

No. 894,976.

PATENTED AUG. 4, 1903.

W. J. O'DONNELL.
FABRIC PASTING MACHINE.
APPLICATION FILED NOV. 25, 1907.

3 SHEETS—SHEET 1.

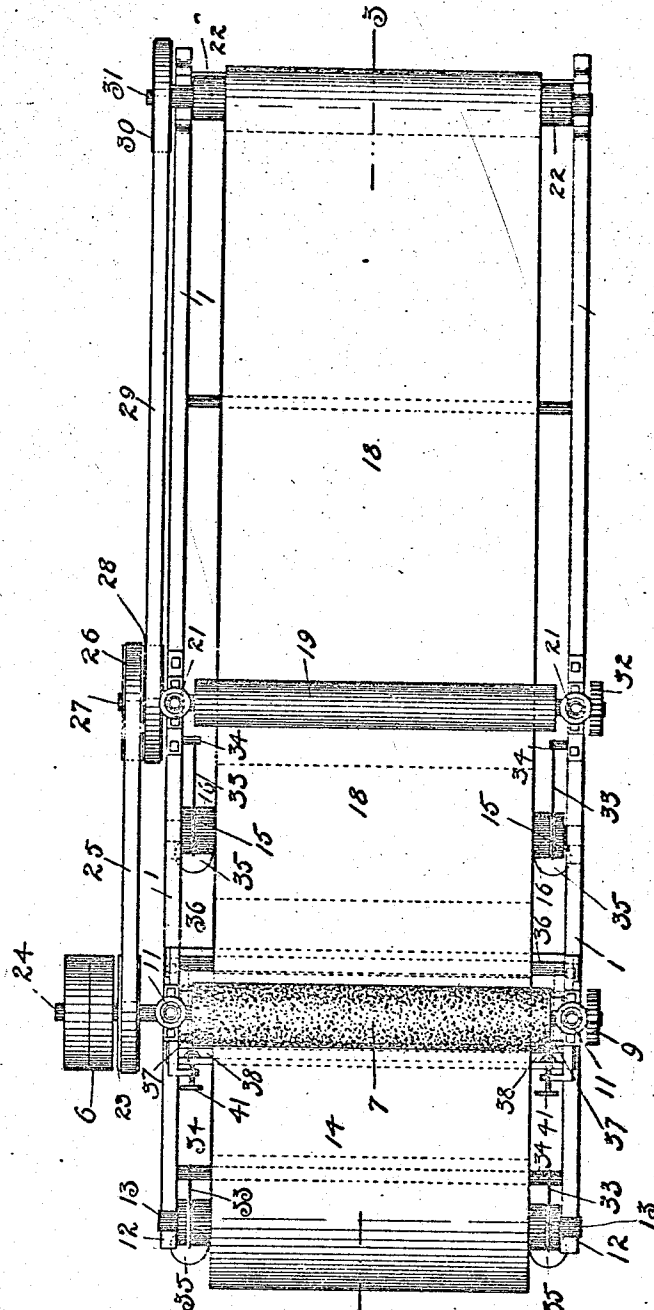


FIG. 1.

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J. Donsbach.

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By Mosher & Curtis
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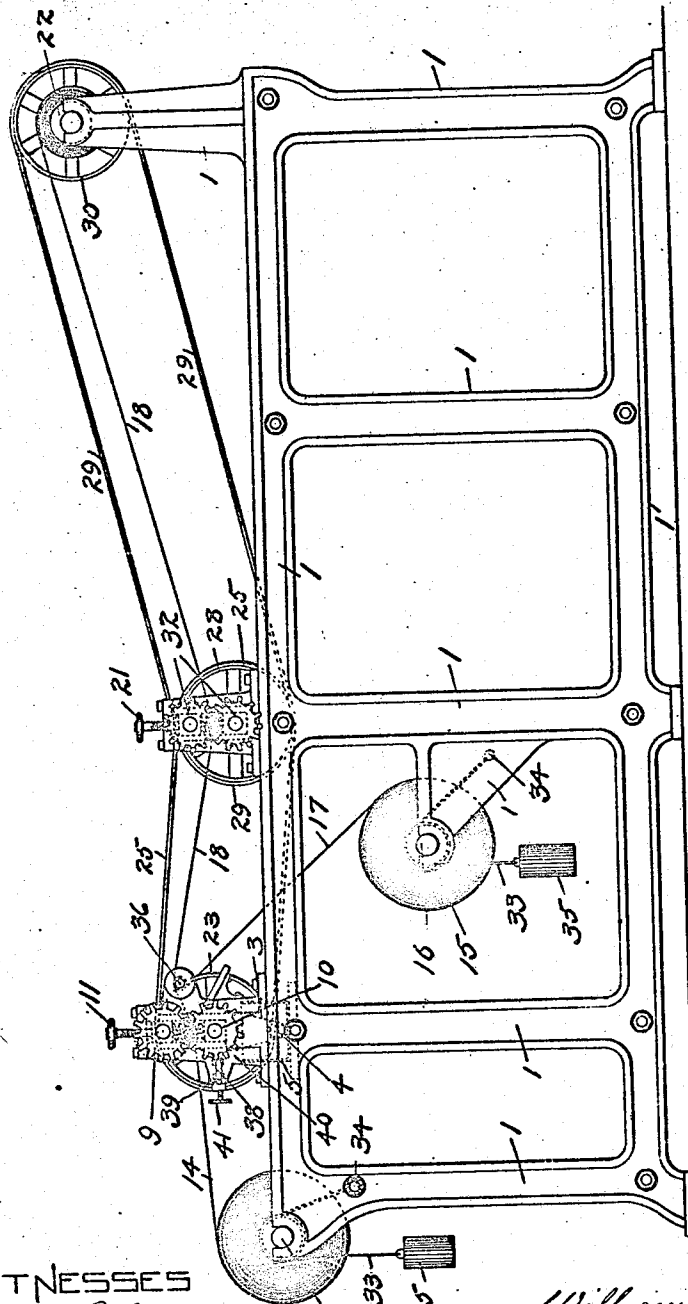
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3 SHEETS—SHEET 2.



WITNESSES
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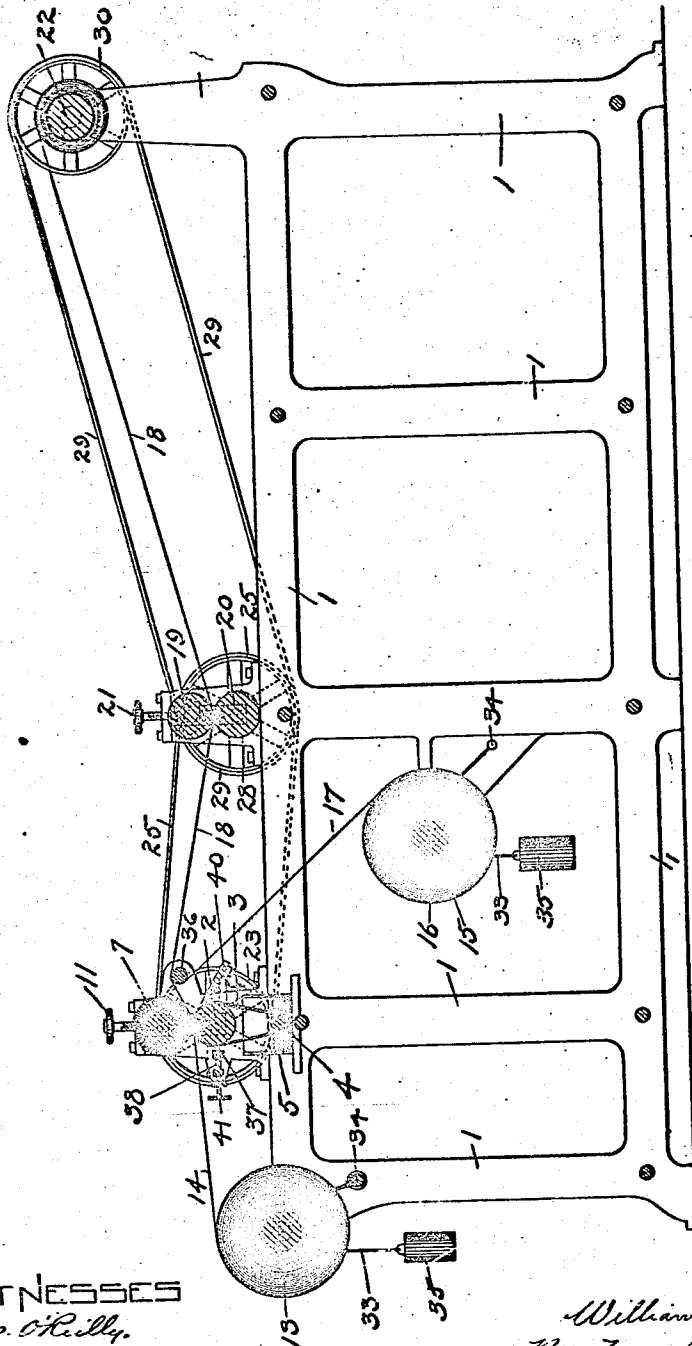
FIG. 2

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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

WILLIAM J. O'DONNELL, OF GLOVERSVILLE, NEW YORK.

FABRIC-PASTING MACHINE.

No. 894,976.

Specification of Letters Patent.

Patented Aug. 4, 1908.

Application filed November 25, 1907. Serial No. 403,599.

To all whom it may concern:

Be it known that I, WILLIAM J. O'DONNELL, a citizen of the United States, residing at Gloversville, county of Fulton, and State of New York, have invented certain new and useful Improvements in Fabric-Pasting Machines, of which the following is a specification.

The invention relates to such improvements and consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification. Similar characters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a top plan view of my improved fabric-pasting machine. Fig. 2 is a view in side elevation of the same. Fig. 3 is a central, vertical, longitudinal section of the same taken on the broken line 3—3 in Fig. 1.

This invention relates to machines for pasting together two plies or webs of fabric, which fabric is adapted for various uses, such for example as the making of lined fabric gloves in the manufacture of which it is found desirable to paste together the lining fabric and the outer fabric for the gloves before the glove blanks are cut therefrom. As many of these glove fabrics are of delicate color and texture, it is highly desirable that the application of the adhesive substance to the fabric plies should be so regulated as not to disfigure or injure the fabric.

The principal object of this invention is to regulate the distribution of the adhesive material to the fabric, so as to secure the necessary adhesion of one ply to the other without injury to the color or texture.

Other objects will appear in connection with the following description.

Referring to the drawings wherein the invention is shown in preferred form, 1, is the main frame of the machine, upon which is rotatively mounted in suitable bearings a paste-roll, 2, around which passes a paste-carrying belt, 3, which also passes around a roller, 4, in the lower part of the paste-box, 5.

Rotary movements are imparted to the paste-roll through the pulley, 6, fixed thereto, whereby a continuous movement is im-

parted to the belt, 3, over said roller, carrying to the upper side of the roller a supply of paste from the paste-box.

Above the paste-roll is a brush-roll, 7, rotatively mounted in bearings upon the frame of the machine, and adapted to be driven by a gear, 9, meshing with a gear, 10, on the shaft of the paste-roll.

The brush-roll is mounted in adjustable bearing boxes of ordinary form, the position of which is regulated by the hand-wheels, 11, whereby greater or less pressure, as desired, can be caused to be exerted by the brush upon the paste-roll.

In advance of the paste-roll are bearings, 12, for a cloth-roll, 13, the fabric, 14, from which roll passes between the paste-roll, 2, and brush-roll, 7, whereby the underside of said fabric is forced by the brush-roll into contact with the paste-covered surface of the apron or belt, 3, and the paste carried by said apron is applied to the underside of the fabric, 14, and beaten more or less into the body thereof by the pressure of the brush-roll.

In rear of and below the paste-roll are bearings, 15, for a cloth-roll, 16, the fabric, 17, of which passes around a small guide-roll, 36, just in rear of the paste-roll, the fabric, 17, passing below the fabric, 14, which also passes over said roll, 36, whereby the pasted fabric, 14, is applied and caused to adhere to the unpasted fabric 17.

The two-ply fabric thus produced, which is represented by the single line, 18, in the drawings, passes from the roller, 36, between a pair of presser-rollers, 19 and 20, the upper of which rollers is mounted in adjustable bearing boxes of ordinary form, whereby the pressure of the upper roller upon the lower roller can be regulated by means of the hand-wheels, 21, so as to force the two plies of the fabric into a more or less intimate contact as desired.

From the rollers, 19 and 20, the two-ply pasted fabric passes to the cloth-roll, 22, upon which it is wound.

As a means for driving the several rolls a pulley, 23, on the paste-roll shaft, 24, is connected by belt, 25, with a pulley, 26, on the shaft, 27, of the roller, 20, and a pulley, 28, on said shaft, 27, is connected by belt, 29, with a pulley, 30, on the shaft, 31, of the cloth-roll, 22, while the brush-roll, 7, is

driven from the paste-roll, 2, by means of the intermeshing gears, 9 and 10, and the roller, 19, is driven from the roller, 20, by means of intermeshing gears 32.

5 Each of the cloth-rolls, 13 and 16, is provided with a brake formed by a cord, 33, passing over the respective roll, and secured at one end to a fixed support at, 34, and at the other end to a weight 35. The cloth-
10 roll, 13, and the roller, 36, are so arranged that a direct line of feed from one to the other thereof will intersect the brush-roll, 7, so that the fabric, 14, will be drawn upwardly against the brush-roll and away from the
15 paste-roll. The fabric, 14, is thus brought into contact with a very limited area only of the paste-roll or paste-belt carried thereby, making it possible by adjustment of the brush-roll to regulate exactly the quantity
20 of paste applied to the fabric.

The paste-roll may be made of any desired material, but I prefer to make the same of practically unyielding material, such as wood or metal.

25 The paste-carrying belt, 3, may be made of canvas, rubber, or other material adapted to carry a coating of paste from the paste-box to the upper side of the paste-roll.

Any known means for supplying paste to
30 the paste-roll may be substituted for the paste-carrying belt if desired.

For certain purposes of the invention, the brush-roll may be made of any desired material, but I preferably provide said roll
35 with a yielding surface, as by making the roll in the form of a rotary brush with radially projecting bristles, splints, or brush-fiber.

For the purpose of more accurately regulating the supply of paste to the paste-roll, I
40 provide a brush or scraper, 37, preferably comprising a strip of felt, or other yielding material, adapted to engage the belt, 3, on about the horizontal plane of the axis of the
45 paste-roll, 2, as shown in Fig. 3. This doctor brush or scraper is preferably mounted upon a bar, 38, the ends of which are mounted in slideways, 39, in the housing, 40, containing the bearings for the paste and brush-rolls.
50 The bar, 38, is adapted to be forced against the belt with more or less pressure by means of screws operated by hand-wheels 41. This brush or scraper serves to remove from the paste-belt or paste-roll any excess of paste
55 so that the amount delivered to the fabric can be regulated exactly.

What I claim as new and desire to secure by Letters Patent is

1. In a machine of the class described, the
60 combination with a paste-roll; and means for supplying paste thereto; of a brush-roll co-operative with said paste-roll; means for guiding a web of fabric between said rolls

and means, independent of said rolls, for producing a tension upon said fabric. 61

2. In a machine of the class described, the combination with a paste-roll; and means for supplying paste thereto; of a brush-roll co-operative with the upper side of the paste-roll; means for guiding a web of fabric between said rolls and means, independent of said rolls, for producing a tension upon said fabric. 71

3. In a machine of the class described, the combination with a paste-roll; and means for supplying paste thereto; of a brush-roll co-operative with said paste-roll; a cloth-roll in advance of the paste-roll; and a cloth-guide-roll in rear of the paste-roll, said cloth-roll and cloth-guide-roll being so arranged
80 that a direct line of feed from one to the other thereof will intersect said brush-roll and means for producing a tension upon said fabric between said guide-roll and said cloth-roll. 81

4. In a machine of the class described, the combination with a paste-roll; and means for supplying paste thereto, of a brush-roll co-operative with the paste-roll; a cloth-roll in advance of said paste-roll; a guide-roll in rear
90 of the paste-roll in the path of the pasted surface of the fabric from said cloth-roll; means for producing a tension upon said fabric between said guide-roll and said cloth-roll and means for supplying to said guide-roll, between it and the pasted surface of said fabric, a second web of fabric. 91

5. In a machine of the class described, the combination with a paste-roll; and means for supplying paste thereto; of a brush-roll co-operative with the paste-roll; a cloth-roll in advance of said paste-roll; a guide-roll in rear of the paste-roll in the path of the pasted surface of the fabric from said cloth-roll; means for producing a tension upon said
100 fabric between said guide-roll and said cloth-roll; means for supplying to said guide-roll, between it and the pasted surface of said fabric, a second web of fabric; and a pair of presser-rollers in rear of said guide-roll adapted to receive therebetween and press together both webs of fabric. 101

6. In a machine of the class described, the combination with a paste-roll having an unyielding surface; and means for supplying
110 paste thereto; of an adjustable brush-roll having a yielding surface co-operative with said paste-roll; a cloth-roll in advance of the paste-roll; and a cloth-guide-roll in rear of the paste-roll, said cloth-roll and cloth-guide-roll being so arranged that a direct line of feed from one to the other thereof will intersect said brush-roll and means for producing a tension upon said fabric between said guide-roll and said cloth-roll. 111

7. In a machine of the class described, the

combination with a paste-roll; of a paste-box
subjacent to the paste-roll; an endless belt
passing around said paste-roll, and depend-
ing within said paste-box; means for rotating
5 said paste-roll; a brush-roll coöperative with
the upper belt-covered surface of said paste-
roll; means for feeding a web of fabric be-
tween said rolls; and a doctor engageable

with the upwardly movable stretch of said
belt.

In testimony whereof, I have hereunto set
my hand this 31 day of Oct. 1907.

WILLIAM J. O'DONNELL.

Witnesses:

EDUARD J. LA VORE,
WILLIAM O. BROWN.