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WRAPPING AND PASTING MACHINE.

APPLICATION FILED OCT. 26, 1906.

911,542. Patented Feb. 2, 1909.

Fig. 1

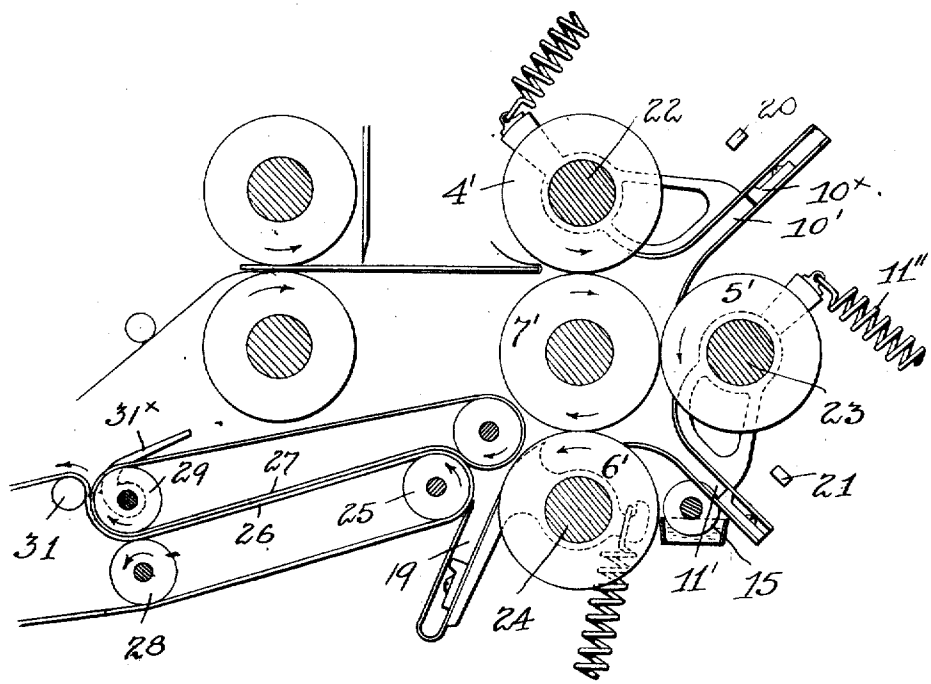
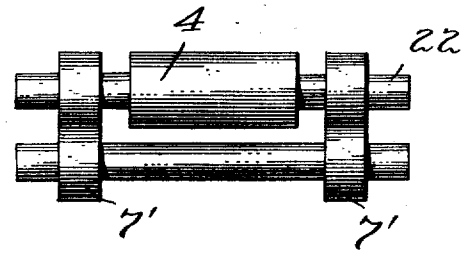


Fig. 2



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UNITED STATES PATENT OFFICE.

CHARLES OWENS, OF CHATTANOOGA, TENNESSEE, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO MONTAGUE MAILING MACHINERY CO.

WRAPPING AND PASTING MACHINE.

No. 911,542. Specification of Letters Patent. Patented Feb. 2, 1909.

Application filed October 26, 1906. Serial No. 340,754.

To all whom it may concern:

Be it known that I, CHARLES OWENS, a citizen of the United States, residing at Chattanooga, Tennessee, have invented certain new and useful Improvements in Wrapping and Pasting Machines, of which the following is a specification.

My invention relates to wrapping and pasting machines particularly adapted for preparing magazines and the like for mailing, and it concerns certain improvements in the general character of the machines disclosed by me in Letters Patent of the United States #722,879, March 17, 1903; 772,474 October 18, 1904 and 772,628 October 18, 1904.

The primary object of my present invention is to apply the paste while the article is undergoing the wrapping process. I have provided means whereby the application of the paste may be effected while the wrapping is being done. The output of the machine is thus increased as the operation can be carried out in this way more rapidly.

I have shown my invention as embodied in the general type of machine disclosed in Patent 772474 above noted, and also the type disclosed in Patent 772628 above mentioned.

The invention consists in the features, combination and arrangement of parts hereinafter described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1, shows my invention as embodied in a machine in which folding and wrapping is accomplished. Fig. 2 is a view of part of the rolls of Fig. 1.

It will be seen from the following description that no separate action is necessary in order to secure the pasting effect. The magazine or its wrapper is not manipulated in any special way to receive the paste, nor is it carried to any special location for this purpose but on the contrary the pasting appliance is located directly in the path of the magazine as it is being moved and controlled by the wrapping mechanism. This facilitates the work and increases the output of the machine.

Referring to the form of apparatus disclosed in Fig. 1, this is to be used in folding and pasting the magazine or other articles, said articles being folded while being wrapped once or more than once. The magazine and its wrapper are first fed to the folding rolls at 4′ 7′. After passing through these rolls the magazine enters a yielding guideway 10′ which performs the function of an abutment and guideway combined and thence the magazine and wrapping paper passes between the rolls 7′ and 5′, being folded in this action, and into a second yielding guideway 11′. As the magazine and its wrapping paper passes into the second yielding guideway 11′ the pasting is accomplished by the pasting roll 15′ to which paste is applied in any suitable manner. The action of this yielding guideway or abutment is to direct the magazine to the bite of rolls 7′ 6′ which effects the second folding action. The folding of the lap of the wrapper on to the paste portion is accomplished at 19. It will be noticed that the paste roll 15′ is in the pathway of the magazine as it passes down into the second yielding guide or abutment, the magazine with its wrapper being folded and the paste being applied after the first folding action takes place. The yielding guideway or abutment regulates the amount of roller space exposed at the time the fold is to be effected, or in other words, it acts to shield the magazine wrapper from contact with the roll which would act to strip it from the magazine. For instance, as the magazine with its advance lap folded down upon it passes between the bite of the rolls 4′ and 7′, it passes directly into the yielding guideway or abutment 10′, in which position the lower wall of the said guideway or abutment covers practically all of the upper surface of the roller 5′ so that it is impossible for the wrapper to contact with it, which contact would result in the said wrapper being stripped from the magazine. As the magazine with its wrapper passes onward into the guideway, it contacts with the abutment block 10ˣ, forcing the guideway around until it strikes the stop 20. At this time, the magazine is forced downwardly at its central portion into the bite of the rolls 7′ and 5′ by the combined action of the rolls 4′ 7′ 5′ and the yielding guideway. The yielding guideways with their abutment are loosely mounted on the shafts 22, 23 of the folding rolls. The same action respecting the shielding of the wrapper from the roller takes place in

connection with the roller 6′ and the yielding guideway 11′.

As before stated, the paste roll 15′ is located in the pathway of the oncoming magazine so as to engage the exposed surface of the wrapped magazine and apply paste to the wrapper. The particular position of the roller 15′ in respect to the curved guideway regulates the extent of the pasted portion of the magazine. As soon as the magazine contacts with the abutment in the yielding guideway 11′, said guideway is retracted against the action of its spring 11″ by the feeding action of the magazine. The paste is applied during the movement necessary to accomplish the folding and wrapping and thus no separate pasting movement is needed, the paste being applied while the movements necessary for folding are taking place. As the guideway advances toward its stop 21 the pasted portion of the magazine is lifted from the paste roll 15′ and receives no more paste until just as it is leaving the guideway. The pasted magazine having at this time its flap in the bite of the rolls 7′ and 5′ passes into the yielding guideway 19 and as it passes through the bite of the rolls 6′, 7′ this guideway, which is without a stop yields until the rear edge of the magazine leaves the bite of rolls 6′, 7′ when it is immediately tucked up into the flap as it passes into the bite of rolls 7′ and 25. As before stated, the yielding guideways are mounted loosely upon shafts 22, 23 and also upon the shaft 24. The roll 4′ is cut away about an inch down to the shaft at a sufficient distance from each end to support the magazine being acted upon during the folding operation. The folding rolls 5′ and 7′ have bearing surfaces only near one end. The yielding abutments all occupy the same relative position on their respective roller shafts so that the unpasted portion of the magazine will register with the parts of the folding mechanism acting upon it so as to avoid the distribution of paste upon the various parts. From between the rolls 7′ and 25 the magazine passes into the grip of tapes 26 and 27 and between rolls 28 and 29, thence the forward edge of the magazine runs up between the rollers 29 and 31 over the latter of which the tape passes. The center of the shaft carrying the roller 31 is slightly above that of the roller 29 and as a result of this the magazine is directed backward upon a support 31× which is mounted on the shaft of the roller 29, the said support projecting enough above the tapes so that when the magazine has passed from the bite of rolls 29 and 31 it drops upon the support and is then conveyed by the tapes in the direction of the arrow.

I claim:

1. In combination in a magazine wrapping machine, rollers to fold the magazine and its wrapper and abutments cooperating with the folding rollers to perform the folding, and paste applying means arranged adjacent one of said abutments, and in fixed relation to the path of the magazine the magazine being brought against the paste by its movement through the rollers substantially as described.

2. In combination in a magazine wrapping machine, rollers to fold the magazine and its wrapper, and pasting means arranged in fixed relation to the path of the magazine while it is being passed through the said folding rollers, the magazine being brought against the paste by its movement through the rollers substantially as described.

3. In combination in a machine of the class described, rollers to fold the magazine and its wrapper, a yielding abutment, and pasting means arranged in fixed relation thereto to apply paste to the wrapped magazine while being acted upon by the yielding abutment and the rollers in folding the magazine, substantially as described.

4. In combination with the rollers, the tapes, the rolls 29 and 31 and the support 31× whereby the magazine is reversed and fed onward, said support receiving the magazine in reverse position from between the rolls 29 and 31 substantially as described.

5. In combination, a pair of rolls, means for feeding the magazines in an upward direction between them and a support onto which the magazine falls laterally by gravity after passing upwardly between said rolls to be fed onward substantially at right angles to its rising movement by one of the said rolls, substantially as described.

6. In combination in a wrapping machine, a group of rollers through which the article and the wrapping paper passes and pasting means arranged in fixed relation to the path traversed by the article to be wrapped and the wrapping paper, said pasting means constantly presenting its paste covered surface at a point adjacent the limit of traveling movement of the package as it passes through the rolls in one direction, substantially as described.

7. In combination with rollers, the tapes, the rolls 29 and 31, the shaft of the roller 31 having its center slightly above that of the roller 29 in order to direct the magazine backwardly for reversing it, and a support to receive the magazine when reversed, the said magazine being moved onward by the action of the roll 31, substantially as described.

8. In combination a pair of rolls, means for feeding the magazine in an upward direction between them, and a support onto which the magazine falls by gravity after passing upwardly between said rolls to be fed onward by one of the rolls, said rolls

having a continuous rotation in one direction.

9. In combination with a plurality of rolls between which the magazines or other articles pass, a paste supply roll in the path of the said article and arranged at the limit of traveling movement of said article in one direction, said roll presenting its paste covered surface constantly in position to apply paste to the article when moved thereto.

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

CHARLES OWENS.

Witnesses:
D. H. RAINS,
MAX MILLIGAN.