

No. 822,252.

PATENTED JUNE 5, 1906.

O. DESROSIERS.  
SELF CLOSING PAPER BAG MACHINE.  
APPLICATION FILED JULY 1, 1904.

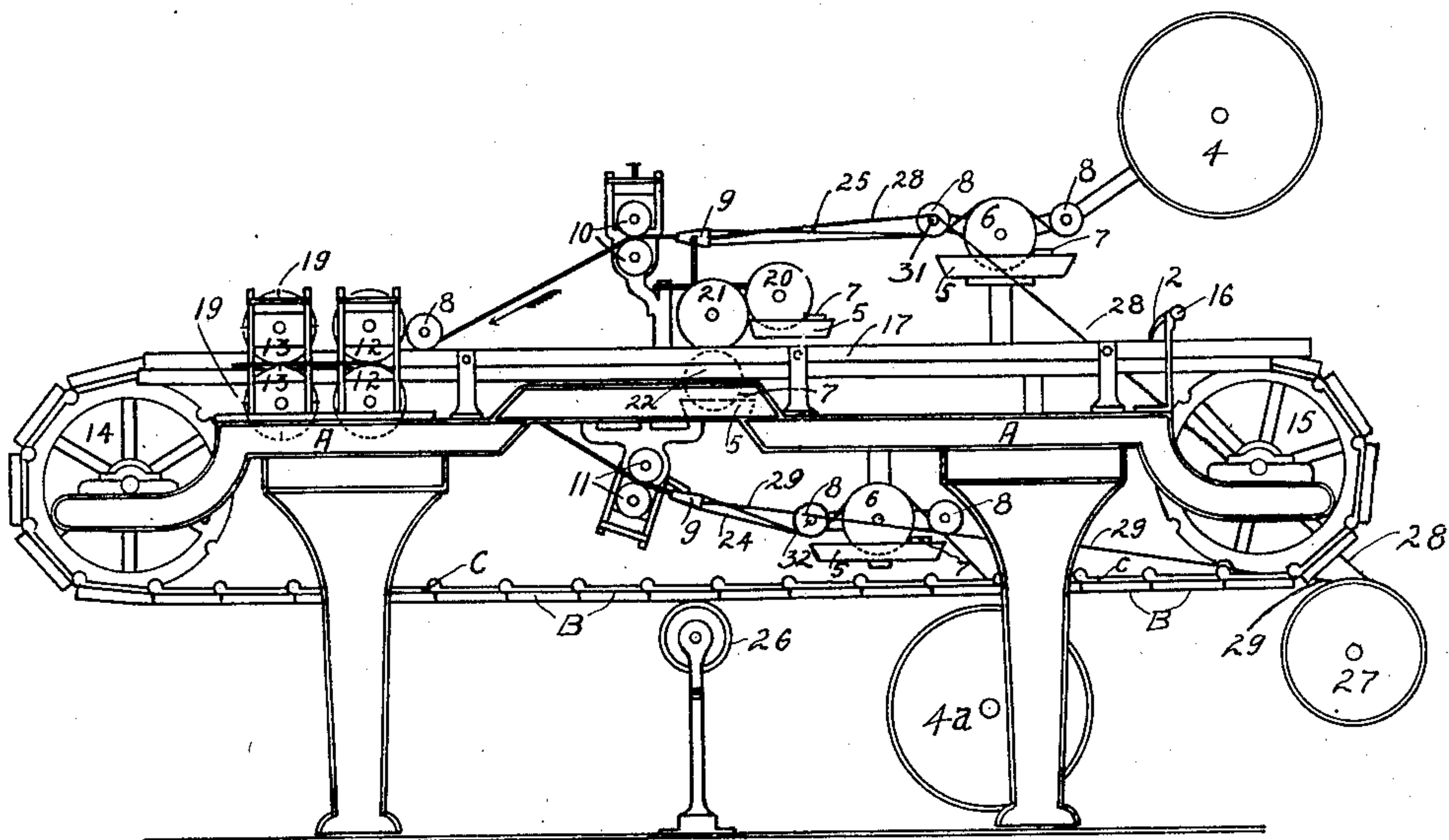


FIG. 1.

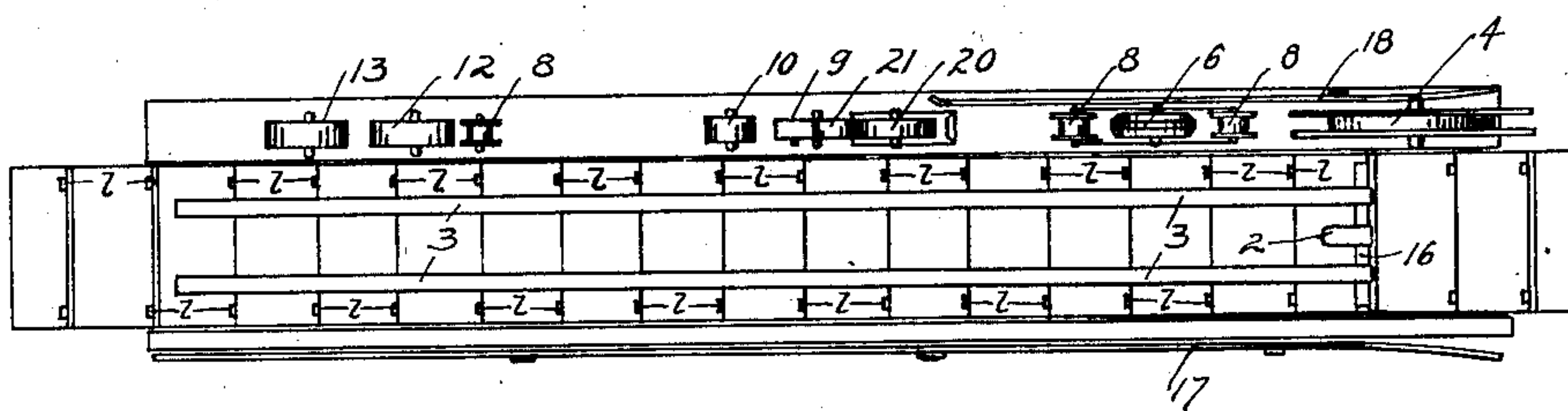


FIG. 2.

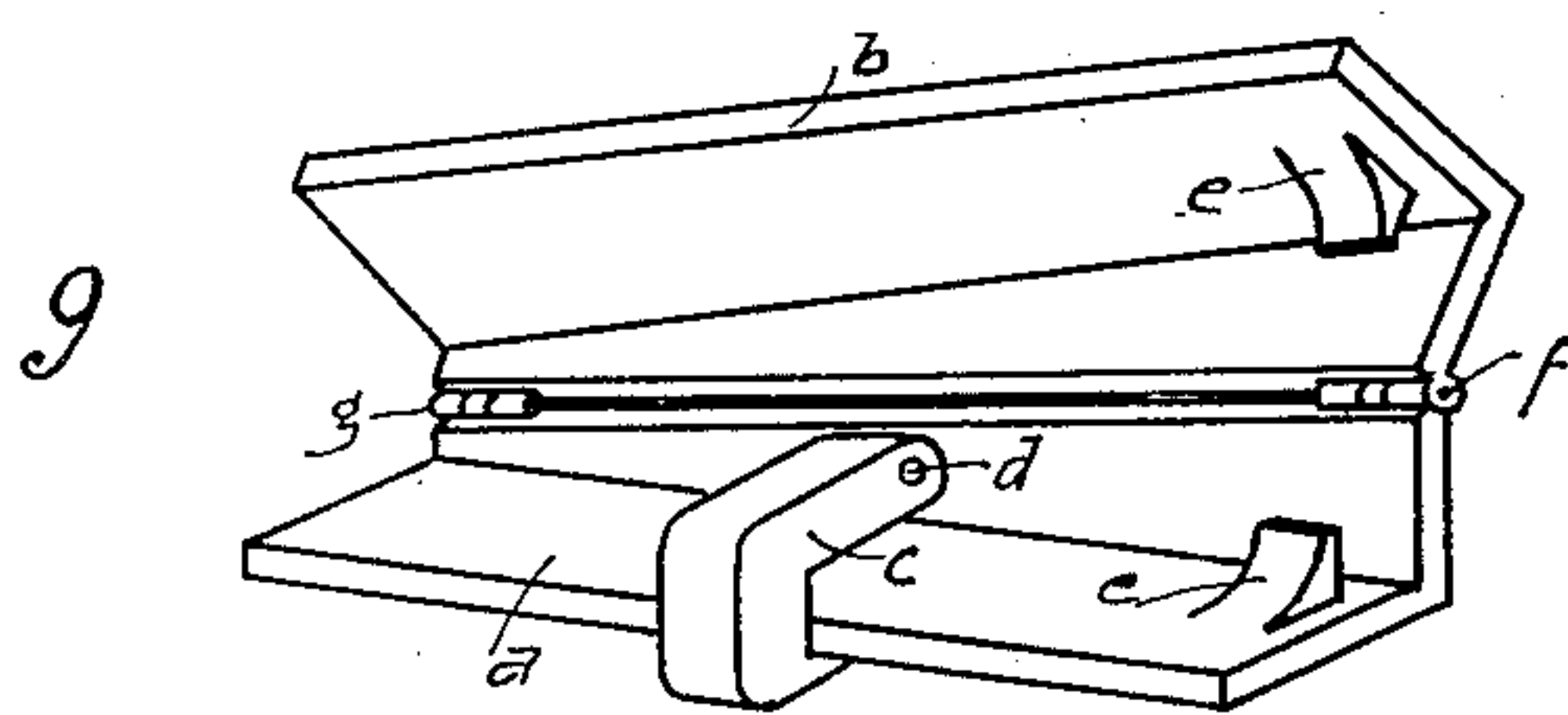


FIG. 3.

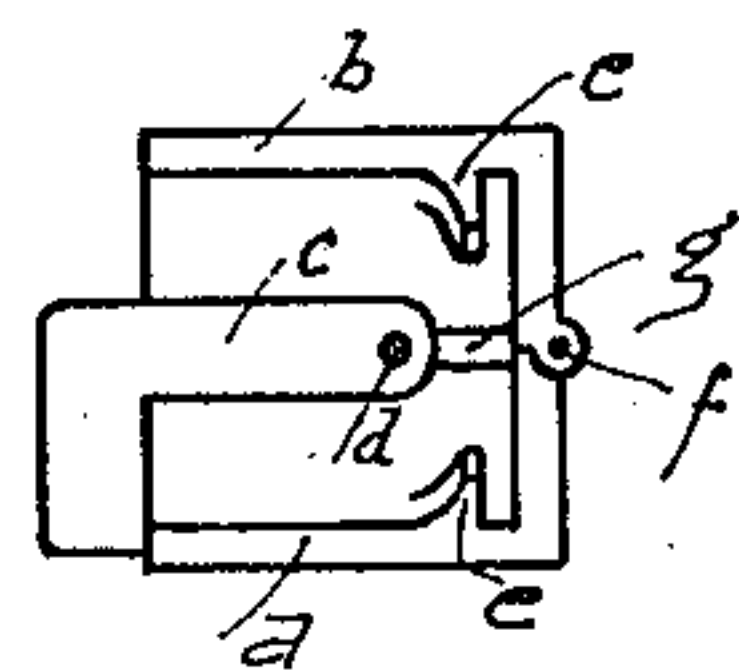


FIG. 4.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

ODILON DESROSIERS, OF LOUISEVILLE, CANADA, ASSIGNOR TO DANIEL FRANCOIS REAULME, OF MONTREAL, CANADA, AND EUGENIE DESROSIERS, OF LOUISEVILLE, CANADA.

## SELF-CLOSING PAPER-BAG MACHINE.

No. 822,252.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed July 1, 1904. Serial No. 215,034.

*To all whom it may concern:*

Be it known that I, ODILON DESROSIERS, a subject of the King of Great Britain and Ireland, residing in the town of Louiseville, in the county of Maskinongé, in the Province of Quebec, Canada, have invented a new and useful Self-Closing Paper-Bag Machine, of which the following is a specification.

The invention refers to a machine to paste the wires on the self-closing device for paper bags, and the object is obtained by fastening with paste across the length of the bag near the mouth thereof strips of paper or fabric—such as cotton, linen, canvas, and the like—doubled over a metal wire and extending beyond the width of the bag in such a manner that the bag may be closed by folding over the mouth two or three times and bending or twisting the ends of the wire and ribbon projecting out beyond their width.

The invention consists of a frame supporting the parts, an endless apron, and at one end of the frame one or two reels containing each a long ribbon of paper or fabric about five-eighths of an inch in width, one of these reels being situated above the apron and the other underneath. These ribbons of paper or of fabric are drawn toward the other end of the machine by proper gearing. (Not shown on the drawings.) As the ribbons travel toward the other end they receive along their center a continuous stripe of paste, and they are made to pass into a folder which longitudinally doubles them over a metal wire carried along with it until the folded ribbons and the wire therein contained come over one another between two rubber rollers. While the ribbons and the wires are thus moving, the bags held flat, one on each section of the endless apron, travel toward the two rubber rollers, receiving on their way transversally to their length and near the edges of their mouth on each side thereof a stripe of paste, so that the stripe of paste comes to the rubber rollers between the two ribbons. The action of the rubber rollers pressing on the whole fastens the ribbons to the bags. The whole emerges from the pressing-rollers to come between two wheels containing sets of knives, which cut the ribbons and their wires about an inch beyond the edges of the bag.

Wire-reels situated at the rear feed the

wires through guides and holes in the end of the shaft or axle of the grooved wheels nearest to the folders.

The accompanying drawings illustrate the invention.

Figure 1 is an elevation of the side of the machine opposite the working side. Fig. 2 is a plan of the machine. Fig. 3 is a front view of the folder opened. Fig. 4 is an elevation of the wide end or inlet of the same.

A is the frame supporting all the parts of the mechanism.

B B are the sections of the endless apron rolling over the parallel wheels 14 and 15, the upper surface thereof moving toward 14, each section of the apron being slightly longer than the width of the bags and narrower than the length of the bags to be laid across the apron.

C C is the endless chain of the apron.

a is the lower piece of the folder; b the upper piece of the same.

c is the tongue on which the ribbon is doubled over the wire which passes through the hole d.

d is a hole in the end of the tongue c, through which the wire is fed to the pasted ribbon which is to cover it.

e e are two guides in the inlet or large end of the folder to keep the ribbon in a vertical position.

f indicates the hinges of the folder, which may be opened when required.

g is the outlet of the folder, where the ribbon folded over the wire is made to pass, pressed so as to fasten the ribbon on the wire.

1 1 1 are small lugs fixed to the latter end of each section of the endless apron, so as to keep the paper bags square across the apron and secure their coming to the pressing-rollers 12 12 in a true transversal position.

2 is a spring-finger fastened on the arm and pressing lightly on the apron, so as to place the paper bags close against the lugs 1 1.

3 3 are strips of metal also fastened to the arm 16 and extending the whole length of the apron to steady the bags in their position on the sections.

4 is the upper reel containing the ribbon to be fed and doubled over a wire and pasted on the upper face of the folded bag.

4<sup>a</sup> is another reel situated under the frame to feed out the ribbon to be doubled over a



wire and which is to be pasted on the under side of the folded paper bag.

5 5 are troughs containing the paste which is to be laid longitudinally along the ribbons and transversally at the mouth of the bags.

6 6 are ribbons-pasting wheels turning partly in troughs containing paste to deposit a stripe of the same on the under face of the ribbons.

10 7 7 are gages of suitable material held to the edge of the troughs, so as to remove from the wheels the useless quantity of paste. They fit close to the side of the wheels, but may be adjusted more or less close to the periphery, according to the thickness of paste  
15 required on the ribbons or on the bag.

8 8 are grooved wheels proportionate to the width of the ribbons, the object of which is to maintain the ribbon over the pasting-wheels.

20 9 9 are the wedge-shape folders hereinbefore described.

10 10, 11 11 are sets of rubber rollers to press the ribbons folded over the wire and insure their adherence.

25 12 12 are two rubber rollers to press and fasten the ribbons doubled over the wires onto the paper bags.

13 13 are two wheels carrying knives evenly distanced across their periphery to cut the  
30 ribbons and the wire contained therein about one inch beyond each side of the bag.

14 and 15 are two parallel wheels over which the endless apron rolls.

16 is an arm held to the frame and extending transversally over the apron so as to hold  
35 in position the two long bands 3 3 and the spring-finger 2.

17 is a guard-rail extending the whole length of the apron to prevent the bags from  
40 sliding out of their place on the sections of the apron.

18 is another guard-rail on the far side of the apron for the same purpose as the first. It extends as far as wheel 20.

45 19 19 are the knives evenly distanced across the periphery of the wheels 13.

20 is a pasting-wheel turning partly in the paste contained in the trough and transferring the paste to wheel 21, which is to lay the  
50 stripe of paste on the upper side of the folded bag.

22 is another pasting-wheel similar to wheel 20 to deposit a stripe of paste on the lower side of the folded bag.

55 24 and 25 are the ribbons traveling toward the folder.

26 is a rubber-tired wheel supporting the lower part of the apron.

27 is a double reel containing two rolls of  
60 wire, one of which feeds the wire to the upper folder and the other to the lower folder.

28 is the wire passing through a hole horizontally made in the end of the rigid axle of the grooved wheel 8, thence to the hole *d* of  
65 the tongue *c* of the upper folder.

29 is the other wire passing through guides onto a horizontal hole in the end of axle of wheel 8, thence to the lower folder.

The power is applied on the axle of the parallel wheel 14 and through suitable gearing 70 (not shown in drawings) located on the far side of the machine. The speed of all these wheels is regulated so that they all work together.

To utilize the invention, the machine is set 75 going and the apron moves from right to left, and all the wheels turn in the direction to draw the ribbons, wires, and bags toward the left. The end of the ribbons is placed horizontally in the groove of the guide-wheels 8 80 and over the paste-wheels 6, where they receive a longitudinal stripe of paste. Thence they enter vertically into the inlet of the folders 9 9. At the same time the end of the wire is introduced in the hole in the end of the axle 85 of the grooved wheels, thence into the hole *d* of the tongue *c* of the folders, and ribbons and wires are pulled between the press-wheels 10 10 and 11 11, where the ribbons are made fast on the wire, thence onto the grooved wheels 8 8. 90

The bags, folded flat, as they come from factories, are fed on the sections of the endless apron. As they pass under the spring-finger 2, attached to the arm 16, they are pressed against the lugs *I I*, located at the latter end 95 of each section and held there by the two strips of metal 3 3, extending all along the upper face of the apron. On their way the bags pass between the two paste-wheels 21 and 22, where they receive transversally to their 100 length two narrow stripes of paste. Thence they consecutively reach the two press-wheels 12 12 between the ribbons containing the wire, which are pressed on the stripe of paste of the bags and firmly united thereto. The whole 105 emerges from there to meet the knives of the cutting-wheels where the ribbons and their wires are cut, leaving the two ends projecting out on each side of the bags, and they fall ready for use. 110

I will not claim as my invention the paper bags nor the device for self-closing bags, as they are the matter of patents already granted; but

What I claim, and desire to secure by Letters Patent, is— 115

In self-closing paper-bag machines: a frame to support the parts, an endless apron to convey the paper bags, each section thereof having lugs at the rear end to insure the progress 120 of the bags toward the knives, a spring-finger to place the bags close against the lugs of the sections; strips of metal over the apron and close thereto to steady the paper bags on the sections; guard-rails to maintain the mouth 125 of the bags in the track of the pasting-wheels; ribbon-pasting wheels, their trough containing paste and their gage to free the wheels from the unnecessary quantity of paste; reels to feed the wire into folders to be, therein, dou- 130



bled over in the ribbons and pasted on each  
side of the bag; folders having therein guides  
to keep the ribbons in a vertical position and a  
tongue, transversally to their length, to double  
5 over the ribbons and having a hole horizon-  
tally traversing their end, to receive the wire  
to be doubled over in the ribbon; sets of press-  
wheels to secure the adhesion of the ribbons,  
inclosing the wires; two bag-pasting wheels  
10 their trough and gage, to lay stripes of paste at  
the mouth of the bags; two press-wheels to

fasten the ribbons on the stripes of paste, at  
the mouth of the bags and a set of knives to  
cut the ribbons and wires, a little beyond the  
width of the bags, in the manner and for the 15  
purpose hereinabove mentioned.

In witness whereof I have hereunto set my  
hand in presence of two witnesses.

ODILON DESROSIERS. [L. s.]

Witnesses:

GID BILAND. [L. s.]

A. DU SAULS. [L. s.]