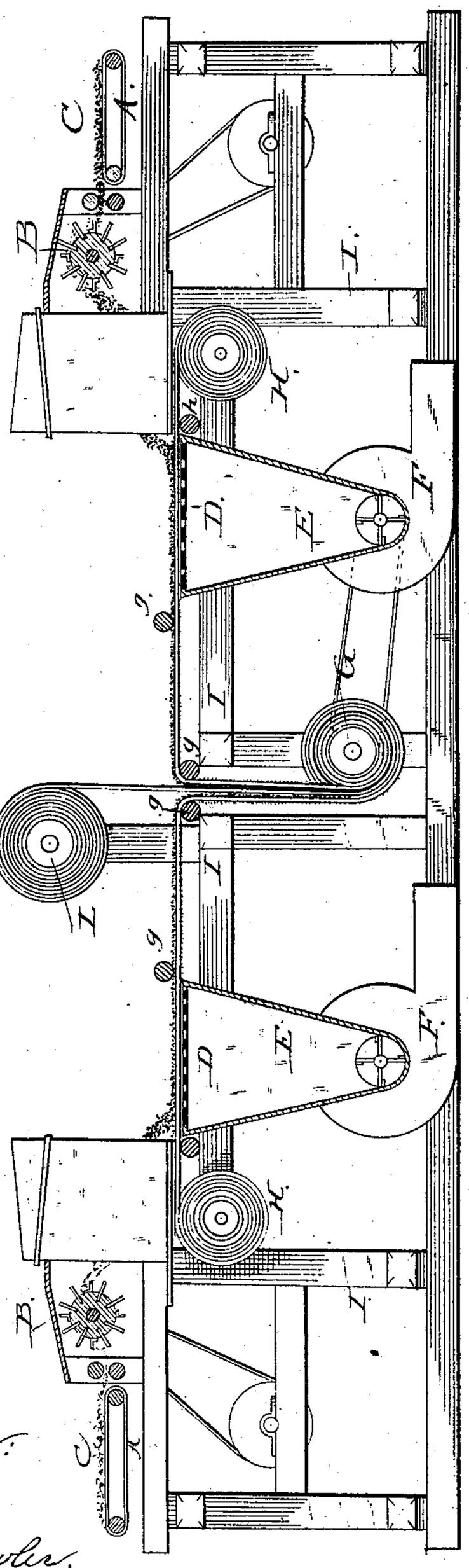
(No Model.) 3 Sheets—Sheet 1.

W. E. DOUBLEDAY.

MAKING FUR FACED FABRICS.

No. 255,381. Patented Mar. 21, 1882.

Fig. 1.



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by Doubleday & Bliss attys

(No Model.) 3 Sheets—Sheet 2.

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Fig. 2.

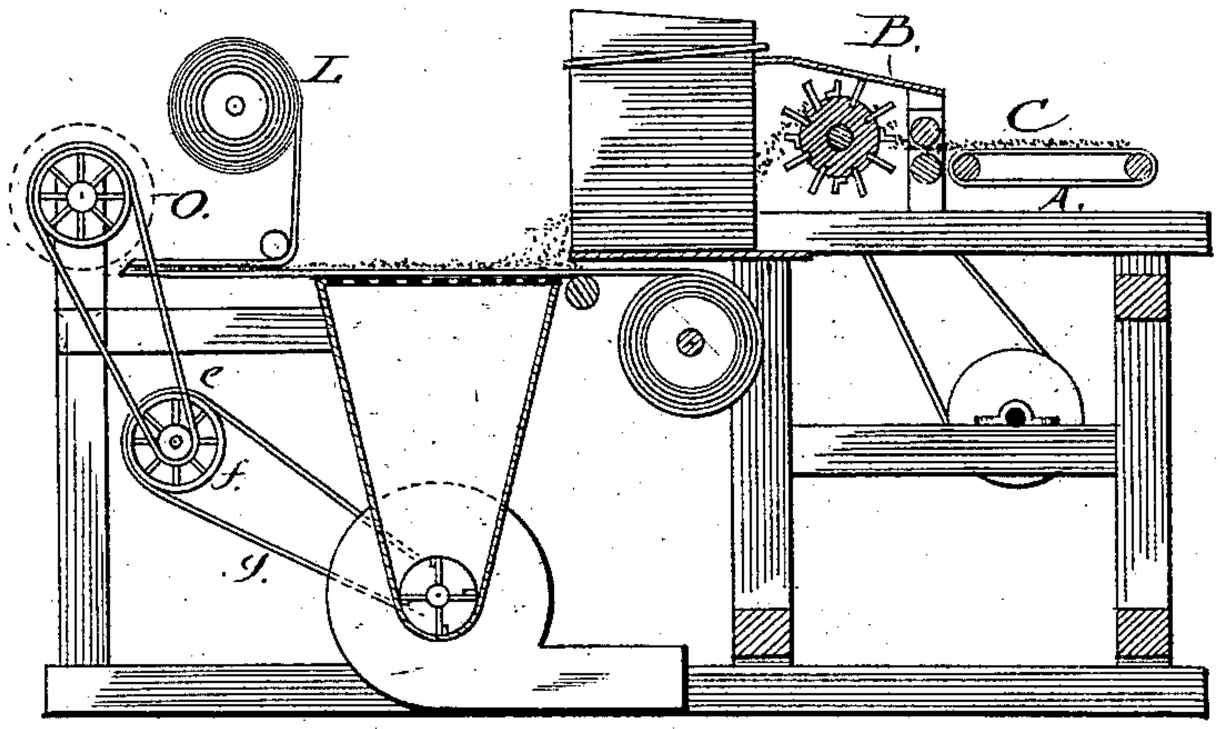
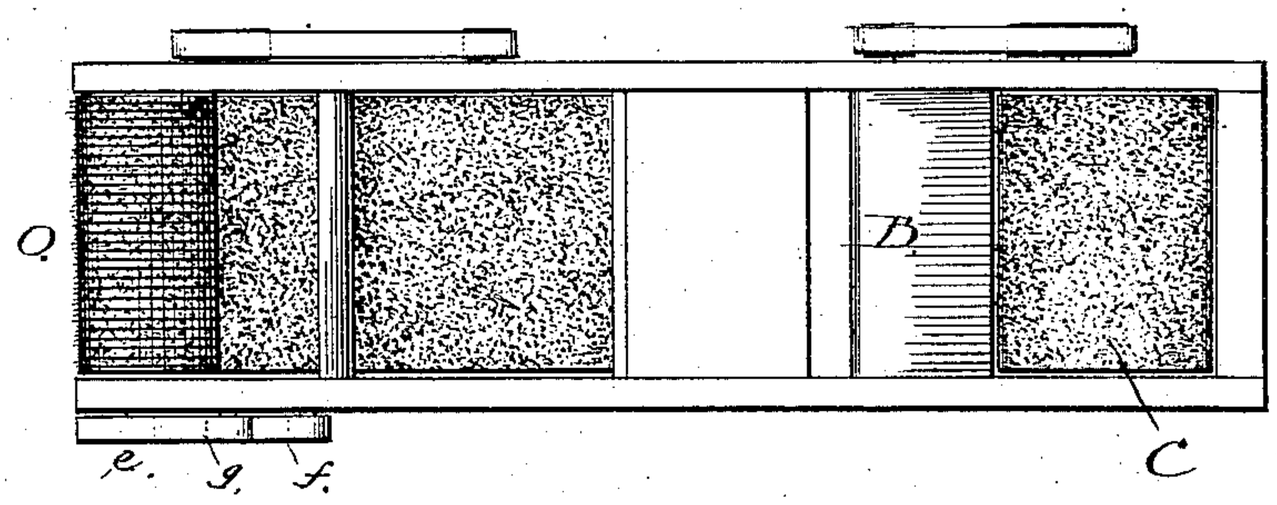


Fig. 3.



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attorney's

(No Model.) 3 Sheets—Sheet 3.

W. E. DOUBLEDAY.

MAKING FUR FACED FABRICS.

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Fig. 6.

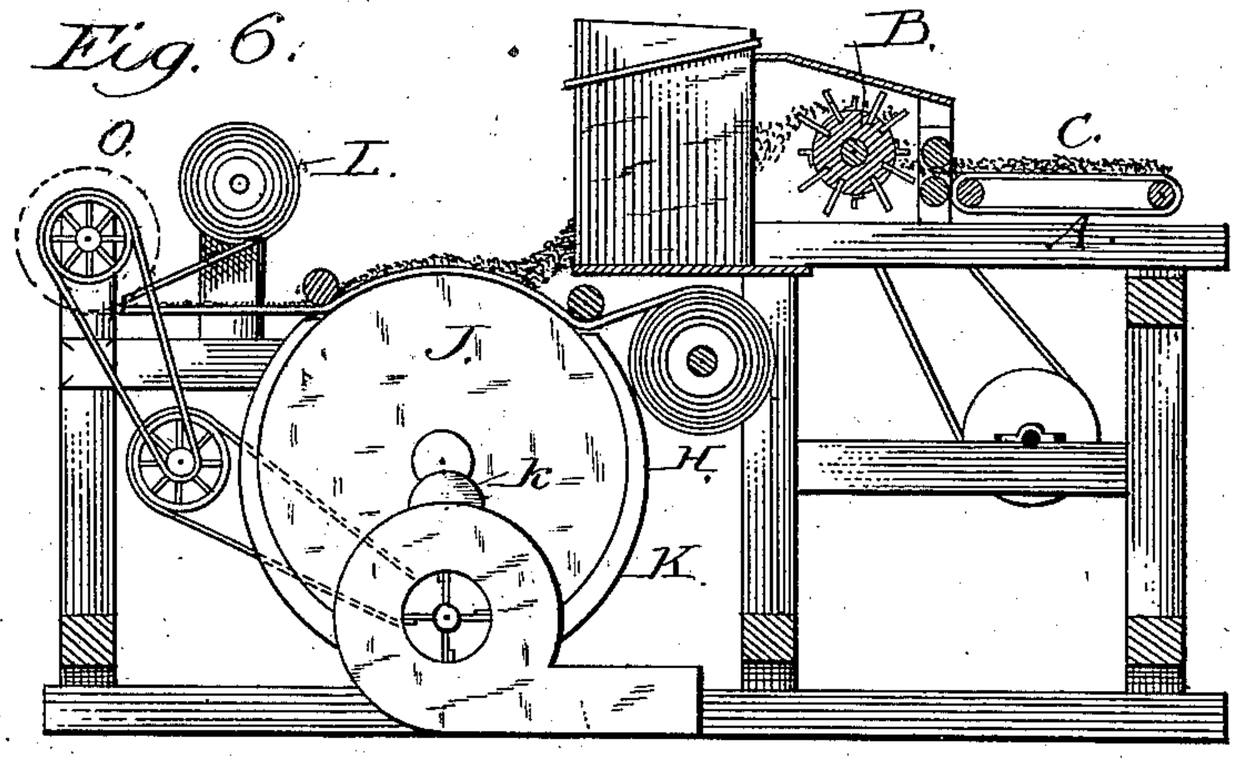

Fig. 4

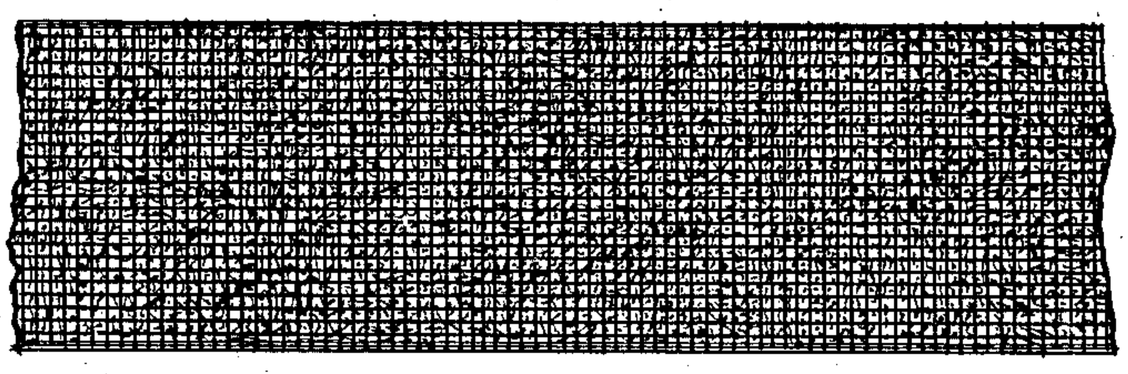

Fig. 5

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Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM E. DOUBLEDAY, OF NEW YORK, N. Y., ASSIGNOR TO ELLEN M. DOUBLEDAY, OF SAME PLACE.

MAKING FUR-FACED FABRICS.

SPECIFICATION forming part of Letters Patent No. 255,381, dated March 21, 1882.

Application filed January 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. DOUBLEDAY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Making Fur-Faced Fabrics; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a vertical longitudinal section of a machine which I have invented for carrying out my improvements. Fig. 2 is a similar view of one section of my machine, slightly modified. Fig. 3 is a plan view of Fig. 2. Fig. 4 is a bottom view of a fur bat. Fig. 5 is an edge view of the same. Fig. 6 is a section of a modified form of the machine.

I will first describe that part of my machine which is arranged upon one side of the receiving-roller G, it being a duplicate of the devices upon the opposite side of said roller.

Referring to Fig. 1, A B C represent respectively the feeding-apron, the blower, and fur upon the apron; but as these parts of the machine may be of any usual or approved construction adapted for blowing fur upon an exhausted cone, they need not be specifically described.

D represents a flat perforated or reticulated surface placed above an exhausting-chamber, E, which is connected with an exhaust-fan, F, whereby a current of air is caused to pass downward through the surface D.

G is a roller connected by a train of gearing and belt, or belts and pulleys alone, *e f g*, with the shaft of fan F, whereby a slow rotary motion is imparted to roller G in the direction indicated by arrow 1.

H is a supply-roller, both rollers being mounted in suitable bearings upon the frame-work I I of the machine.

L is a supply-roller having a sheet of felted or woven fabric, formed in whole or in part of suitable feltable fibers, arranged in such relation to the perforated surface that the fur bats can be delivered in contact with both the felted or woven fabric, and the three delivered to the receiving-roller G.

g g h h are guiding-rollers.

This machine may be operated substantially as follows: Strips of mosquito-netting or millinet, being wound upon the supply-roller H H, are passed thence over the perforated surfaces D D, thence to the receiving-roller G, to which it is connected in such manner that by the rotation thereof it (the mosquito-netting) is drawn slowly over the perforated surface. During the passage of the mosquito-netting over this perforated surface there is deposited upon it a thin layer of fur by means of the parts A B C. Thus there will be produced a bat consisting of a felted or woven fibrous base of cloth, in combination with two bats of fur, one on each side of the cloth, adapted to be removed from the receiving-roller G and subjected to any process for sticking fur, either by hand or by machinery, whereby there may be produced cloth fur-napped upon both sides. As the work progresses, and the size of the roll of bats upon the receiving-roller G increases, the speed at which the mosquito-netting is drawn over the perforated surface D D will be correspondingly increased, unless provision be made for slowing the speed of the receiving-roller relative to the other parts of the machine as the diameter of the roller-bat increases. Hence in order to insure a uniformity in the thickness of the fur bat I propose to use any of the well-known mechanisms for regulating the speed of the receiving-roller relative to the other parts of the machine in such manner as to insure that the mosquito-netting shall travel over the perforated surfaces D D at a uniform speed relative to the movement of the parts A B C and the rate at which the fur is blown upon the mosquito-netting; or substantially the same result may be accomplished by permitting the rate of travel of the netting over the surfaces D D to increase as the diameter of the roll of the bats increases, and at the same time making a corresponding variation in the thickness of the layer of fur upon the feeding-aprons A.

Referring to Fig. 6, the perforate surface is shown in the form of a cylinder, J, from which the air is partially exhausted, and over which

the mosquito-netting and fur constituting the bat pass. The other part of the mechanism may be substantially the same as those shown in Figs. 1 and 2, except that, instead of the inclosed chamber (the exhaust-chamber) being square or rectangular in form, I propose in this instance to employ a circular jacket, K, which conforms substantially to the outer surface of the cylinder J, exhausting the air from the ends of the cylinder through trunk *k*, one on each side of the machine.

The cylinder may be rotated either by the friction of the mosquito-netting or by a train-gearing and belt, *i j k*, and a cogged rim, *l*, at one end of the cylinder, the speed of the cylinder, if it has the positive movement, being regulated to correspond with the speed of the bat which is being wound upon the receiving-roller; or, instead of using two sets of mechanisms for applying fur to the mosquito-netting, I may use a single mechanism with a receiving-roller located as indicated in dotted lines O, upon which may be wound a sheet or strip of woven or felted fabric, having a bat of fur applied to one side thereof.

Thus I am enabled to produce, as a new and merchantable article, a compound bat consisting of fur made in a continuous sheet of any desired width and length, applied to a corresponding-sized sheet of felted or woven fabric, which is ready for the subsequent operations of sticking and scalding by the use of any machines or processes adapted therefor, such new article of manufacture being in convenient shape for transportation and sale; or a cloth composed wholly or in part of feltable fiber and of comparatively loose open texture may be wound upon the supply-roller H and caused to move over the perforated surface, and a sheet or bat of fur deposited thereon and caused to adhere thereto by the action of a downward current of air passing through the cloth and through the perforated surface, after which the cloth, with the fur bat thus applied, may be either transferred directly to a jigger or wound upon a receiving-roller.

I do not in this patent claim any invention except that which is specifically set forth in the claims hereof, preferring to claim all other patentable features which are shown or described in another case, which I have filed as a division of this one.

What I claim is—

1. The combination of the following elements, namely: means adapted to move a continuous non-feltable fabric over a perforated surface, means adapted to deposit fur upon said fabric, means for causing the fur to adhere to said fabric, and means for supplying a feltable fabric to the layer of fur thus produced, substantially as set forth.

2. The combination of the following elements, namely: means adapted for moving a sheet of cloth, composed wholly or in part of feltable fiber, in combination with mechanisms, substantially as described, adapted to apply to each side of the cloth a fur bat, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM E. DOUBLEDAY.

Witnesses:

HARRY N. LOW,

J. S. BARKER.