(No Model.)

A. C. SQUIRES.

MACHINE FOR MAKING SKIRT FACINGS.

No. 597,074. Patented Jan. 11, 1898.

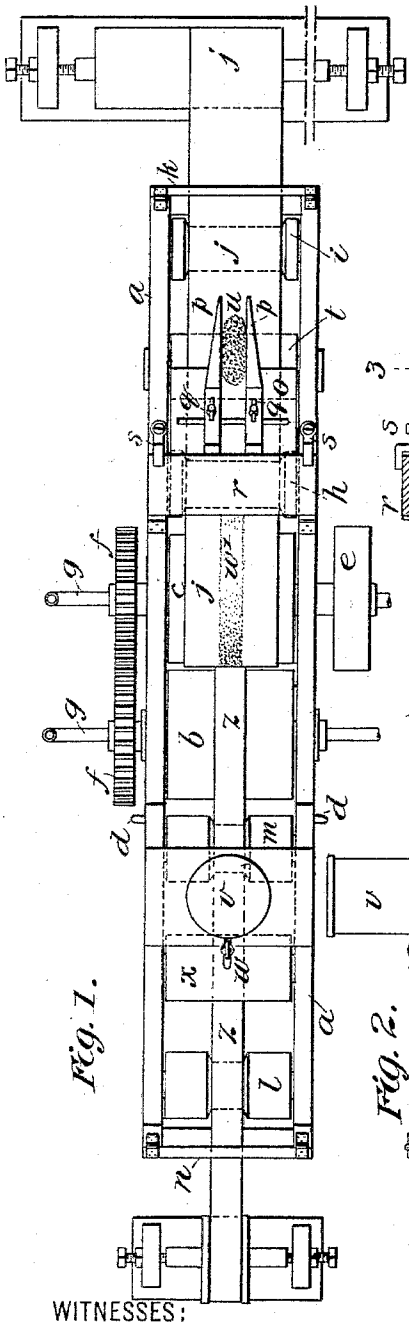


Fig. 1.

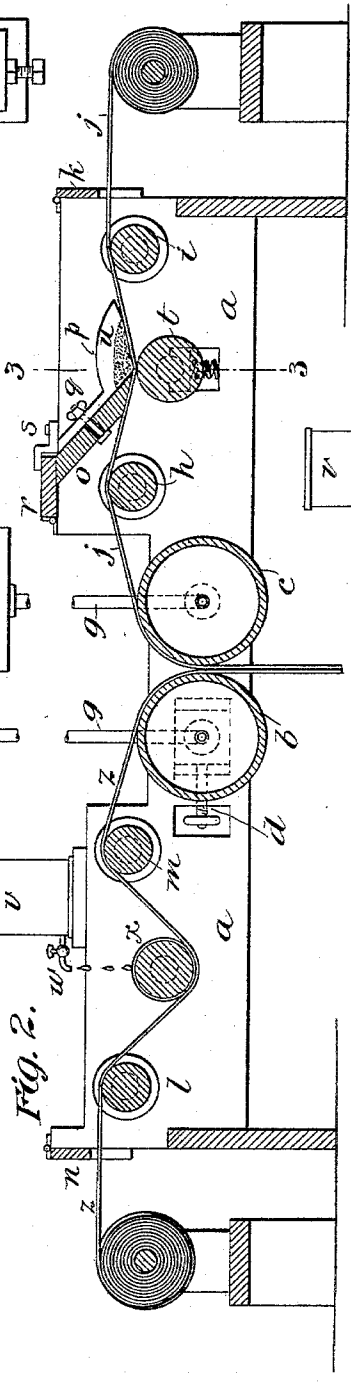


Fig. 2.

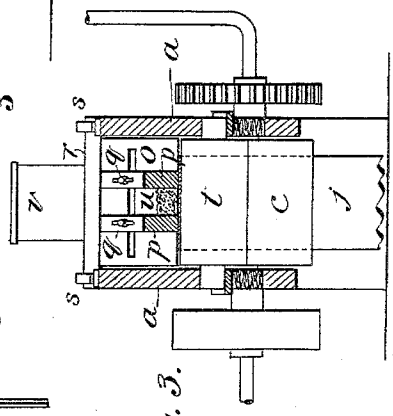


Fig. 3.

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UNITED STATES PATENT OFFICE.

ARTHUR C. SQUIRES, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE I. B. KLEINERT RUBBER COMPANY, OF NEW YORK, N. Y.

MACHINE FOR MAKING SKIRT-FACINGS.

SPECIFICATION forming part of Letters Patent No. 597,074, dated January 11, 1898.

Application filed March 23, 1897. Serial No. 628,821. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR C. SQUIRES, a citizen of the United States, and a resident of Brooklyn, county of Kings, State of New York, have invented certain new and useful Improvements in Machines for Making Skirt-Facings, of which the following is a specification.

This invention has for its object the construction of a machine for making that class of skirt-facing which consists of two strips of material combined together by means of a suitable cement. The materials of which such skirt-facings are made consist of a strip of common or cheap stock, such as felt, having one of its sides coated with rubber, and a much narrower strip of more expensive stock, such as cloth or velvet, also rubber-coated on one side, the narrow strip being placed centrally on the wider one with their rubber-coated faces adjacent, a suitable cement being generally used to insure the proper adhesion of the rubber-coated faces. The combined strip is then vulcanized and separated into two strips by a longitudinal central severance of it.

The machine devised by me for making skirt-facings, briefly described, comprises a pair of presser-rollers, preferably steam-heated, guide-rollers on either side thereof for guiding the two strips of material from opposite directions to the presser-rollers, a cement hopper or pocket arranged to apply a thin film of cement to the rubber-coated face of one of the strips, and a moistening device for applying a suitable solvent to the other rubber-coated strip, so as to soften the rubber of this strip and insure the perfect adhesion of the rubber faces of the two strips.

To more fully describe my invention and the manner in which it operates, I will now refer to the accompanying drawings, in which—

Figure 1 is a plan view of a machine made according to my invention. Fig. 2 is a longitudinal vertical sectional elevation of the same; and Fig. 3 is a transverse section on the line 3 3, Fig. 2.

The frame of the machine consists of two side pieces *a a*, provided with bearings for the journals of the presser-rollers and the rollers of the working parts of the machine and are held together by end pieces.

In the central part of the frame are located the presser-rollers *b c*, one of which rotates in sliding boxes of the frame, set up by the screws *d d*, and the other is provided with a pulley *e*, which may be connected with the source of power in the ordinary manner. These rollers *b c* are connected together by gears *f f*, are hollow, and steam-heated through the medium of the pipes *g g*.

On one side of the feeding presser-rollers *b c*, arranged about horizontally therewith, are the two grooved rollers *h* and *i*, which guide the wide strip of material *j* to the rollers *b c*, said material first passing through the guide *k* at the end of the frame. This guide is hinged to the frame, so that it may be swung out of the way to facilitate the presentation of a fresh piece of material to the machine. On the other side of the rollers *b c* are the grooved rollers *l m* for guiding the narrow strip of material *z* centrally toward the other strip, the said strips of material passing in contact together between the rollers *b* and *c*. A hinged guide *n* is located at this end of the machine for the guidance of the narrow strip to the roller *l*. Both of the strips of material are coated with rubber on one side, and these sides of the strips face upwardly as they pass through the machine.

A hopper or pocket for applying a suitable cement to the wide strip of the material is located between the rollers *h* and *i*, so as to somewhat depress the strip between them, and this hopper or pocket consists of a back piece *o* and two side pieces *p p*, attached thereto by clamping-bolts *q q*, said bolts passing through slots in the back *o* to provide for the lateral adjustment of the side pieces, so that the width of the film of cement applied to the rubber-coated face of the strip may be varied at will. The back piece *o* is connected to the cross-bar *r*, hinged to the top of the frame *a a*, so that the pocket may be turned up for cleaning, &c., and is held down in operative position by the buttons *s s*.

The lower edges of the back and side walls of the pocket-rest on the strip of material which constitutes the bottom of the pocket, and the strip is held against the side pieces by the spring-actuated roller *t*. The cement *u*, placed in the open pocket, as shown, is held by the side walls from spreading laterally, but is drawn out in a thin film by the traveling strip of material beneath the lower

edge of the back wall. The side walls are so adjusted that the width of the film of cement applied to the strip shall be so much less than the width of the other strip of material *z*, as shown by the lines *w'*, that when the two strips pass between and are pressed by the rollers *b c* the cement will spread to but not beyond the edges of the narrow strip *z*, so that the finished article will be free of stains due to any exposed cement.

It is advantageous to soften the rubber coat of the uncemented strip—in this case the narrower one *z*—and for this purpose a suitable solvent, as benzin, is applied to it. This solvent is contained in the reservoir *v*, which is provided with a spout *w* and a cock for the regulation of the discharge of the solvent therefrom. The solvent falls from the spout onto the roller *x*, which is preferably coated with felt or other absorbent material and by this roller is uniformly applied to the strip, said roller being arranged so as to depress the strip between the rollers *l* and *m*.

The particular arrangement of the various parts of the machine shown may be departed from without changing their structural functions or the principles of my invention.

Instead of applying the cement to the wide strip and the solvent to the narrow strip the reverse applications may be made, and in some cases the solvent may be omitted.

The combination of the two strips in making skirt-facings by this machine is not only very rapidly performed, but the completed article is perfectly uniform and clean.

I claim as my invention—

1. In a machine for making skirt-facing the combination of a pair of presser-rollers, grooved rollers at one side thereof for guiding the wider strip of material thereto, and grooved rollers at the other side for guiding the narrower strip of material toward the wider strip, the two strips passing in contact between the presser-rollers, means for applying cement to one of the strips of material, and means for moistening with a suitable solvent the other strip of material.

2. In a machine for making skirt-facing the combination of a pair of presser-rollers, grooved rollers at one side thereof for guiding the wider strip of material thereto, and grooved rollers at the other side for guiding the narrower strip of material toward the wider strip, the two strips passing in contact between the presser-rollers, and a hopper or pocket having an open bottom arranged over and in contact with one of the strips of material, and a roller located beneath the hopper or pocket.

3. In a machine for making skirt-facing the combination of a pair of presser-rollers, grooved rollers at one side thereof for guiding the wider strip of material thereto, and grooved rollers at the other side for guiding the narrower strip of material toward the wider strip, the two strips passing in contact between the presser-rollers; a solvent-holding reservoir provided with a discharge-spout above one of the strips of material and a moistening device arranged beneath the discharge-spout and in contact with the strip of material.

4. In a machine for making skirt-facing the combination of a pair of presser-rollers, grooved rollers at one side thereof for guiding the wider strip of material thereto, and grooved rollers at the other side for guiding the narrower strip of material toward the wider strip, the two strips passing in contact between the presser-rollers, a hopper or pocket having an open bottom arranged over and in contact with one of the strips of material, a roller located beneath the hopper or pocket, a solvent-holding reservoir with a discharge-spout located above the other strip of material, and a moistening-roller arranged beneath the discharge-spout and in contact with this strip of material.

5. In a machine for making skirt-facing in combination a pair of feeding presser-rollers, two grooved rollers for guiding a strip of material to the feeding presser-rollers, said rollers being horizontally arranged, a cement hopper or pocket comprising a back piece and two laterally-adjustable sides and arranged between the two guide-rollers in contact with the strip of material so as to depress it between the two guide-rollers, and a spring-actuated supporting-roller beneath the hopper or pocket.

6. In a machine for making skirt-facing in combination a pair of feeding presser-rollers, two grooved rollers for guiding a strip of material to the feeding presser-rollers, said rollers being horizontally arranged, a cement hopper or pocket comprising a back piece and two laterally-adjustable sides and arranged between the two guide-rollers in contact with the strip of material so as to depress it between the two guide-rollers, a spring-actuated supporting-roller beneath the hopper or pocket, two grooved rollers at the other side of the presser-rollers for guiding another strip of material thereto, a moistening-roller arranged to bear on the strip between these two guide-rollers, and a solvent-reservoir with a discharge-spout located above the moistening-roller.

7. In a machine for making skirt-facing the combination of a pair of presser-rollers, grooved rollers at one side thereof for guiding the wider strip of material thereto, and grooved rollers at the other side for guiding the narrower strip of material centrally toward the wider strip, the two strips passing in contact between the presser-rollers, means for applying a film of cement to the central part of the wide strip of material in width somewhat less than the width of the narrow strip of material.

8. In a machine for making skirt-facing the combination of a pair of presser-rollers, grooved rollers at one side thereof for guiding the wider strip of material thereto, and

grooved rollers at the other side for guiding the narrower strip of material centrally toward the wider strip, the two strips passing in contact between the presser-rollers, means for applying a film of cement to the central part of the wide strip of material in width somewhat less than the width of the narrow strip of material, and means for moistening the narrow strip of material.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 15th day of March, 1897.

ARTHUR C. SQUIRES.

Witnesses:
ALFRED SHEDLOCK,
EDWARD SCHENCK.