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No. 813,993. PATENTED FEB. 27, 1906.

J. P. WRIGHT.

GLUE APPLYING MECHANISM.

APPLICATION FILED APR. 11, 1905.

Fig. 1.

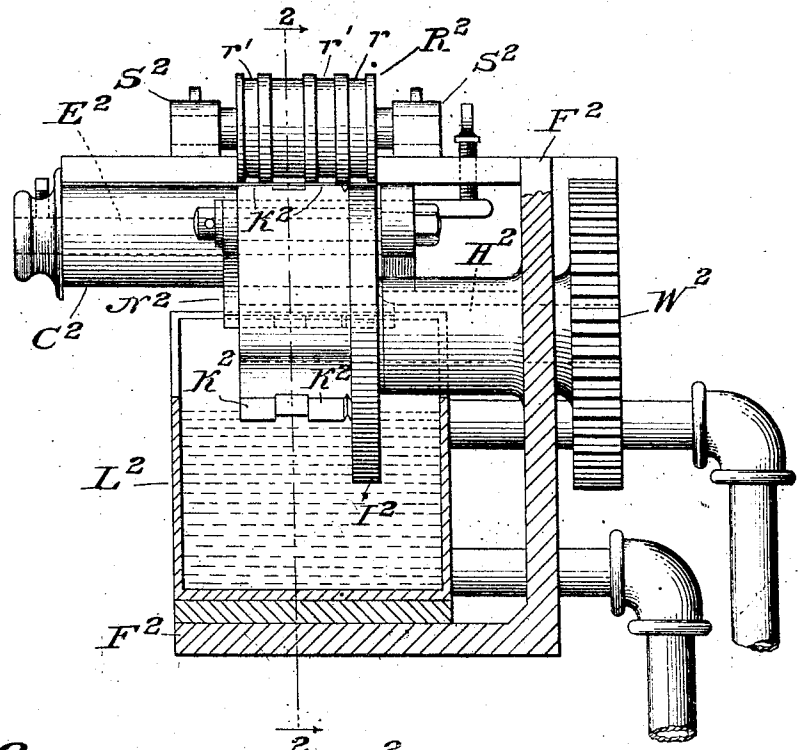
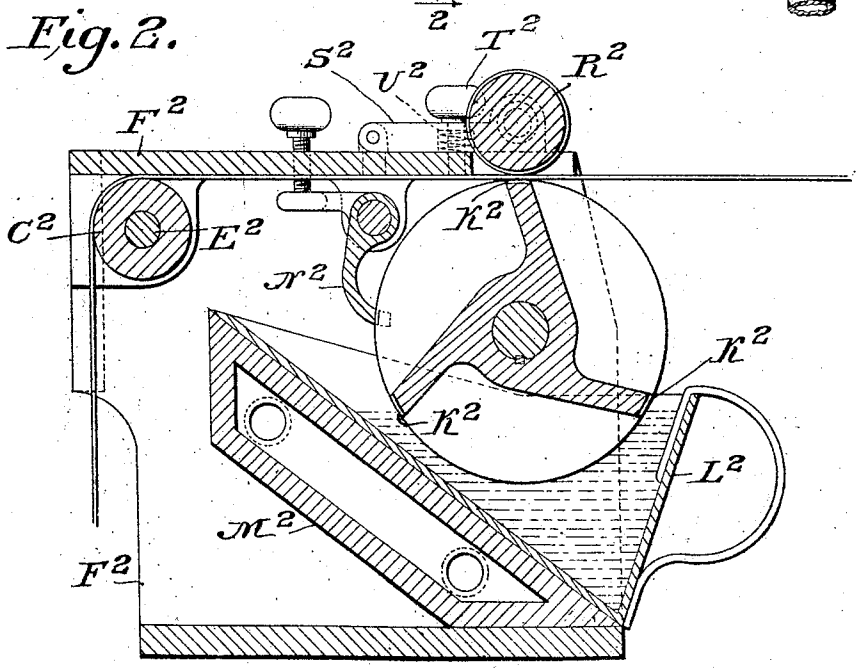


Fig. 2.



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UNITED STATES PATENT OFFICE.

JACOB P. WRIGHT, OF BARBERTON, OHIO, ASSIGNOR TO THE DIAMOND MATCH COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

GLUE-APPLYING MECHANISM.

No. 813,993. Specification of Letters Patent. Patented Feb. 27, 1906.

Original application filed June 20, 1900, Serial No. 20,970. Divided and this application filed April 11, 1905. Serial No. 254,983.

To all whom it may concern:

Be it known that I, JACOB P. WRIGHT, a citizen of the United States, and a resident of Barberton, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Glue-Applying Mechanism, of which the following is a specification.

The present application is a division of an application for Letters Patent filed by me June 20, 1900, for an improvement in box-machines, Serial No. 20,970.

The subject of the present application relates primarily to mechanism for applying glue, including any liquid cementing medium to a strip or blank of paper or the like, during the process of converting the same into boxes or shucks, such mechanism combining simplicity of construction with reliability and efficiency of operation and being hereinafter particularly set forth and claimed.

In the drawings, Figure 1 is a transverse section, partly in elevation, of my improved glue-applying mechanism. Fig. 2 is a vertical section as on the line 2 2 of Fig. 1.

F^2 is a bracket, comprising a top, bottom, and side, affixed to the frame of the box-making machine. On the side of this bracket is a bearing for a horizontal shaft H^2, which carries a glue-applying wheel of novel construction, above and adjacent to which wheel extends the strip or blank of paper or the like to which the glue is to be progressively applied. The shaft H^2 is provided with a gear-wheel W^2, which meshes with and is actuated by the driving-gearing of the box-machine in a manner to revolve the glue-wheel at a prescribed rate of speed. The glue-wheel comprises an annular portion I^2 and several equidistant portions K^2, having the same radius as the portion I^2 and extending parallel with the axis of the wheel. The portions K^2 constitute the outer or peripheral faces of arms which extend from the wheel-hub in directions that incline from lines radial to the wheel, the inclination being rearward and outward with reference to the direction of rotation of the wheel. The lower portion of the glue-wheel revolves within a glue-pot L^2, which rests upon a heater M^2, secured to the bottom of the bracket. The bottom of the pot is inclined, so that the pot is wedge-shaped, and the surface of the heater on which such bottom rests is correspondingly inclined. As a result of the inclination of the pot and its support the pot can readily be slid into or withdrawn from position beneath the glue-wheel without the otherwise necessity of removing or shifting adjacent parts, notwithstanding the fact that the glue-wheel projects down into the pot. Obviously, if the heater were disposed horizontally the glue-pot could not be removed therefrom unless the heater were also removed, which operation would require, as heretofore, a flexible pipe connection for the heater, together with special devices for raising and lowering the heater. Just above the glue-pot the glue-wheel is engaged by an adjustable scraper N^2, that is designed to remove surplus glue therefrom.

The above-described inclination of the glue-wheel arms, which carry the glue-applying portions K^2, prevents such arms lifting glue as they emerge from the pot, for the reason that the angle at which the forward sides of said arms stand on emerging from the pot is such that glue readily passes down off the same.

Above the glue-wheel is a roller R^2, between which and the glue-wheel the paper passes, the paper being guided by a suitably-disposed roller C^2, mounted on a shaft E^2, supported by the bracket. To reduce the paper-engaging surface of the roller R^2, it is grooved circumferentially, a groove r being provided opposite the annular portion I^2 and other grooves r' and r'' being provided opposite the glue-carrying portions K^2 and K^2, so that opposite the latter there is a series of narrow bearing-surfaces. As a result of the provision of the circumferential grooves in the roller, as described, there is no pressure applied to a large portion of the surface of the paper opposite the glue, and hence any such squeezing action on the glue is avoided as would result in the exudation of the glue at each side of the roller and the formation thereat on the paper of raised lines or ridges of glue.

The roller R^2 is journaled in bearings afforded by two arms S^2 and S^2, that are secured upon the top of the bracket F^2, preferably by means which permit the ready lifting of the roller for the convenient insertion of paper between it and the glue-wheel when such insertion is necessary. As shown, each

arm is pivoted at its outer end to a lug rising from the bracket and is held down at its inner end by means of a thumb-screw T^2, passing therethrough into a tapped opening in the bracket. Coil-springs U^2, confined within recesses in the under sides of the respective arms, lift the latter when the thumb-screws are raised, thus facilitating the operation of inserting the paper and also preventing contact of the roller R^2 with the glue-wheel when no paper is between them, and thereby avoiding a deposit of glue on the roller.

I claim—

1. In mechanism of the character described, the combination of a glue-pot, and a glue-wheel having arms with peripheral glue-applying surfaces, said arms inclining outwardly and rearwardly with respect to the direction of rotation of the wheel, and said wheel being situated above the glue-pot so that the arms thereof pass through the glue in the pot.

2. In mechanism of the character described, the combination of a glue-pot having an inclined under surface, a correspondingly-inclined supporting-surface upon which said pot rests and along which it may be slid in order to place it in or out of operative position, and a glue-applying device projecting into the pot when the latter is in position for use.

3. In mechanism of the character described, the combination of a glue-pot having an inclined under surface, a heater having a corresponding surface upon which said pot rests, and a glue-applying device projecting into the pot when the latter is in position for use.

4. In mechanism of the character described, the combination with a wheel mounted in a fixed position, of a pot or receptacle in which the lower portion of the wheel revolves, and a support for said pot or receptacle having an inclined supporting-surface that engages a like surface on the pot or receptacle.

5. In mechanism of the character described, the combination of a glue-pot having an inclined under surface, a heater having a corresponding surface upon which said pot rests, and a glue-applying wheel having a fixed axis of rotation and projecting into the pot when the latter is in position for use.

6. In mechanism of the character described, the combination of a glue-pot, a glue-wheel having arms with peripheral glue-applying surfaces, said arms inclining outwardly and rearwardly with respect to the direction of rotation of the wheel, and said wheel being situated above the glue-pot so that the arms thereof pass through the glue in the pot, and a circumferentially-grooved roller between which and the glue-wheel passes the material to receive the glue from said wheel.

Signed at Barberton, in the county of Summit and State of Ohio, this 8th day of April, A. D. 1905.

JACOB P. WRIGHT

Witnesses:
B. C. Ross,
Tom A. Palmer.