

(No Model.)

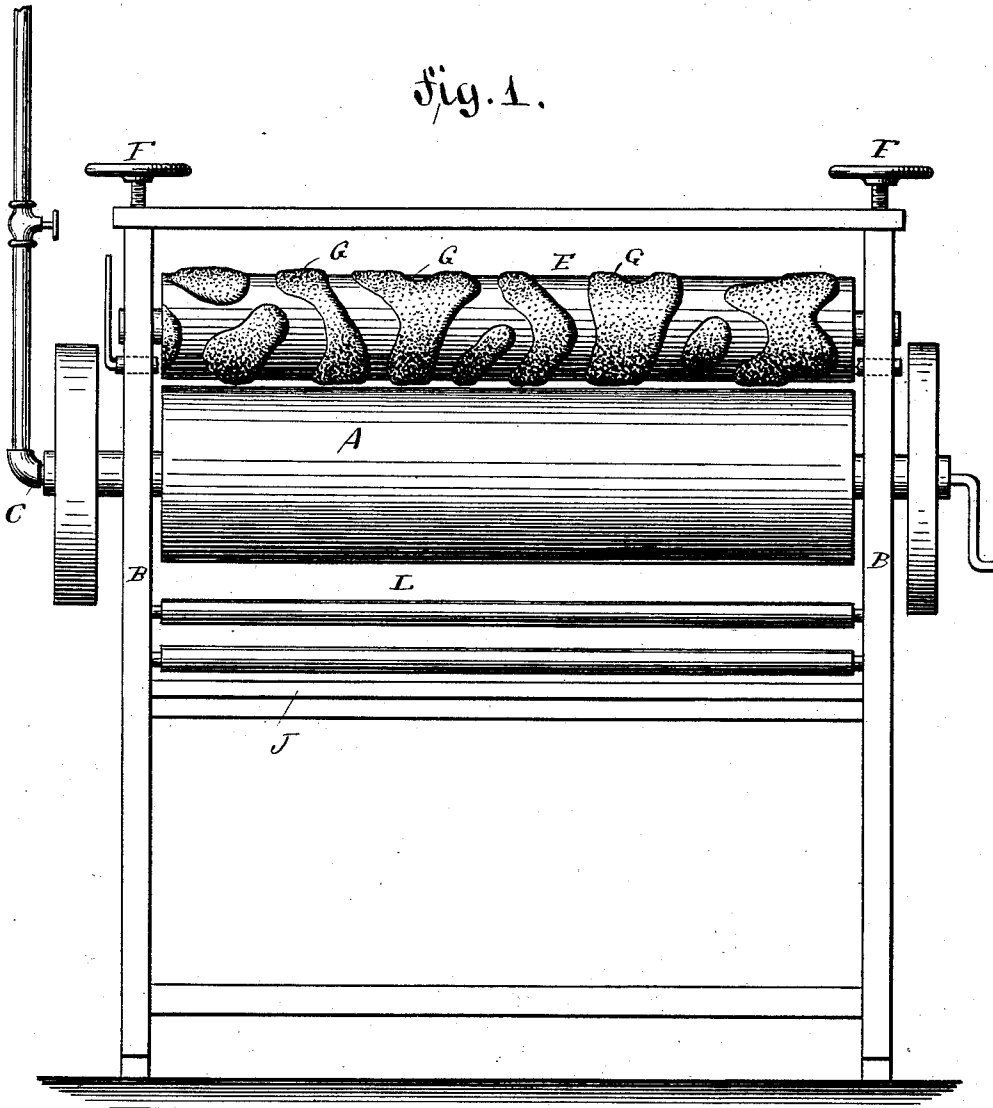
3 Sheets—Sheet 1.

E. RAU.

MACHINE FOR CLOUDING OR MARBLEIZING PLUSH.

No. 362,178.

Patented May 3, 1887.



WITNESSES:

W. N. Rosenbaum.
Carl Kapp

INVENTOR

Eugene Rau
BY *Joseph Rieger*
ATTORNEYS.

(No Model.)

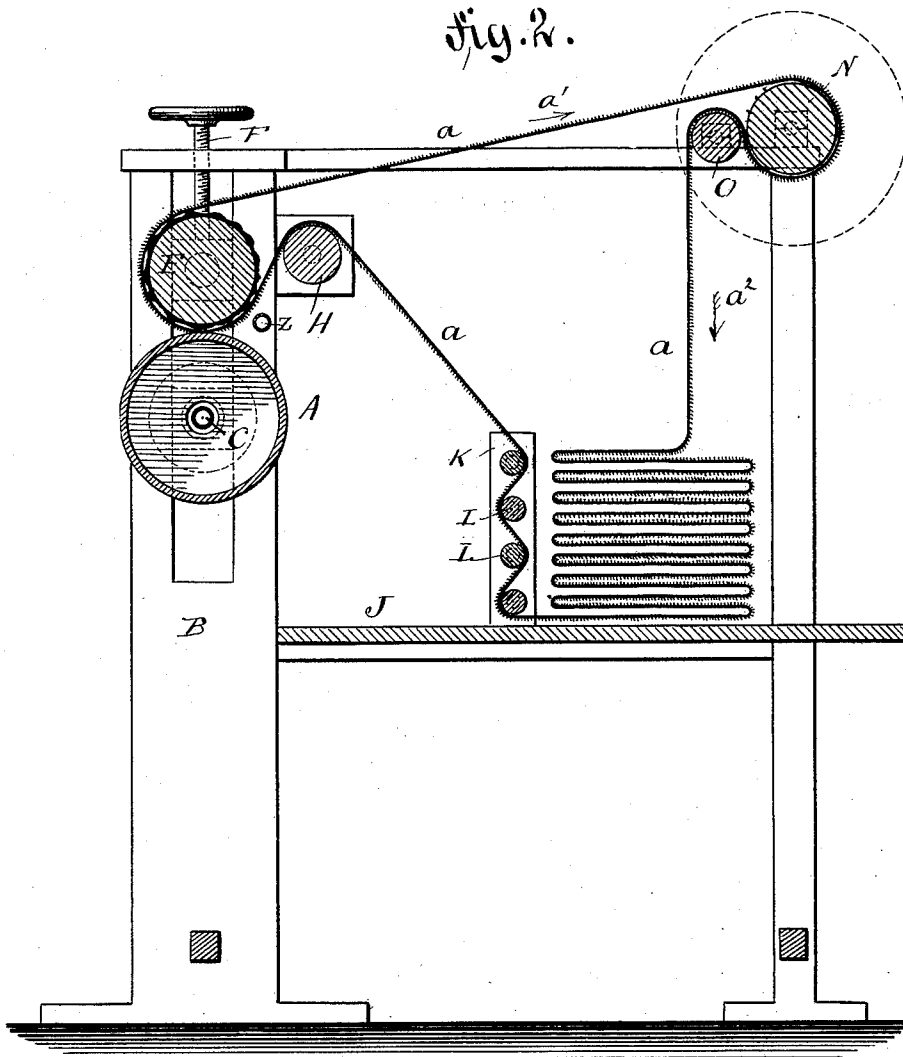
3 Sheets—Sheet 2.

E. RAU.

MACHINE FOR CLOUDING OR MARBLEIZING PLUSH.

No. 362,178.

Patented May 3, 1887.



WITNESSES:

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(No Model.)

3 Sheets—Sheet 3.

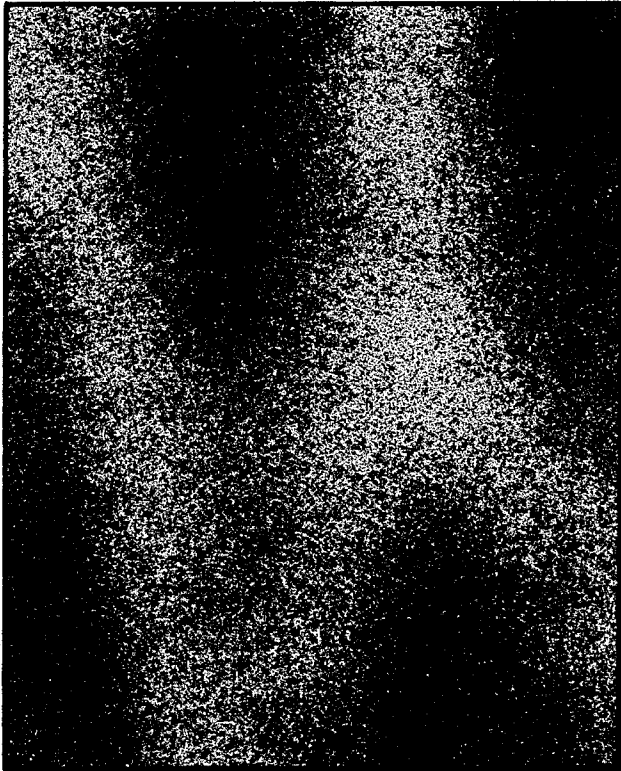
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Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EUGENE RAU, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO JOHN GODDARD WATMOUGH, OF SAME PLACE.

MACHINE FOR CLOUDING OR MARBLEIZING PLUSH.

SPECIFICATION forming part of Letters Patent No. 362,178, dated May 3, 1887.

Application filed February 4, 1887. Serial No. 226,511. (No model.)

To all whom it may concern:

Be it known that I, EUGENE RAU, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Clouding or Marbleizing Plush, of which the following is a specification.

Heretofore it has been customary to make plush with a uniform pile surface—that is to say, with the same luster on the entire surface; but of late it has been customary to cloud or marbleize the plush—that is, to treat some of the pile-threads in such a manner that the reflection of the light is different on different parts of the plush, whereby a cloudy or marbleized appearance is obtained.

The object of my invention is to provide a new and improved machine by means of which the plush can be clouded perfectly in a very short time and at very little expense, and without in any way injuring the plush.

The invention consists of the combination, with a hollow heated drum or metal cylinder, of a roller parallel with and adjacent to said drum, on the surface of which roller padded irregular projections are formed. The plush to be clouded is passed between said rollers, and at those places where the projections of the padded roller press the plush upon the heating drum or roller the pile-threads are turned over and bent on themselves, and those parts that have been thus acted upon have a luster different from that of the other parts, all as will be fully described and set forth hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is an end elevation of my improved machine for clouding and marbleizing plush, parts being broken out. Fig. 2 is a longitudinal section of the same. Fig. 3 is a representation of a piece of clouded or marbleized plush made on my improved machine.

Similar letters of reference indicate corresponding parts.

The hollow roller or drum A is mounted in vertical standards B, and into said drum a steam-pipe, C, or a gas-burner pipe or other heating-pipe is passed, which preferably extends entirely through the drum, so as to permit of introducing steam at one end and draw-

ing off the water of condensation at the other end. Above the drum A a wooden or metal roller, E, is mounted in the standards, said roller having vertical bearings for the purpose of adjusting the said roller by means of screws F a greater or less distance from the roller or drum A. Padded irregular projections G are produced on the surface of the roller E, which projections can be formed by pieces of paper fastened on the roller, or formed by means of pieces of canvas, cotton-flannel, flannel, felt, or any other like material; or these projections may be produced in any well-known way on the body of the roller and covered by any suitable material.

At the side of and parallel with the roller E a guide-roller, H, is mounted in suitable supports, and on a table, J, held in the frame of the machine, uprights K are provided, in which a series of tension-rollers, L, are mounted.

N is a roller provided with slight projections or pins for drawing the plush off the roller E.

O is a guide-roller adjacent to and parallel with the roller N.

Z represents a pipe or steam-box running parallel with and adjacent to the roller E, which pipe or box has a series of apertures on the side facing the roller E. The fabric passes from the roller H between the roller E and the box or pipe Z, and the pile-face is dampened slightly by the steam escaping from the apertures in said box or pipe, which assists materially in producing a better and more durable clouding or marbleizing effect.

The operation is as follows: The folded fabric *a* is placed upon the table J and one end of the fabric passed between the tension-rollers L, and then the fabric is passed over the roller H and almost entirely around the roller E, so that the pile-surface of the fabric faces the roller A. The roller E is then adjusted by means of the screws F so that the pile-surface of the fabric is pressed against the roller or drum A, which roller A is revolved, and by frictional contact revolves the roller E. The roller N is also revolved by a suitable belt, and draws the fabric in the direction of the arrow *a'*, and the said fabric then passes over the roller O and downward, as indicated by the arrow *a''*.

Those portions of the plush or piece of fabric at the back of which the projections G rest are pressed on the heated roller A, which revolves quite slowly, and thereby the pile is "ironed" at those places where a projection acts on the back of the fabric. As the projections or raised parts G are irregular and have approximately the shape of clouds, it is evident that the pile-face of the fabric, after having passed through the machine, will have a cloudy appearance. Those parts which have been ironed have a different luster from those which have not been ironed. As shown in Fig. 1, the raised parts do not terminate abruptly, but the edges are beveled off, so that the ironed parts of the face gradually merge into the parts not ironed, thereby distinguishing the material from shorn plush, in which the contours of the figures are very sharp.

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

1. A machine for clouding and marbleizing plush, constructed with a heated roller and an adjacent roller provided with irregular projections, substantially as shown and described.
2. A machine for clouding and marbleizing

plush, constructed with a roller containing a heating device, a roller having irregular slightly yielding or padded projections on its face, which padded roller is adjacent to and parallel with the heated roller, and means for drawing the plush between the two rollers, substantially as shown and described.

3. A machine for clouding and marbleizing plush, constructed with a roller containing a heating device, a roller having irregular slightly yielding or padded projections on its face, which padded roller is adjacent to and parallel with the heating-roller, means for drawing the plush between the two rollers, and a steam box or pipe having apertures in the side facing the padded roller, for the purpose of heating the pile-surface of the fabric before said fabric passes between the two rollers, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

EUGENE RAU.

Witnesses:

CHAS. M. LUKENS,

WILLIAM J. ANDERSON.