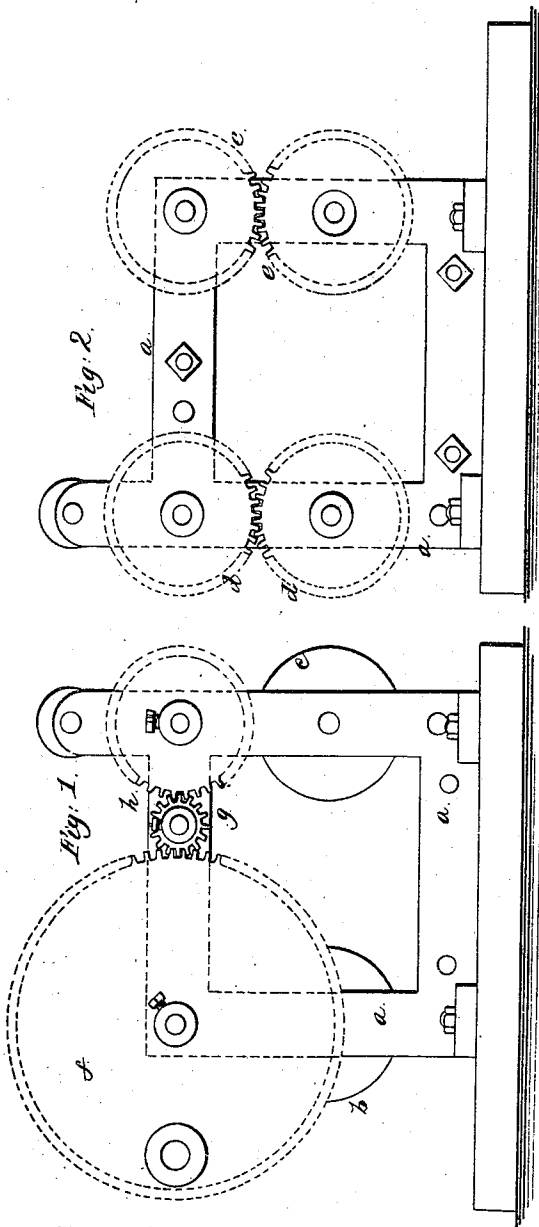


G. S. Dwight.

Making Rubber Fabrics.

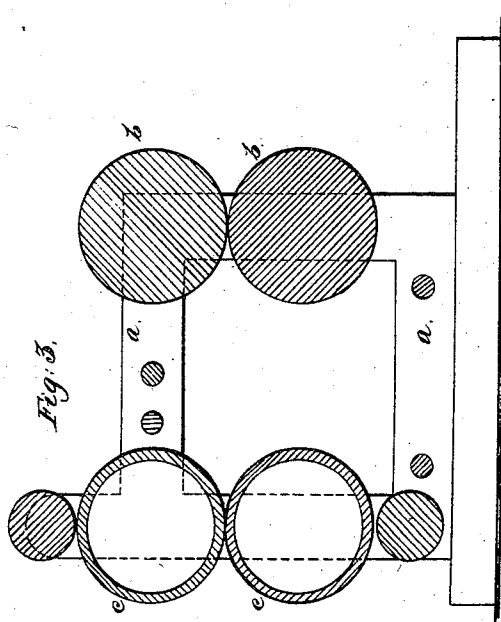
Nº 87,087.

Patented Feb. 16, 1869.



Witnesses:

Wm H Bishop
Andrew J. DeLong



Inventor:

Geo. Wright

United States Patent Office.

GEORGE S. DWIGHT, OF NEW YORK, N. Y.

Letters Patent No. 87,087, dated February 16, 1869.

IMPROVED MACHINE FOR COATING CLOTH WITH INDIA RUBBER AND OTHER SUBSTANCES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, GEORGE S. DWIGHT, of the city, county, and State of New York, have invented a new and useful Improvement in Machinery for Coating Cloth with India Rubber or Allied Gums; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figures 1 and 2 are elevations of the two opposite sides of the machine, and

Figure 3, a vertical section.

The same letters indicate like parts in all the figures.

The object of my invention is to apply a coating of India rubber or allied gum to both surfaces of the cloth at the same time, although, if desired, the coating may be applied to one surface only.

The coating of cloth with India rubber has heretofore been effected by dissolving the gum in any of the essential oils, and, when in the liquid state, spreading it on to the surface of the cloth; and it is also effected by means of heated rollers, between which the cloth passes, one of the said rollers applying the gum to one surface of the cloth, while it passes between the two; and in some instances the surface of the roller by which the gum is applied moves slower than the surface of the opposite roller which carries the cloth, and in other instances the surface of the roller which applies the gum moves faster than the surface of the contiguous or opposite roller, which carries the cloth.

It will be obvious that by either of these two modes, the two opposite surfaces of the cloth are exposed to two opposing forces in the direction of the length of the cloth, because one of the rollers of the pair, between which the cloth is passing, tends to move the cloth faster than the other roller, which acts on the opposite surface; and by none of the means known prior to my invention, could both surfaces of the cloth be coated at the same time.

By means of my said invention, I am enabled to coat both surfaces of the cloth at one and the same operation, while at the same time the pulling-action of the rollers is equal on both surfaces of the cloth.

In the accompanying drawings—

a represents a suitable frame, in which are mounted two pairs of rollers, *b b* and *c c*, the two pairs being

placed at any desired distance apart. Each pair should be mounted, so that they can be adjusted to the thickness of the material which is to pass between, but such mode of adjustment is neither described nor represented, as it is well known.

The two rollers constituting each pair, are geared by cog-wheels, *d d* and *e e*, so as to turn in opposite directions with equal velocity, and motion is communicated from one pair to the other by a train of cog-wheels, *f g h*, so that the surfaces of the pair *c c* shall move faster than the surfaces of the pair *b b*; and as the difference in the rate of motion is required sometimes to be varied, according to the quality of the cloth and the thickness of the coats of gum to be applied, the wheels *f g h* are secured to their shafts, each by a temper-screw, or other equivalent means, so they can be removed and other wheels substituted.

The pair of rollers *c c* should be hollow, so that they can be heated, as is usual with rollers used in machinery for applying India rubber to cloth.

The India rubber or allied gum is to be prepared, and supplied to each of the rollers *c c*, in the same manner as it has heretofore been applied to the roller in machines heretofore used for coating cloth.

The cloth to be coated is introduced in the bite of the pair of rollers *b b*, and by them moved forward to the bite of the pair of rollers *c c*, which take the cloth, and, being provided with the plastic gum, apply it simultaneously to both surfaces of the cloth, and as the pair of rollers *b b* move slower than the rollers *c c*, they hold back the cloth, that the rollers *c c* may spread the gum evenly on both surfaces.

In this way, it will be seen that the gum is applied to both surfaces of the cloth at the same time, and that the pull, or strain on the two opposite surfaces of the cloth is equal.

What I claim as my invention, and desire to secure by Letters Patent, is—

The method, substantially as above described, of coating cloth with India rubber or allied gum, by means of two pairs of rollers, one pair moving faster than the other, as set forth.

GEO. S. DWIGHT.

Witnesses:

WM. H. BISHOP,
A. J. DE LAOY.