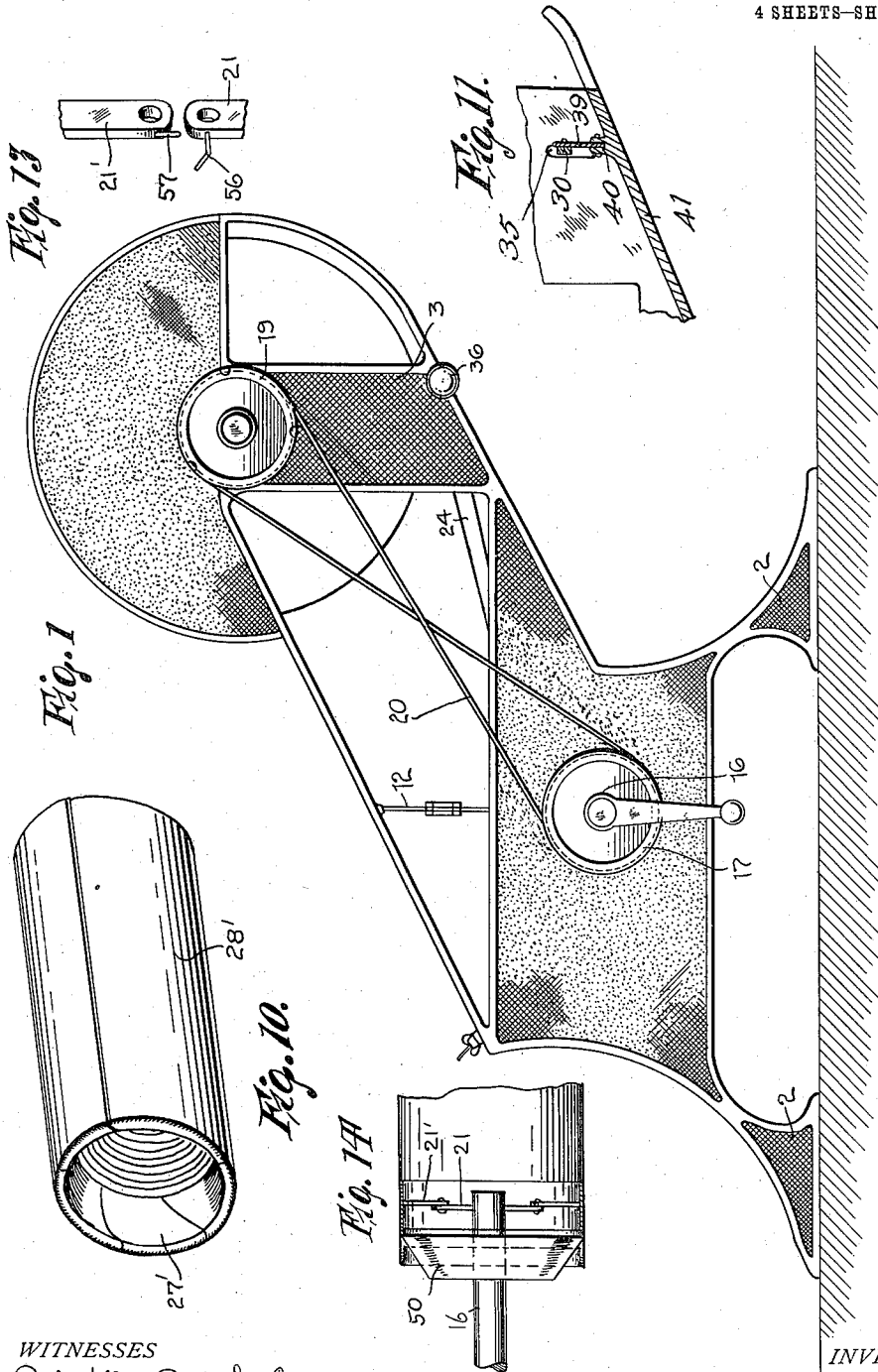


A. LINDGREN.
 DRY GOODS WRAPPER.
 APPLICATION FILED JAN. 11, 1912.

1,045,046.

Patented Nov. 19, 1912.

4 SHEETS—SHEET 1.



WITNESSES
 Robert m. Sutphen.

INVENTOR
 Alfred Lindgren

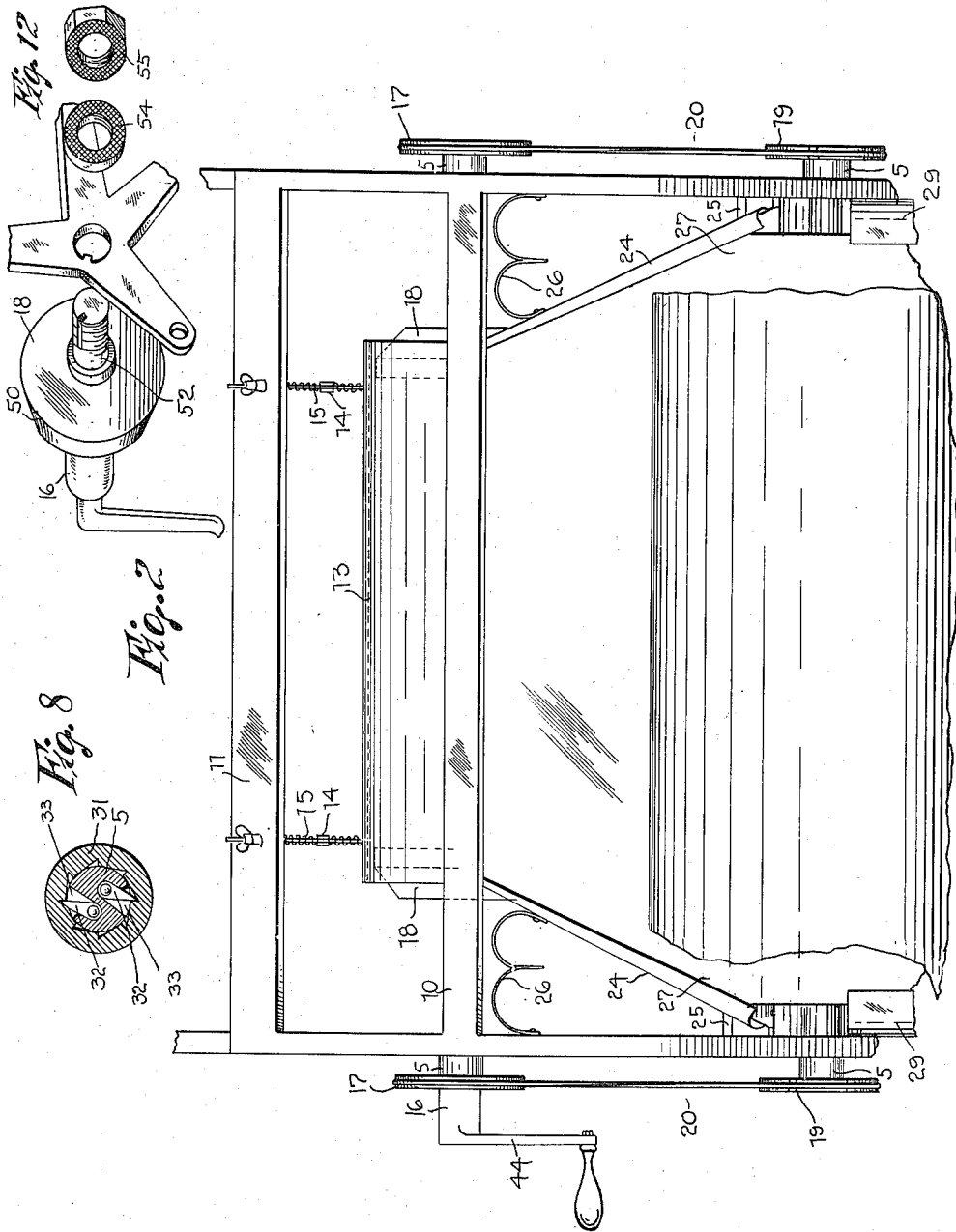
W. L. M. Cathman By E. C. Vrooman, his Attorney

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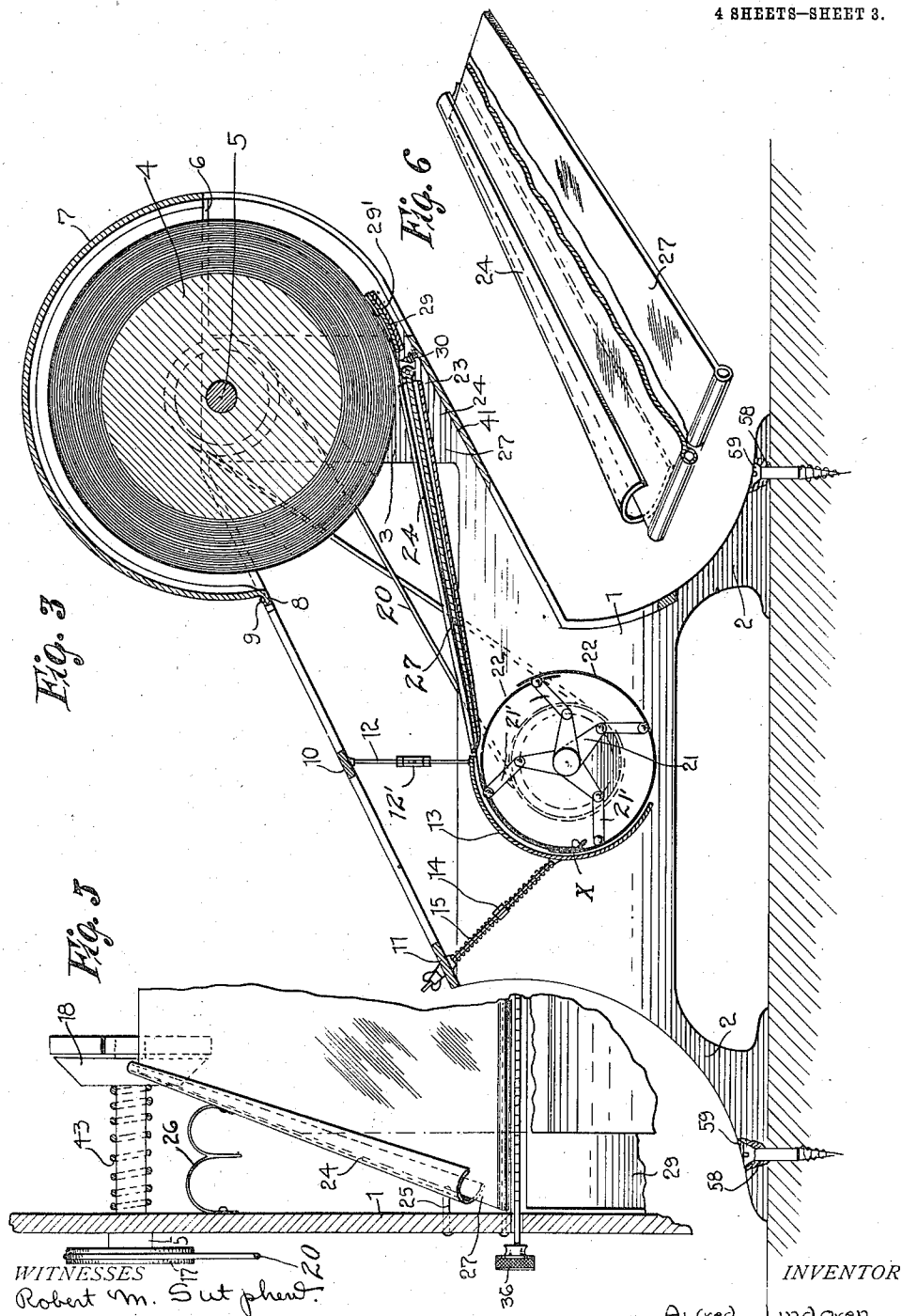
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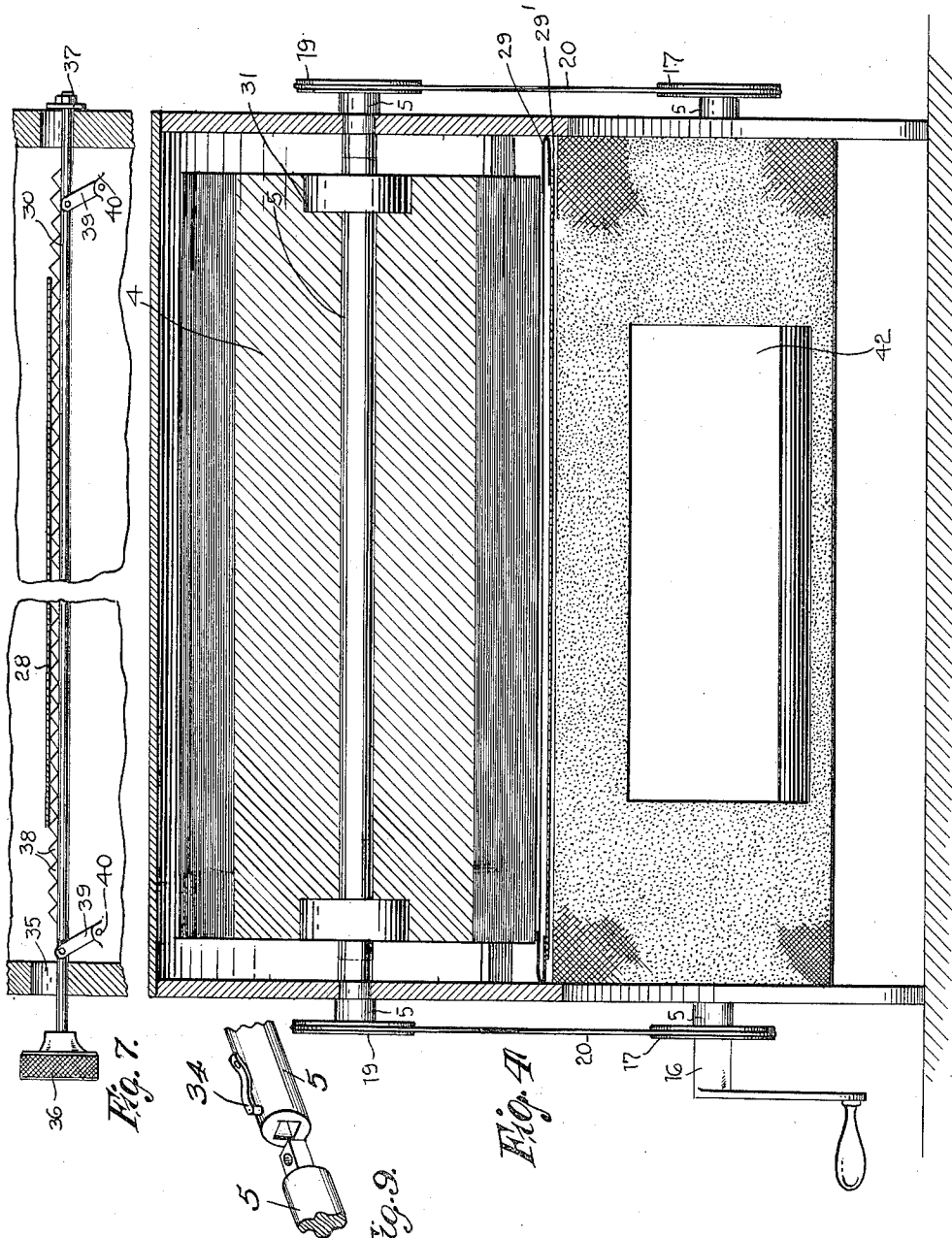


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4 SHEETS—SHEET 4.



WITNESSES
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UNITED STATES PATENT OFFICE.

ALFRED LINDGREN, OF SALINA, KANSAS.

DRY-GOODS WRAPPER.

1,045,046.

Specification of Letters Patent.

Patented Nov. 19, 1912.

Application filed January 11, 1912. Serial No. 670,696.

To all whom it may concern:

Be it known that I, ALFRED LINDGREN, a citizen of the United States, residing at Salina, in the county of Saline and State of Kansas, have invented certain new and useful Improvements in Dry-Goods Wrappers, of which the following is a specification, reference being had therein to the accompanying drawing.

The object of the present invention is the provision of means for facilitating the wrapping of a bundle without the necessity of using a string or other binder.

Another object of this invention is the production of efficient means for crimping the ends of the paper while wrapping the same around the bundle, whereby the paper will be firmly held upon the bundle.

Still another object of this invention is the production of efficient means for placing and holding the article to be wrapped within the machine.

With these and other objects in view, this invention consists of certain novel constructions, combinations and arrangements of parts, as will be hereinafter fully described and claimed.

In the drawings:—Figure 1 is a side elevation of the machine. Fig. 2 is a fragmentary top plan view thereof. Fig. 3 is a central longitudinal section of the machine. Fig. 4 is a rear view of the machine showing the paper roll compartment and a paper roller in section. Fig. 5 is a fragmentary top plan view of a portion of the machine showing the relation of the paper crimper to the supporting head. Fig. 6 is a detail perspective of one of the paper crimpers shown in connection with the paper guide table. Fig. 7 is a transverse section through the machine showing the construction of the cutting knife. Fig. 8 is a transverse section through the paper roller and supporting shaft showing the construction of the rod used in connection therewith for preventing the rotation of the shaft in one direction. Fig. 9 is a detail perspective of the connecting means for the shaft which supports the paper roll. Fig. 10 is a perspective view of the bundle after the same has been wrapped. Fig. 11 is an enlarged longitudinal sectional view of the wrapping frame showing the cutting knife attached thereto. Fig. 12 is a perspective

view of a portion of the pair of gripping members showing the same drawn apart or in an unassembled position. Fig. 13 is a detail perspective of the paper gripping controlling arms showing the means for limiting the swinging movement of one portion upon the other. Fig. 14 is a transverse sectional view through the paper gripping members showing the manner in which the paper is folded along the edge of the bundle.

Referring to the drawings by numerals 1 designates the frame which is preferably supported by means of integral feet 2, and this frame carries at its upper end a pair of upwardly extending arms 3. A paper roller 4 is supported between the arms 3 upon a shaft 5. The frame 1 curves upwardly and connects with the longitudinally extending bars 6 of the frame which are supported by the top of the arms 3. A shield or hood 7 is carried by the upper end of the frame 1, and has one end thereof secured to the frame by means of a rolled edge 8 fitting under the transverse bar 9 which constitutes a hinge for the hood 7. The frame 1 is provided upon the top thereof with a central, transversely extending bar 10 and near the lower end of the top of the frame, the same is also provided with a transversely extending bar 11. A hanger bar 12 is suspended from the central transverse bar 10 and this hanger bar supports a shield 13 which shield is adapted to cooperate with the wrapping mechanism hereinafter described. The shield 13 is braced by means of rods 14 which rods depend from the transverse bar 11 and are connected to the front of the shield 13. It will therefore be obvious that the front of the shield 13 will be yieldably supported in view of the fact that springs 15 are placed upon the rod 14. A pair of shafts 16 are carried by the frame 1, and each of these shafts carries a drive pulley 17. The inner end of each of the shafts 16 is provided with a head 18. These drive pulleys 17 are driven by means of pulleys 19 which are carried by the shaft 5 above described. A belt 20 connects the pulleys 17 and 19.

A plurality of collapsible arms 21 are carried by each shaft 16 and the outer ends of these collapsible arms are connected to the collapsible sections 22 of the paper clamping means. There are preferably four

arms 21 employed, two of which are connected to each section so that when the shaft 16 is rotated counter-clockwise, the two sections will be clamped along their ends and when the shaft is rotated clockwise, the sections will be collapsed. The object of the clamping means, on the end of the collapsible sections is to grip the end of the paper when it is desired to wrap the bundle, thereby making a pocket for the reception of the bundle before being wrapped. The paper is drawn around the outside of the upper section and clamped between the adjacent edges of the collapsible sections at the point marked *x* in Fig. 3. The crank 44 is then turned $\frac{1}{4}$ of a turn thereby forming a pocket for the goods to be wrapped.

A table 23 is hinged to the frame 1, directly below the paper roller 4, and extends partly over the collapsible sections 22 as is illustrated in Fig. 3. Crimping members 24 are pivotally secured to the frame 1, by means of a rod 25 and the free ends of the crimping members 24 are yieldingly supported by means of springs 26. These springs are preferably formed of two loop-sections. These crimping members 24 are substantially semicircular in cross section and as the paper from the roller 4 passes into the crimping members 24, the edges will be rolled under the table, thereby allowing the same to fold over the edges of the bundle which is being wrapped.

The shaft 5 is provided with a pair of ratchet casings 31 which tightly grip the paper roller 4. Ratchet pawls 32 are carried by the shaft 5 and work in sockets 33 formed in the shaft 5. It will be obvious that as the shaft 5 is rotated clockwise the ratchet pawls 32 will engage the ratchet casing 31 and rotate the paper roller whereas when the shaft 5 is rotated counter-clockwise, the pawls will readily slip over the ratchets upon the casing 31 without rotating the roller 4. Clips 34 are carried by the shaft 5 so as to allow the same to be detached for removing the paper roller from the shaft 5. The frame 1 is provided upon each side with a vertically extending aperture 35 in which works the cutting knife 30. The cutting knife 30 is provided upon one end with a handling knob 36 and at the other end with a stub nut and washer 37. The knife 30 is provided upon its upper edge with a plurality of sharpened teeth 38 and this knife, 30 is supported upon links 39 having their lower ends carried by ears 40 which ears are supported upon the plate 41 of the frame 1. It will be obvious that as the knife 30 is shoved inwardly the same will rise upon the links 39 thereby pressing the sharpened teeth 38 against the paper and severing the same from the roller. The frame 1 is provided upon its rear with an opening 42 for allowing the bundle or goods

which is desired to be wrapped to be placed within the pocket formed by the paper. The bundle may also be ejected or removed from the frame through the same opening 42.

One of the shafts 16 is provided with a coil spring 43 which spring presses against one of the heads 18. A crank 44 is also carried by the last-mentioned shaft 16 for allowing the same to operate the machine when it is desired to wrap the article. When it is desired to remove the bundle, the crank 44 will be drawn outwardly thereby withdrawing the heads 18 and 22 from the end of the bundle and allowing the bundle to be removed from the machine.

From the foregoing description it will be obvious that a very simple and efficient device has been produced whereby the bundle may be easily and conveniently held and the same wrapped efficiently after being once placed within the machine. Each of the pulley wheels 17 and 19 are notched upon their periphery so as to allow the belt to be easily placed upon and removed from the wheels when it is desired to do so.

The shield 13 as stated above is suspended from the central transverse bar 10 through the medium of the hanger bar 12 which consists of a pair of sections connected at their ends by means of a turn buckle 12'. By the use of this turn buckle 12', it will be obvious that the shield 13 may be adjusted vertically. As the paper passes over the table 27 and the edges of said paper are crimped, the crimped edges 27' will be folded over the edge of the bundle 28' as illustrated in Fig. 10. Of course, the paper extends for some distance to one side of each end of the bundle 28' so as to allow the paper to be easily folded back to retain its crimped form while being rolled upon the bundle 28'. The wrapping of the bundle in the manner as above stated is made possible in view of the fact that the bundle supporting blocks firmly engage the ends of the bundle and the paper is allowed to extend upon each side of said bundle.

From the foregoing description, it will be obvious that as the paper is fed over the bundle the ends thereof will be so crimped as to take the desired shape after passing around the bundle by first being held in engagement with the crimping jaws 22.

By carefully considering Fig. 3 of the drawing, it will be obvious that as the arms 21 are rotated to the left, the links 21' will be straightened in alinement with the arms 21, thereby causing the collapsible sections to be brought tightly together at their adjoining ends. As long as the operating shaft is operated in the direction above stated, the paper will be firmly gripped by the edge of the jaws as illustrated at X in Fig. 3. If, however, the shaft is rotated in

the opposite direction after the bundle has been once rotated, of course, the arms 21 will cause the links 21' to be released from their aligned position and again assume a collapsed position, and allowing the adjoining edges of the gripping sections 22 to be released from each other.

As is illustrated in Fig. 12, the head 18 is provided with a beveled face 50 for allowing the paper to be easily removed from the head 18 and gripping members 22 when the head 18 is drawn from the edge of the paper wrapped around the bundle. This feature is clearly illustrated in Fig. 14. The paper gripping members 22 are supported by arms 21 as previously described which arms are integrally connected together. The arms 21 are keyed to the axle 52 formed upon the shaft 16. The outer face of the arms are engaged by means of a roughened washer 54, which washer is in turn engaged by means of a nut 55 having a milled or roughened face engaging the washer whereby the nut will firmly hold the member 51 in its proper place upon the stub shaft 52. The arms 21 are provided near their outer ends with angular, laterally extending members 56 which are adapted to engage the sides of the links 21' for limiting the pivotal movement of said arms in one direction. Each of the links 21' is also provided with a depending finger 57 which is also adapted to engage the angle members 56 carried by the arms 21 for limiting the pivotal movement of the link 21 in the opposite direction. Of course, it should be understood that when the paper is cut the cut edge is still a distance from the bundle and the crank 44 is rotated until the end of the paper has reached the bundle. The free end of the paper carried by the roller follows the cut edge of the paper wrapped around the bundle and then the operation of the crank is discontinued and operated in the opposite direction, thereby releasing the edge of the paper from the paper grippers and allowing the bundle to be removed from the machine, and the edge of the paper to be released from the grippers. Of course, the edge of the paper for receiving a new bundle may also be attached as previously described. Semicircular guards 29 are carried by each side of the frame 1 and are adapted to engage the edge of the paper carried by the roller for guiding the same directly to the paper crimpers. A stationary table 29' is carried by the lower edge of the semicircular guards 29, and this stationary table is adapted to protect the paper as the same is first cut by the knife 30. The inner ends of the semicircular guards 29 are much lower than their outer ends so as to guide the paper directly near the knife, and facilitate the cutting thereof. The feet 2 of the body 1 are provided with apertures 58 through

which screws or bolts 59 pass for firmly holding the wrapping machine upon a support.

What is claimed is:—

1. A machine of the class described comprising a frame, heads carried thereby, one of said heads being yieldably mounted for allowing said head to be withdrawn, paper clamping means, a paper roll carried by said frame, means for simultaneously rotating said paper roll and paper clamping means, and means carried by said paper clamping means for gripping the edge of the paper from said paper roll whereby a pocket will be formed for the reception of an article to be wrapped.

2. A machine of the class described comprising a frame, a paper roll carried thereby, paper gripping members carried by said frame comprising a pair of collapsible sections, collapsible arms carried by said paper gripping clamps for supporting said collapsible sections whereby said collapsible sections will tightly grip each other at their edge when said shafts are rotated in one direction and will become disengaged when said shaft is rotated in the opposite direction, and the edges of said collapsible sections being adapted to engage the edge of the paper carried by said paper roll for supporting the same in position for constituting a pocket for an article to be wrapped.

3. A machine of the class described comprising a frame a paper roll carried thereby, paper gripping members associated therewith, link arms supporting said paper gripping members, the paper from said roll being adapted to be gripped between the adjoining edges of said paper gripping section, and said paper gripping sections being adapted to firmly clamp said paper in engagement therewith when the article gripping heads are being rotated clockwise and said paper gripping members will be released when said heads are rotated clockwise and said paper gripping members will be released when said heads are rotated counter clockwise.

4. A machine of the class described comprising a frame, a paper roll carried thereby, semicircular guides carried by said frame and engaging the edges of the paper from said paper roll, a stationary table associated with said guides and being adapted to act as a support for the paper from said paper roll, a cutting means associated with said table for facilitating the cutting of the paper from said paper roll, and bundle wrapping means carried by said frame and cooperating with said paper roll for winding paper from said roll around an article to be wrapped.

5. A machine of the class described comprising a frame, paper gripping means carried by said frame, a paper roll carried by

said frame, said paper gripping means comprising a pair of paper grippers contacting at their adjacent ends, shafts carried by said frame, arms extending from said shaft, 5 links connected to said arms and engaging said sections of said paper gripper being adapted to draw the edges of said sections together, and means carried by said arms and links for limiting the swinging movement of said links relative to said arms. 10

6. A machine of the class described comprising a frame, a paper roll carried thereby, paper gripping means carried by said frame and comprising heads having beveled faces, 15 paper engaging means carried by said paper grippers, and said beveled faces of said heads being adapted to facilitate the removal of said paper from said heads, and paper crimping means carried by said frame, 20 and means for severing said paper.

7. A machine of the class described comprising a frame, a paper roll, article wrapping means carried by said frame and adapted to engage the paper carried by said roll for unwinding the paper from said roll, 25 a hinged table carried by said frame for receiving said paper as the same is unwound from said roll, substantially semi-circular crimpers carried by said frame and cooperating with said table for crimping the edge 30 of the paper, as the same passes over said table, and means for severing said paper from said paper roll.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

ALFRED LINDGRÉN.

Witnesses:

P. S. SOLDAN,

C. E. SULLIVAN.