No. 685,566. Patented Oct. 29, 1901.

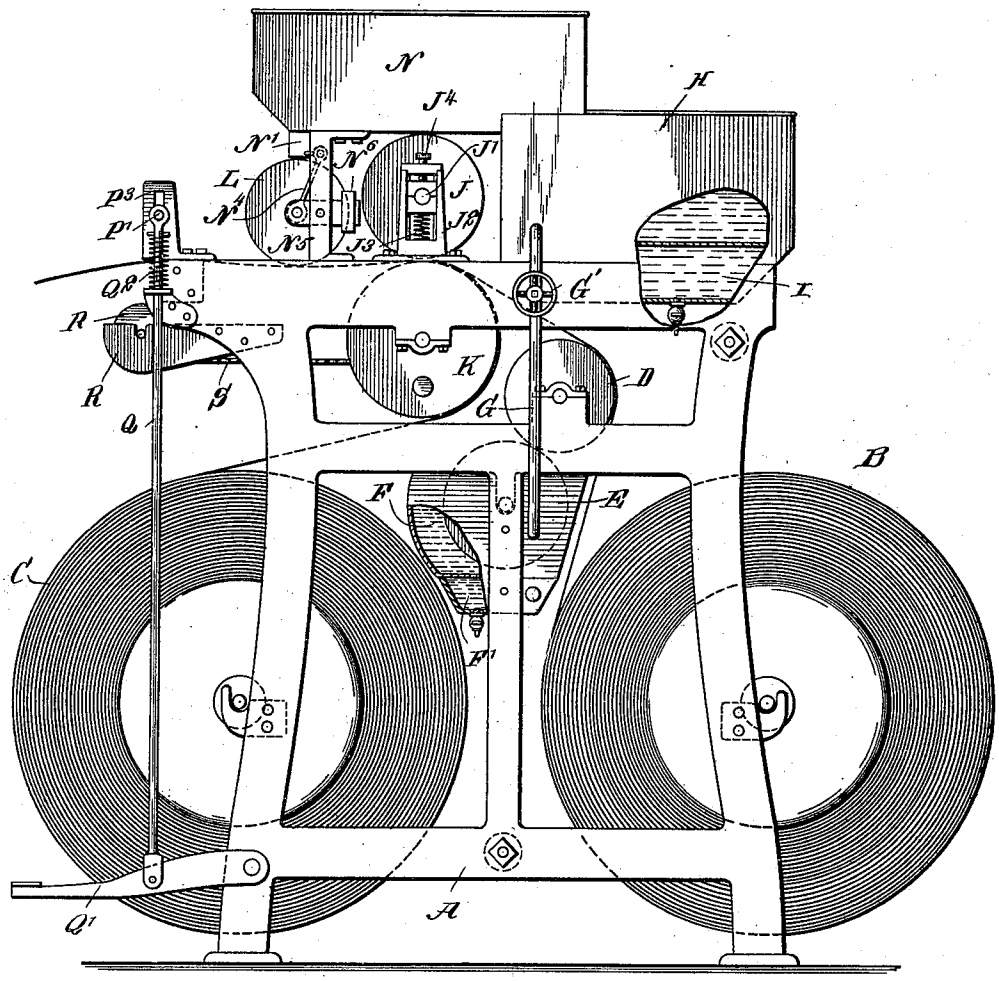
F. W. BROWN.

GLUING OR PASTING MACHINE.

(Application filed June 17, 1901.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1



WITNESSES:

J. A. Brophy

Geo. J. Hoskins

INVENTOR

Frederick W. Brown

BY Munn & Co.

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

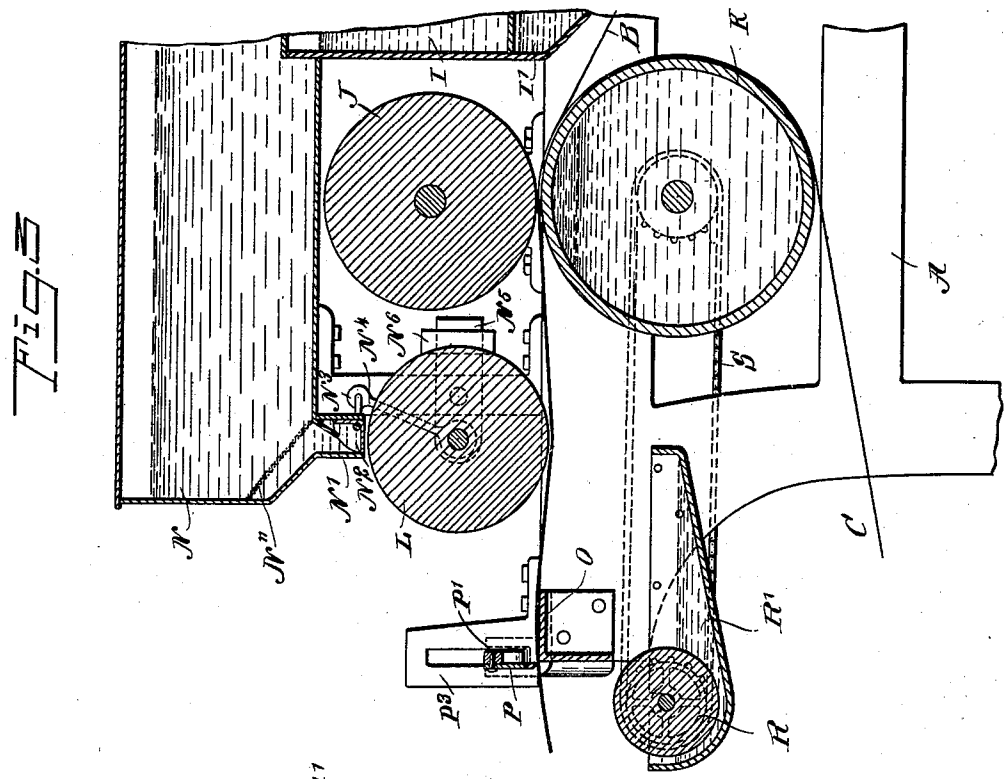
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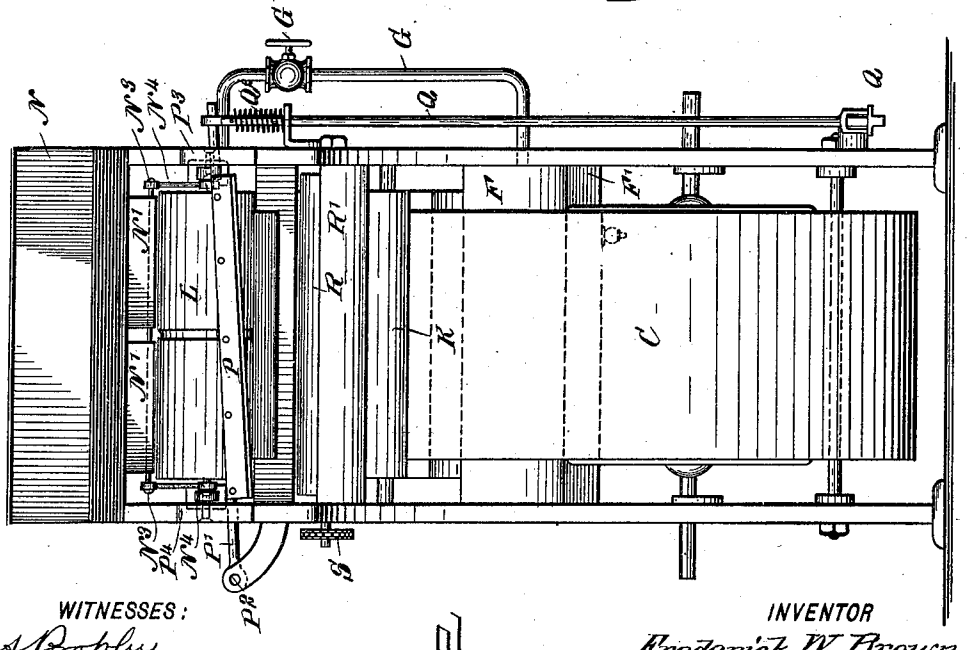
F. W. BROWN.

GLUING OR PASTING MACHINE.

(Application filed June 17, 1901.)

(No Model.) 3 Sheets—Sheet 2.





WITNESSES:

J. A. Brophy

Rev. J. Hoster

INVENTOR

Frederick W. Brown

BY Munn & Co

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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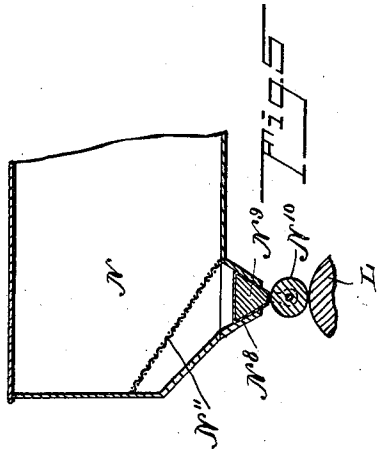


Fig. 5

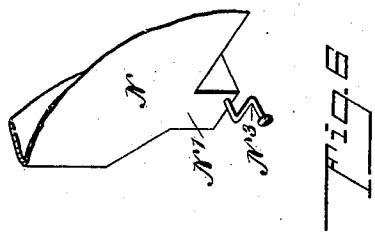


Fig. 6

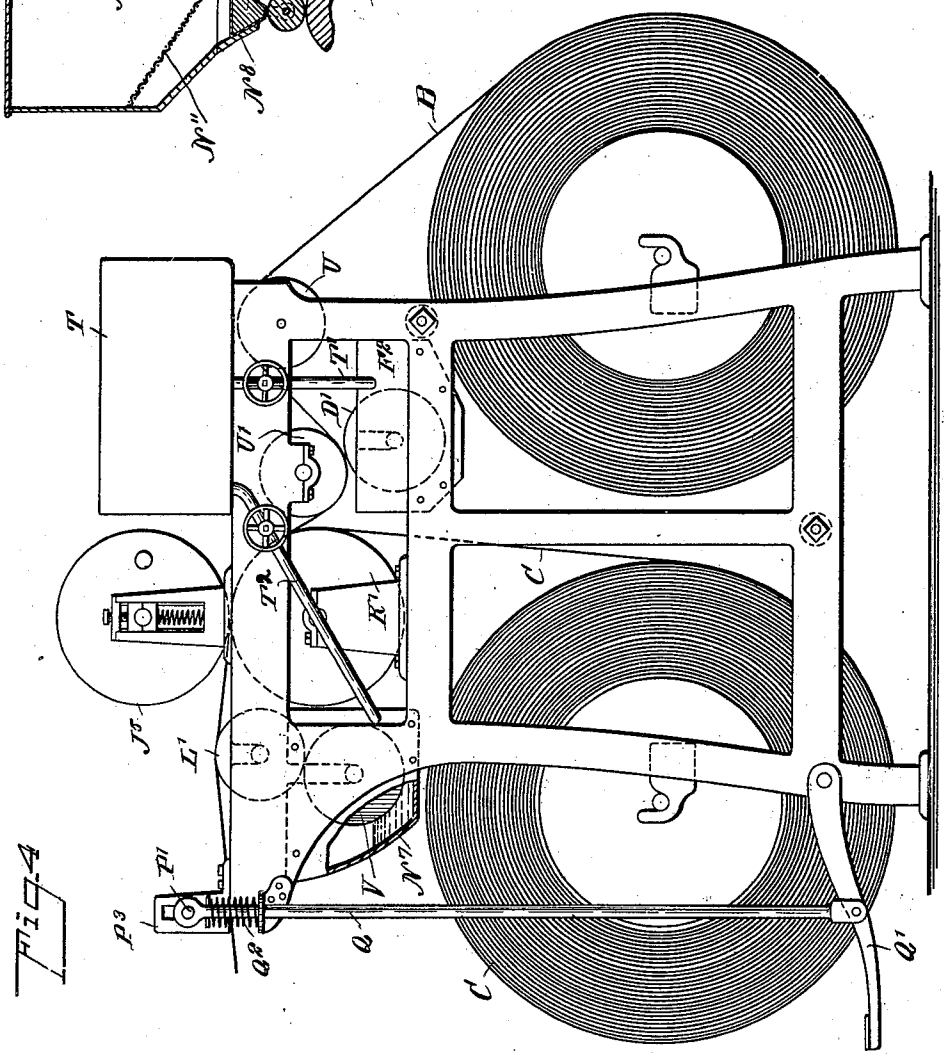


Fig. 4

WITNESSES:

J. F. Brophy

Rud. J. Hoster

INVENTOR

Frederick W. Brown

BY Munn & Co.

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERICK WILLIAM BROWN, OF BERLIN, NEW HAMPSHIRE.

GLUING OR PASTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 685,566, dated October 29, 1901.

Application filed June 17, 1901. Serial No. 64,923. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK WILLIAM BROWN, a citizen of the United States, and a resident of Berlin, in the county of Coos and State of New Hampshire, have invented certain new and useful Improvements in Gluing or Pasting Machines, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved gluing and pasting machine, more especially designed for securing a burlap lining on a sheet of wrapping-paper and coating the latter with an adhesive substance to secure the article formed upon the ends and edges of the paper rolls, especially large paper rolls, such as newspaper rolls, to protect the edges of the rolls from damage during transportation, loading, and other handling of the rolls.

The invention consists of novel features and parts and combination of the same, as will be fully described hereinafter and then pointed out in the claims.

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.

Figure 1 is a side elevation of the improvement with parts broken out. Fig. 2 is a front end elevation of the same. Fig. 3 is an enlarged sectional elevation of the front end of the machine. Fig. 4 is a side elevation of a modified form of the improvement. Fig. 5 is a sectional side elevation of a modified form of the paste-reservoir and the outlet-valve for the same, and Fig. 6 is a perspective view of the rear side of the paste-reservoir shown in Fig. 3.

The improved machine illustrated in Figs. 1, 2, 3, and 6 is mounted on a suitably-constructed frame A, in which are journaled a roll of paper B and a roll of burlap C. The paper B after unwinding from the roll passes over a coating-roller D for coating one face of the paper with glue or other adhesive substance supplied to the coating-roller D by a fountain-roller E, mounted to turn in a fountain F, having a water-heater F′ at the bottom and receiving its supply of glue or other adhesive substance through a pipe G from a glue-reservoir H, supported on the frame A above the fountain F, which latter is also supported on the said frame A. The pipe G is provided with a valve G′ for filling the fountain F from the reservoir H whenever necessary, and the said reservoir H is provided with a water or steam heater I for keeping the adhesive substance in proper condition. The burlap C passes with the coated sheet of paper B between the rollers J and K, mounted to rotate in suitable bearings on the frame A, the roller J acting as a pressing-roller and the roller K as a drying-roller. The roller J is preferably made solid and journaled in boxes J′, slidable vertically in brackets J^2, carried by the frame A, the said boxes resting on springs J^3 and the tops of the boxes being engaged by set-screws J^4 for adjusting the boxes and the roller J according to the desired pressure to be given to the burlap and the paper. The roller K is made hollow and filled with steam or hot water, so that when the superimposed paper B and the burlap C pass between the two rollers J and K the burlap is glued to the under coated side of the sheet B. In order to place an adhesive substance on the top or outer face of the paper B, the paper, with the burlap secured to the under side thereof, is passed under a roller L receiving paste or other adhesive substance from one or more spouts N′ of a paste-reservoir N, supported on the frame A. In the spouts N′ are pivoted valves N^2, (see Fig. 3,) carrying on the outer ends of the pivots crank-arms N^3, (see Fig. 6,) connected by links N^4 with levers N^5, fulcrumed on the frame A. In the forward ends of the levers N^5 is journaled the roller L, and the rear ends of the levers carry weights N^6, the aggregate weight of which is slightly less than the weight of the roller L. The united burlap and paper extend from the under side of the roller L over a support O, secured on the front end of the frame A, and the top surface of this support is in horizontal alinement with the top of the drying-roller K, so that when the united burlap and paper extend loosely from the roller K to the support O the roller L presses the united burlap and paper downward, as shown in Fig. 3, and when the operator exerts a pull on the united burlap and paper in a forward direction the burlap and paper are stretched between the drying-roller

K and the support O, and consequently the roller L is lifted upward, and an upward swinging motion is given to the levers N^5, which by the links N^4 and the crank-arms N^3 causes the valves N^2 to open, so that paste flows through the spouts N′ upon the peripheral surface of the roller L. As the united paper and burlap is pulled forward by the operator the roller L is rotated, thus coating the top or outer face of the paper with the paste or other adhesive substance.

Over the front edge of the support O operates a knife P for cutting off a desired length of united paper and burlap, and the knife P is secured on a transversely-extending bar P′, fulcrumed at P^2 on the main frame A, (see Fig. 2,) and the front end of the bar P′ is connected by a rod Q with a treadle Q′ under the control of the operator. A spring Q^2 presses the rod Q, so as to normally hold the bar P′ and the knife P in an uppermost position; but when the operator presses the treadle Q′ a downward swinging motion is given to the knife P to cut off the united burlap and paper at the edge of the support O. The operator then takes this burlap-lined wrapping-paper and presses one end, either burlap side or paper side, against the front gluing-roll R and then coats it with glue, which makes the ends more adhesive when applied to the edge of news or other kind of paper rolls. It is understood that the piece cut off is provided on the paper side with paste, which is supplied by the roller L, so that this piece may be readily used as a covering for a paper roll and by the adhesive substance can be secured to the paper roll for protecting the edges thereof, it being expressly understood that the paste and glue on the paper serves to cause the piece to adhere to the paper roll. When the operator releases the treadle Q′ and the spring Q^2 returns the knife P to an uppermost position, then the united paper and burlap extending between the support O and the drying-roller K is relieved of pressure, and consequently the roller L now moves downward to the position shown in Fig. 3, and in doing so the valve N^2 is again closed. On the next pull by the operator on the burlap the roller L is again lifted and rotated and paste is supplied to the peripheral surface thereof, as previously explained. Thus the valve N^2 is opened only during the time that the united paper and burlap is pulled forward to supply the roller L with paste for coating the top or outer face of the paper. The end of the cut-off piece of united burlap and paper can be supplied with glue, and for this purpose the operator rubs the end on the peripheral surface of a roller R, extending into a trough containing glue, the said roller R being driven from the drying-roller K by a suitable sprocket-wheel and sprocket-chain gear S, as illustrated in the drawings. The reservoir N (shown in Fig. 5) is formed with a spout N^8, in which is seated a valve N^9, carrying at its lower end a friction-roller N^{10} in contact with the peripheral surface of the roller L, so that when the latter is lifted, as previously described, the valve N^9 is lifted off of its seat to allow the adhesive substance to flow from the reservoir N upon the peripheral surface of the coating-roller L to coat the paper, as previously explained. When the roller L moves downward on releasing the united paper and burlap, the valve N^9 by its own weight and the pressure of the adhesive substance in the reservoir N immediately moves to its seat to stop further outflow of the adhesive substance for the time being.

In the modified form shown in Fig. 4 a single reservoir T is employed, having two valved outlet-pipes T′ and T^2, of which the pipe T′ supplies adhesive substance to a fountain F^2, containing the coating-roller B′ for coating one face of the paper B as the latter passes from the guide-roller U to the guide-roller U′ previous to receiving the burlap C. The paper and burlap pass together between the rollers K′ and J^5, of which the roller J^5 is a drying and pressing roller, is journaled similarly to the roller J, previously described, and is filled with steam or water, the same as the roller K above referred to. The other pipe T^2 serves to supply adhesive substance to a fountain N^7, containing a fountain-roller V in contact with the coating-roller L′ for supplying the adhesive substance to the under side of the burlap after uniting the cut-off article to the paper roll, as previously explained, the piece being cut off by the knife P actuated by the operator working the treadle Q, as before explained. A sieve N^{11} is preferably arranged in the reservoir N to prevent lumpy matter in the paste from passing to the roll.

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

1. A machine of the class described provided with a pair of uniting and drying rollers, a support spaced from the said rollers and over which the united fabric passes, and a coating-roller mounted between the support and the uniting and drying rollers for applying an adhesive substance to one surface of the united fabric, as set forth.

2. A machine of the class described, provided with a pair of uniting and drying rollers, a support spaced from the said rollers and over which the united fabric passes, a coating-roller mounted between the support and the uniting and drying rollers, a reservoir above the roller, and a valve in the reservoir and controlled by the coating-roller, as set forth.

3. A machine of the class described, provided with a pair of uniting and drying rollers, a support spaced from said rollers and over which the united fabric passes, a coating-roller arranged between the said rollers and support and mounted in a swinging support, a reservoir above the roller, a valve in

the reservoir, and means whereby the valve is controlled by the coating-roller, as set forth.

4. A machine of the class described, provided with a reservoir, a valve in the reservoir, provided with crank-arms, a swinging support below the reservoir, a coating-roller mounted in the support, links connecting the crank-arms of the valve with the swinging support, as set forth.

5. A machine of the class described, comprising a coating-roller over which passes the paper, to coat the latter with an adhesive substance on one side, a pair of uniting and drying rollers between which pass the paper and the burlap to be united by the coat of adhesive substance on the paper, a roller for applying an adhesive substance on the outer face of the paper, and a knife under the control of the operator, for cutting off a desired length of united and coated paper and burlap, as set forth.

6. A machine of the class described, comprising a coating-roller over which the paper passes, a pair of uniting and drying rollers between which the paper and the burlap to be united pass, a support spaced from the said rollers and over which the united fabric passes, a coating-roller between the support and rollers, a reservoir above the roller, a valve in the reservoir and controlled by last-named coating-roller, and a knife at the front of the support, as set forth.

7. A machine of the class described, comprising a coating-roller over which the paper passes, a pair of uniting and drying rollers between which the paper and burlap to be united pass, a support spaced from the said rollers, a reciprocating knife at the front of the support, pivoted and counterbalanced levers arranged between the said rollers and support, a coating-roller mounted in the support, a reservoir above the roller and provided with a spout, a hinged valve in said spout and provided with crank-arms, and links connecting the crank-arms of the valve with the said levers, as set forth.

8. A machine of the class described, comprising a coating-roller over which passes the paper to receive a coat of adhesive substance on one side of the paper, means for supplying said coating-roller with an adhesive substance on its peripheral surface, a pair of rollers, one of which is a pressing-roller and the other is a drying-roller, and between which rollers pass the burlap and the paper, the burlap being in contact with the coated face of said paper, a coating-roller for coating the outer face of the paper with an adhesive substance, and a reservoir containing the adhesive substance for the last-mentioned coating-roller, the latter controlling a valve in said reservoir to regulate the supply of adhesive substance to the coating-roller, as set forth.

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

FREDERICK WILLIAM BROWN.

Witnesses:
ADDIE B. RICH,
GEO. F. RICH.