

(No Model.)

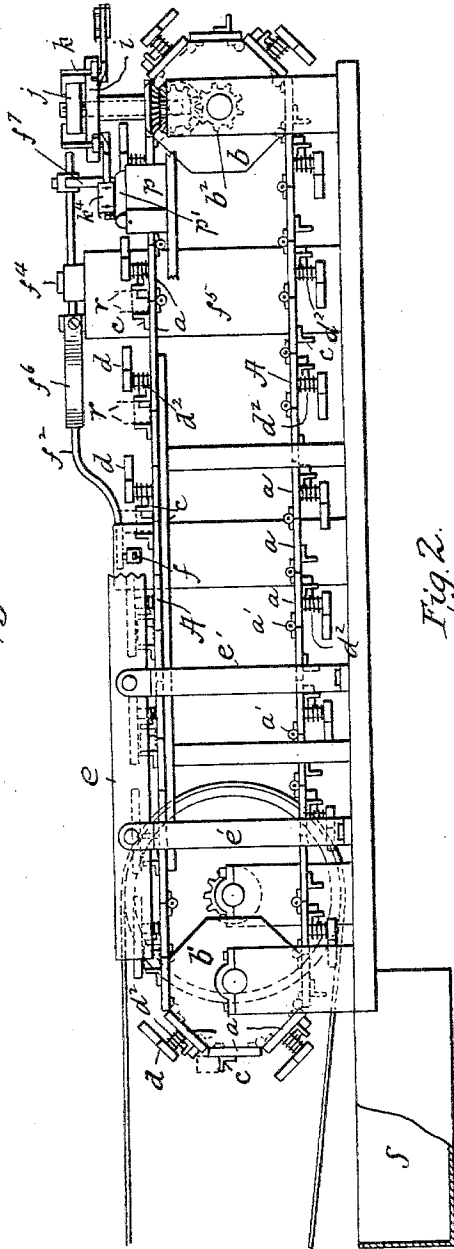
2 Sheets—Sheet 1.

M. W. SCHLOSS.
PARCEL WRAPPING MACHINE.

No. 566,540.

Patented Aug. 25, 1896.

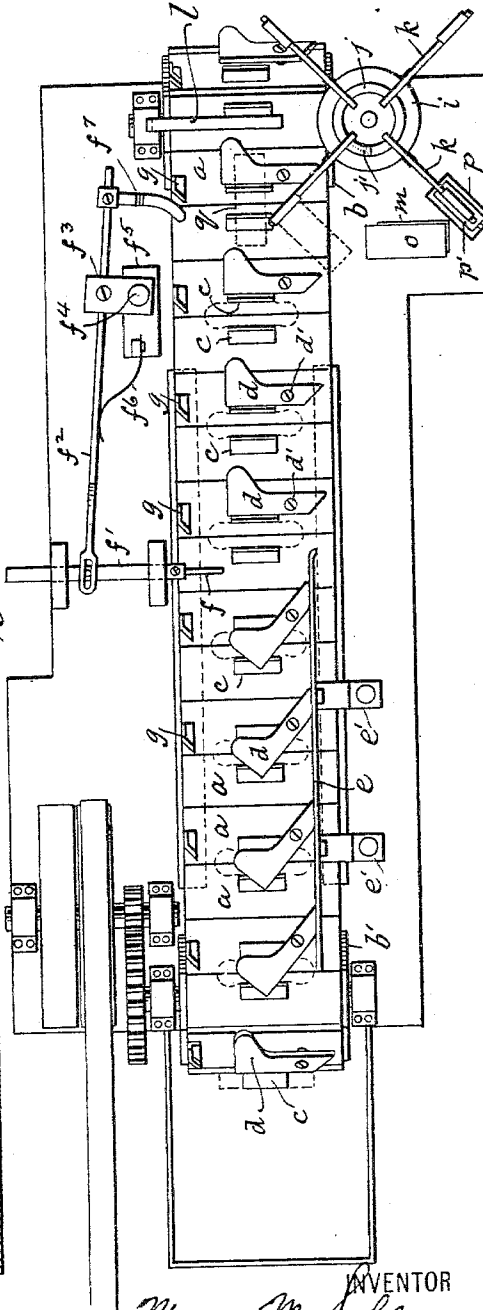
Fig. 1.



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Fig. 2.



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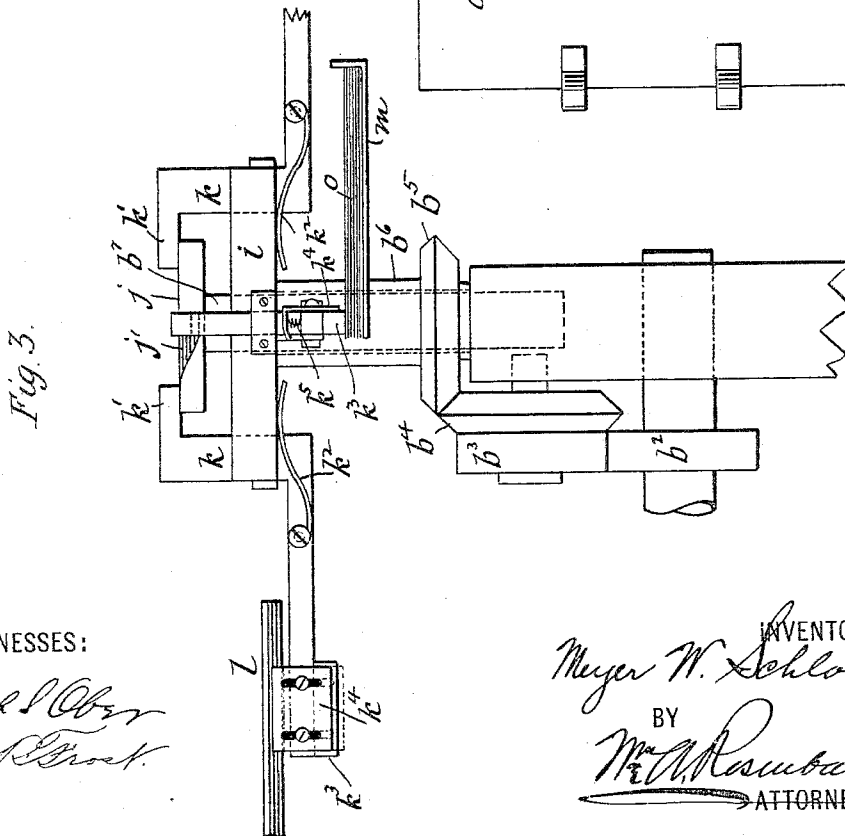
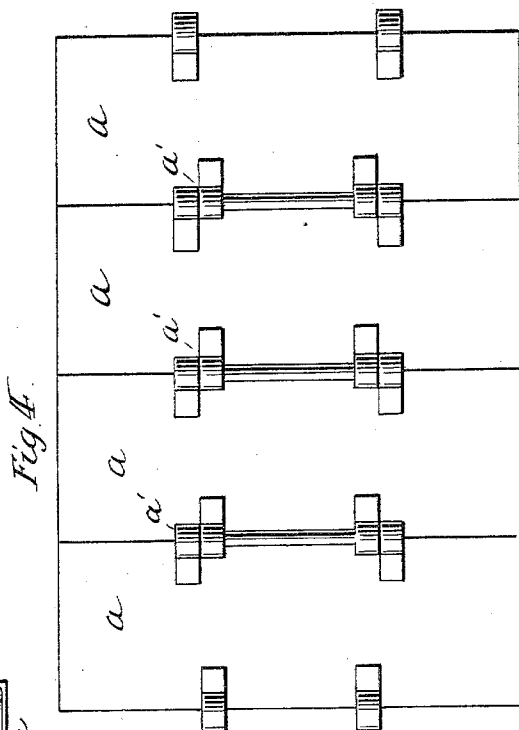
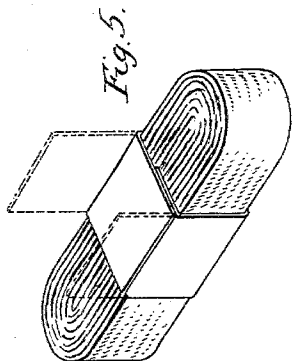
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UNITED STATES PATENT OFFICE.

MEYER W. SCHLOSS, OF NEW YORK, N. Y., ASSIGNOR TO THE AUTOMATIC WRAPPING MACHINE COMPANY, OF NEW YORK.

PARCEL-WRAPPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 566,540, dated August 25, 1896.

Application filed December 9, 1895. Serial No. 571,481. (No model.)

To all whom it may concern:

Be it known that I, MEYER W. SCHLOSS, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Parcel-Wrapping Machines, of which the following is a full, clear, and exact description.

The invention is a machine for folding a wrapper of flexible material, such as paper, around a parcel or package of goods and sealing the same, the object being to perform this work rapidly and neatly and to dispense with manual labor to a great extent in packing up goods. The machine consists of an endless belt made up of a series of rigid links hinged together and moving over suitable power-driven rollers. The belt carries a number of holders in which the wrappers are first placed and upon the wrappers the packages to be wrapped. The holders thus loaded are then carried forward to points where folding devices first fold one end of the wrapper down and then the other, the latter being held and slightly compressed for a short time to allow the mucilage or paste which has previously been applied to the surface of the wrapper to dry sufficiently to hold the wrapper in place about the package. Then the wrapper and package are released and automatically fall out of the machine and into a receptacle.

The invention consists of devices for applying mucilage or paste to the edge of the wrapper and for placing the wrapper in position upon the holder; of the construction of the holder and its combination with the belt; of the folding device for folding over one end of the wrapper; of a second folding device for folding the other end of the wrapper and holding it in place, and of certain details of construction which will be hereinafter fully described, and pointed out in the claims.

Referring to the accompanying drawings, in which the machine is illustrated, Figure 1 is a side elevation thereof. Fig. 2 is a plan. Fig. 3 is an enlarged elevation of the device for placing a wrapper upon a holder. Fig. 4 is a view of the back of the belt, showing the method of hinging the links together; and Fig. 5 is a perspective view of the pack-

age of goods with the wrapper applied thereto as it appears when leaving the machine.

This machine was designed especially to place paper straps or labels around the middle portion of a stick of dress braid or binding, but it will be understood that the invention involved may be used for wrapping up goods of most any character. The width of the paper wrapper with respect to the package of goods is immaterial. The main function of the machine is to put a strap around a parcel of goods and seal it in place.

The machine consists, primarily, of an endless belt A, made up of a series of rigid, flat, rectangular links *a*, hinged together on the under or back side, as shown at *a'*, in such a manner that the face of the belt will be perfectly smooth and without cracks between the links when the belt is straight. The belt is mounted upon two polygonal rollers *b* and *b'*, respectively, the rollers here shown being octagons with sides equal in length to the width of the links composing the chain. On the face of every two links is placed a holder, consisting merely of pieces of angle-metal *c*, placed crosswise of the belt, with one side secured to a link and the other extending vertically or at right angles therefrom. Each holder consists of two of these pieces *c*, placed directly opposite each other and one on each of two adjoining links. The space between these angle-pieces is the receptacle for the article or goods about which the wrapper is to be applied. Adjacent to each holder and pivoted to one of the links is a swinging arm *d*, which I have termed the "sealing-blade." This blade is parallel to the face of the belt, and is supported upon its pivot-post *d'* in a plane coinciding with the top or upper edges of the holder. A spiral spring *d²* is applied to this blade, with a tendency to maintain it in the position shown at the right-hand end of the belt in Fig. 2. One end of the blade is inclined, as shown, for the purpose of engaging with a flange *e*, fixed upon suitable brackets *e'* at one side of the belt. As the belt is moved along from right to left the inclined ends of the blades successively strike the end of the flange *e* and the blade is swung forward over the center of the holder. It remains in this position as long as the inclined

end of the blade is in contact with the flange. When the blade is past the flange, spring d^2 acts and returns the blade to its former position. On the side of the belt opposite the flange e is arranged what I term the "folding-blade" f . This is a flat finger fixed in the end of a reciprocating bar f' and located in the same plane as the top of the holder or the under side of the sealing-blade. It occupies a transverse position a very short distance to the left of the point where the flange e begins. To the bar f' is connected by means of a pin and slot an arm f^2 , which is secured to a lug f^3 , and the latter pivoted at f^4 to the post f^5 . A spring f^6 bears against the arm f^2 with a tendency to force it away from the belt. Arm f^2 carries at its extremity a curved finger f^7 , which projects slightly over the edge of the belt and close to it. To one of each pair of links a is fixed a cam-lug g . These lugs correspond, respectively, with the holders. Their function is to successively strike the end of the finger f^7 and force it outward, holding it in that position until the cam passes the finger, when the spring f^6 returns the finger to its normal position. When the finger is thus thrown outward by the cam, the folding-blade f is thrown inward across the path of movement of the holders c . The folding-blade is held in this position until the next succeeding sealing-blade has been struck and partially moved by the flange e . At that moment the cam g releases finger f^7 and the folding-blade is withdrawn out of the path of movement of the holders.

Upon the shaft of the polygonal roller b is a pinion b^2 , engaging with another pinion b^3 , which carries a beveled gear b^4 , engaging with another beveled gear b^5 . This last gear-wheel is on a sleeve b^6 , surrounding a stationary post b^7 . The sleeve carries a disk i and the post a disk j . These disks are arranged concentrically one above the other, the disk i rotating with the sleeve, while the disk j is stationary. Disk i carries four arms k , &c., projecting radially and mounted in radial notches formed in the periphery of the disk. The arms have upward extensions, which occupy the said notches, and rearward extensions k' , which project over the edge of the disk j , upon which they rest and slide as they move around with the disk i . Springs k^2 are provided, with a tendency to lower the arms or to draw them downward against the disk j , sliding them meanwhile in the notches of the disk in which they are located. The edge of the disk j is provided with a notch j' , which is formed by one abrupt shoulder and another gradually-inclined shoulder. As the arms slide around on the edge of the disk j they successively drop into the notch j' and are gradually lifted out of the same. At the outer end of each arm is a block k^3 , about the same width as the wrapper or label which is to be placed about the parcel. The extremity of the arm is covered by a siding hood k^4 , the lower edge of which is held above the

lower edge of the block by springs k^5 . Immediately opposite the disks i and j and standing transversely across the belt is a stationary arm l , with its under surface beveled and at an elevation to strike the top of the hood k^4 as the arms swing around and force it downward, thus causing the lower edge of the hood to pass the lower edge of the block k^3 . In front of the disks i and j is located a tray, box, or table m , adapted to hold a pile of the wrappers which are to be bound upon the parcels by the machine. This pile of wrappers is located with one end opposite the notch j' in the disk j and at a point where the block k^3 will strike across the end of the wrapper on top of the pile when the arm k drops into the notch. Back of the pile of wrappers a reservoir p of mucilage or paste is located and provided with a roller p' , projecting slightly above the top and running in contact with the contents of the reservoir. The roller is in such a position that the blocks k^3 as they swing around will rub over it and take therefrom a quantity of paste or mucilage contained upon its surface.

Suppose the machine to be running, the operation is as follows: The belt has a continuous movement from right to left and the arms k constantly rotate. As an arm k moves around, the block k^3 , which it carries, first takes mucilage from the roller p' . It then swings around to a point directly above the end of the pile of wrappers and then drops into the notch j' of the disk j and throws its block k^3 into contact with the wrapper on top of the pile. The wrapper adheres to the block and the arm immediately lifts the wrapper from the pile and carries it over across the belt, the arm reaching a position at right angles to the travel of the belt at the moment when one of the holders c is presented below the wrapper which the arm carries. The arm then passes under bar l , which presses the hood k^4 downward and forces the label out of contact with the block, leaving it deposited lengthwise across the top of the holder c in the position shown in dotted lines at q . An operator then lays one of the parcels to be wrapped upon the middle of the wrapper and forces it into the holder. Three sides of the parcel are then surrounded by the wrapper, the two ends of the wrapper projecting upward, as shown in dotted lines at r in Fig. 1, in the shape of an open loop. The parcel in this condition is carried along by the belt to a point near to the folding-blade f . Then one of the cams g strikes finger f^7 and forces the folding-blade into the path of the holder. The forward movement of the holder then carries one of the projecting ends of the wrapper against the blade, thereby causing it to fold down upon the top of the parcel. Immediately thereafter the toe of the corresponding sealing-blade d strikes flange e and the blade is swung forward, folding the other end of the wrapper over onto the first end. Immediately the

folding-blade *f* jumps back and the holder moves along with the sealing-blade pressed upon the top of the parcel and holding the two ends of the wrapper together. Mucilage having been previously applied to the end of the wrapper this opportunity is given for it to dry and hold. The sealing-blade remains in contact with the parcel throughout the latter half of the travel of the belt from one roller to the other. The toe of the blade runs out of contact with flange *e* just before the belt turns over the octagonal roller. Then the spring *d*² withdraws the sealing-blade to its normal position. In passing around the octagonal roller the links of which the belt is made up are caused to swing on their hinges and thus throw the two sides of the holder *c* apart. This releases the parcel and allows it to fall out of the holder and into any suitable receptacle *S*. The holder then travels along the under side of the machine idle. It will be understood that the belt moves at a slow speed and that the wrappers are brought around into position and the parcels fed into the holders successively, the holders on the upper side of the belt being full all the time. The parcels may be placed in the holders either by hand, as described, or in any other desired manner.

For wrapping other kinds of articles it will be necessary to alter the shape, size, and position of the various parts having to do with the parcels direct. For instance, bits of chewing-gum would require holders of small capacity and the two folding-blades would need to be adjusted in distance from the face of the belt and in throw. The machine as herein described may be used for various articles and for this purpose the finger *f*⁷ is made adjustable along rod *f*². Blade *f* may be pushed into or withdrawn from the rod *f*⁷, the set-screws in both instances indicating the clamping devices. The other adjustments necessary would readily occur to any mechanic.

Under some conditions it would be feasible to use an ordinary flexible belt of leather or other material instead of the link belt described. By allowing it to run over a rigid smooth plate for a backing the necessary rigidity would be obtained, and the parts of the holders would separate in passing around a cylindrical roller quite as readily as with the links and polygonal rollers.

Having thus described my invention, I claim—

1. In a parcel-wrapping machine, a traveling holder for the parcel and wrapper, in combination with two folding-blades, one of which is normally stationary and adapted to move into and out of the path of movement of the holder to fold down one end of the wrapper, and the other traveling with the holder and adapted to fold the other end of the wrapper after the first blade has operated, and means

for retaining the second blade in contact with the folded end of the wrapper for a substantial portion of its movement to allow the adhesive material to stick substantially as described.

2. In a wrapping-machine, a series of holders for the parcels and wrappers, in combination with a folding-blade acting successively upon the wrapper in each holder and a series of sealing-blades corresponding respectively to the holders, the folding-blade being automatically moved into and out of operative position for each parcel.

3. In a wrapping-machine, the combination of an endless belt traveling over rollers, a series of holders for the parcels and wrappers, said holders carried by said belt, a folding-blade acting successively upon the wrapper in each holder and a series of sealing-blades carried by the belt and corresponding respectively to the holders, substantially as described.

4. In a wrapping-machine, the combination of a series of traveling holders for the parcels and wrappers, a stationary folding-blade normally out of the line of travel of the holders, and means for throwing said blade into and out of the line of travel of said holders as they successively pass it, the movement of the holders serving to carry the wrappers against the stationary blade to fold the wrapper substantially as described.

5. In a wrapping-machine, the combination of a traveling belt, a series of holders for the parcels and wrappers, a stationary folding-blade normally out of the line of travel of the holders, and devices carried by the belt for throwing said blade into and out of the line of travel of said holders as they successively pass it, for the purpose set forth.

6. In a wrapping-machine, a traveling belt carrying a series of holders for the parcels and their wrappers, a series of folding-blades pivoted upon the belt and respectively adjacent to the holders, a stationary flange against which said blades are adapted to impinge and be moved, and means for returning said blades to their normal positions, substantially as described.

7. In a wrapping-machine, the combination of a traveling belt, a parcel-holder carried thereby, a reciprocating folding-blade moving transversely to the line of travel of the belt, a pivoted lever connected with said blade and a cam carried by the belt and adapted to move said lever to reciprocate the folding-blade, substantially as described.

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

MEYER W. SCHLOSS.

Witnesses:

WM. A. ROSENBAUM,
FRANK S. OBER.