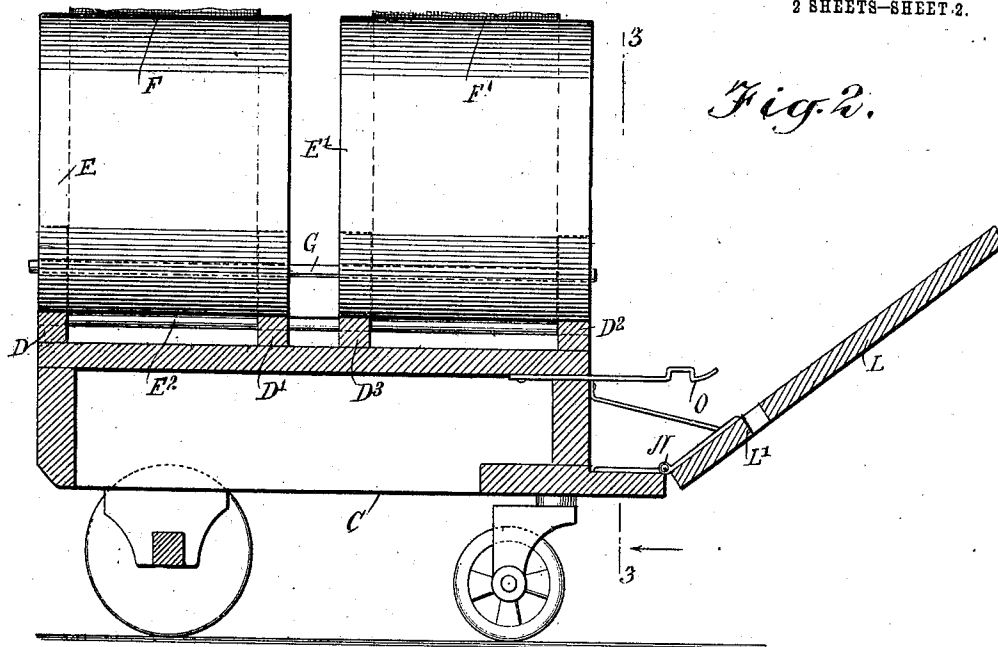


Fig. 2.

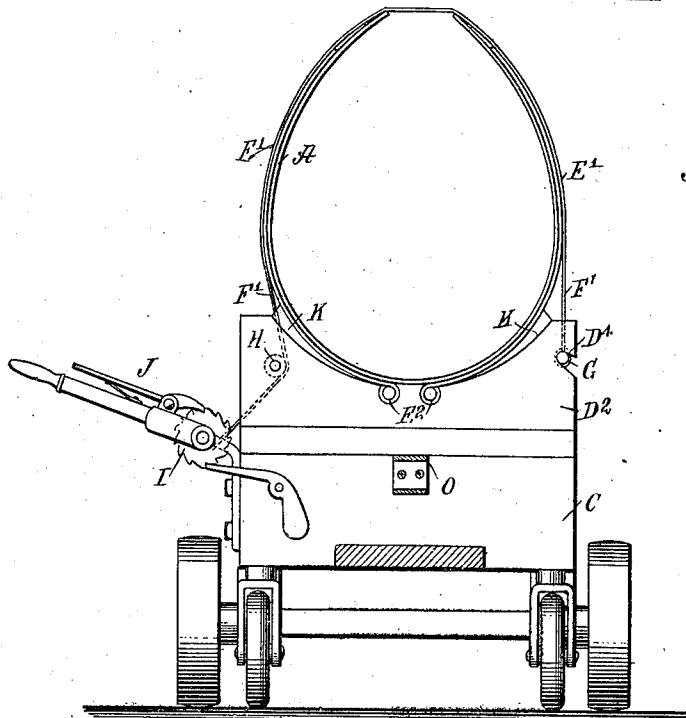


Fig. 3.

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UNITED STATES PATENT OFFICE.

MILLARD F. ANDERSON, OF NEW YORK, N. Y.

PACKAGING-MACHINE.

995,939.

Specification of Letters Patent. Patented June 20, 1911.

Application filed July 5, 1910. Serial No. 570,478.

To all whom it may concern:

Be it known that I, MILLARD F. ANDERSON, a citizen of the United States, and a resident of the city of New York, Bell Harbor, borough of Queens, in the county of Queens and State of New York, have invented a new and Improved Packaging-Machine, of which the following is a full, clear, and exact description.

10 The object of the invention is to provide a new and improved packaging machine, more especially designed for packaging rolls of oilcloth, wall paper and the like, in a very simple manner, in compact form and in a comparatively short time, each package containing a number of rolls.

15 For the purpose mentioned use is made of a curved flexible shaping member, having free sides, and adapted to support a sheet in which the rolls are placed, the shaping member being adapted to form the sheet into a cylindrical shell on drawing the free sides toward each other and around the sheet, and means acting exteriorly on the said shaping member to close the free sides thereof and thus give a cylindrical shape to the sheet.

20 A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

25 Figure 1 is a perspective view of the packaging machine and showing a partly completed package in position thereon; Fig. 2 is a longitudinal sectional side elevation of the packaging machine; Fig. 3 is a transverse section of the same, on the line 3—3 of Fig. 2; and Fig. 4 is a perspective view of the completed package, part being broken out.

30 The package produced by the machine presently to be described in detail is illustrated in Fig. 4, and consists of a sheet A of paper, or other suitable material, bent to form a cylindrical shell containing the rolls B, the ends of the shell being closed by heads A', in the form of disks, and burlap or other fabric caps A² are placed over the heads A' and onto the exterior surface of the ends of the shell, and the caps A² are bound in place on the shell by encircling bale ties A³, and a bale tie A⁴ is placed around the middle of the shell.

35 The packaging machine is preferably mounted on a wheeled frame C, to permit of conveniently moving the machine about, and the said frame C is provided with sets

of transverse blocks D, D' and D², D³, having their tops formed with segmental seats for supporting the shaping members E and E', of sheet metal or other flexible material. 60 Each shaping member E and E' is preferably made in two parts, pivotally connected at their lower ends at E² to the corresponding blocks D, D', D², D³ near the middle thereof, as plainly indicated in Fig. 3, so that the sections can swing toward and from each other, the sections being curved and of such length that when their free ends are drawn toward each other they overlap and draw the sheet A placed into the shaping 70 members E, E' into cylindrical shape. The shaping members E and E' are normally open, as indicated in Fig. 3, to permit of placing the sheet A conveniently into position into the members E, E', with the ends of the sheet projecting beyond the outer edges of the said members E and E'. As the sheet A is flexible it readily conforms to the shape of the members E and E', and into the sheet which is now partly cylindrical are placed the rolls B in a predetermined number. Flexible bands F, F' are used for moving the sections of each shaping member E, E' into a closed position, so as to complete the formation of the sheet 85 A into a shell with overlapping sides, as indicated in Fig. 1. The bands F and F' may be of canvas or other suitable material, and extend exteriorly of the members E and E' and between the blocks D, D' and D², D³. 90 The ends of the bands F, F' at one side of the machine are secured to a rod G, adapted to be engaged with seats D⁴ formed in the corresponding sides of the blocks D, D', D², D³, and the bands F, F' extend from the 95 rod G exteriorly of the members E, E' to the other side of the machine, and then under a guide rod H attached to the blocks D, D', D², D³ at this side of the machine, and the free ends of the bands F, F' finally wind 100 on a drum I journaled on the frame C and adapted to be actuated by a suitable actuating device J, such as a hand lever or a pawl and ratchet wheel conveniently manipulated by a workman, to turn the drum I with a view 105 to simultaneously wind up the bands F and F', to draw the free sides of the members E, E' into closed position, thus forming the sheet A into a cylindrical shell with overlapping ends, and compactly holding the 110 rolls B within the said shell, as will be readily understood by reference to Fig. 1. Seg-

mental wedges K may be introduced between the exterior surfaces of the members E and E' and the blocks D, D', D², D³, as indicated in Figs. 1 and 3, to hold the sections of each member E and E' from opening out too far.

For packages of larger diameter, the wedges K are dispensed with, so as to allow the sections of each member E, E' to open out as far as possible for the reception of the sheet A and the rolls B.

On one end of the frame C is arranged an abutment L, preferably connected at its lower end to the frame C by hinges N, and this abutment L is adapted to be swung up into a vertical position and held therein by a suitable spring catch O engaging a keeper L' on the abutment L. When the abutment L is in its vertical position it is a distance from the outer end of the member E', and when the sheet A is placed in position in the members E and E', then one end of the sheet is abutted against the abutment L, it being understood that the arrangement is such that each end of the sheet A projects a like distance beyond the outer end of the corresponding member E or E'. In a like manner when the rolls B are placed into the sheet A from the open end thereof, then the said rolls are pushed inward until they abut against the abutment L, the rolls B and the sheet A being approximately of the same length.

The machine is used as follows: The bar G is disengaged from the notches D⁴ and moved to the other side of the machine so as to disengage the members E, E' and allow the same to swing into an open position, as indicated in Fig. 3. The abutment L is moved into a vertical position and locked therein by the catch O, after which the sheet A is placed in position in the members E and E', with one end of the sheet abutting against the abutment L. The rolls B are now placed into the sheet A from the open end thereof, and then the bar G is passed over the members E and E' and engaged with the notches D⁴, and the operator manipulates the actuating device J to turn the drum I and then wind up the ends of the bands F and F'. In winding up the bands F and F' they exert a pressure against the sections of the members E and E', so that the said sections are drawn inward toward each other, and in doing so correspondingly draw the free ends of the sheet A in a like direction and firmly around the rolls B, and the free ends of the sheet A are finally overlapped to form a complete cylindrical shell compactly containing the rolls B, as will be readily understood by reference to Fig. 1. The operator now stops the winding up of the bands F and F' and then disengages the catch O from the keeper L' to allow of swinging the abutment L downward out of engagement with one end of the sheet A and

the rolls B. The shell is now closed by the heads A', and the caps A² are placed over the heads and exterior surface of the ends of the shell, and then the bale ties A³ are placed around the caps A² so as to securely hold the same in place and at the same time bind the shell in position, a bale tie A⁴ being also placed around the shell at the middle thereof, that is, at the space between the adjacent inner ends of the members E and E'. When this has been done the operator releases the drum I to allow the bands F and F' to unwind a desired distance with a view to permit the sections of the members E and E' to swing back by their own resiliency into their normal open position, thus releasing the package which can now be quickly discharged from the machine by tilting the latter on end, so that the package slides out of the members E and E'. After the frame C is again righted to normal horizontal position, the bar G is disengaged from the notches D⁴ and moved over the members E and E' to the other side of the machine with the bands F, F' and then the machine is again ready for forming another package in the manner above described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A packaging machine, comprising a segmental block, a flexible shaping member attached to the said segmental block and having its free sides extending beyond the block to provide a holder for a sheet to be formed into a cylindrical shell, means acting exteriorly on the said member to draw the free sides of the said member together to give a cylindrical shape to the sheet, the ends of the sheet projecting beyond the ends of the said shaping member to permit of placing a closure on each end of the shell and tying the closure with bale ties, and an abutment at one end of the machine for one end of the sheet to abut against to position the sheet in the said shaping member and to even the rolls placed lengthwise into the shell.

2. A packaging machine for packaging rolls in shells, comprising sets of segmental blocks, flexible shaping members attached to the said sets of blocks and having their free sides extending upward beyond the blocks for the reception of a sheet to be formed into the shell and for placing the rolls into the sheet, said segmental blocks and their corresponding flexible shaping members being spaced apart whereby a bale tie may be applied between the spaced apart blocks, and flexible bands exteriorly engaging the said shaping members for drawing the free sides thereof into closed position, the said flexible bands extending between the members of the said sets of blocks.

3. A packaging machine for packaging

rolls in shells, comprising sets of segmental blocks, flexible shaping members attached to the said sets of blocks and having their free sides extending upward beyond the blocks for the reception of a sheet to be formed into a shell and for placing the rolls into the sheet, flexible bands adapted to exteriorly engage the said shaping members for drawing the free sides thereof into closed position, a retaining bar at one end of each of the said flexible bands, and winding means engaging the other end of each of the said bands to draw the flexible bands over the free sides of the flexible shaping members to close the same.

4. A packaging machine for packaging rolls in shells, comprising sets of segmental blocks, flexible shaping members attached to the said sets of blocks and having their free sides extending upward beyond the blocks for the reception of a sheet to be formed into a shell and for placing the rolls into the sheet, flexible bands adapted to exteriorly engage the said shaping members for drawing the free sides thereof into closed position, a retaining bar at one end of each of the said flexible bands, winding means engaging the other end of each of the said bands to draw the flexible bands over the free sides of the flexible shaping members to close the same, and an abutting plate at one end of the machine for the sheet and rolls to abut against.

5. A packaging machine for packaging rolls in shells, comprising sets of segmental blocks, flexible shaping members attached to the said sets of blocks and having their free sides extending upward beyond the blocks for the reception of a sheet to be formed into a shell and for placing the rolls into the sheet, flexible bands adapted to exteriorly engage the said shaping members for drawing the free sides thereof into closed position, a retaining bar at one end of each of the said flexible bands, winding means engaging the other end of each of the said bands to draw the flexible bands over the free sides of the flexible shaping members to close the same, the said sheet and rolls projecting beyond the outer ends of the said shaping members to permit of placing closures on the ends of the shell, and bale ties around the shell.

6. A packaging machine, comprising a

frame, spaced segmental blocks held transversely on the said frame, a flexible curved shaping member made in sections hinged to the said blocks for receiving a sheet and rolls to be packaged, a flexible drawing band extending transversely and passing exteriorly over the sides and free ends of the said shaping member, a bar secured to one end of the said band and adapted to be removably attached to one side of the said frame, and a winding means on the other side of the said frame engaging the other end of the said band.

7. A packaging machine, comprising a frame, spaced segmental blocks held transversely on the said frame, a flexible curved shaping member made in sections hinged to the said blocks for receiving a sheet and rolls to be packaged, a flexible drawing band extending transversely and passing over the sides and free ends of the said shaping member, a bar secured to one end of the said band and adapted to be removably attached to one side of the said frame, a winding means on the other side of the said frame engaging the other end of the said band, and an abutment pivoted at one end of the frame for the sheet and rolls to abut against.

8. A packaging machine, comprising a frame, spaced segmental blocks held transversely on the said frame, a flexible curved shaping member made in sections hinged to the said blocks for receiving a sheet and rolls to be packaged, a flexible drawing band extending transversely and passing exteriorly over the sides and free ends of the said shaping member, a bar secured to one end of the said band and adapted to be removably attached to one side of the said frame, a winding drum mounted on the other side of the said frame and on which winds the other end of the said band, manually-controlled means for actuating the said drum, and an abutment pivoted on one end of the said frame for the rolls and sheet to abut against.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MILLARD F. ANDERSON.

Witnesses:

W. E. THATCHER,
ALVIN HUNSICKER.