

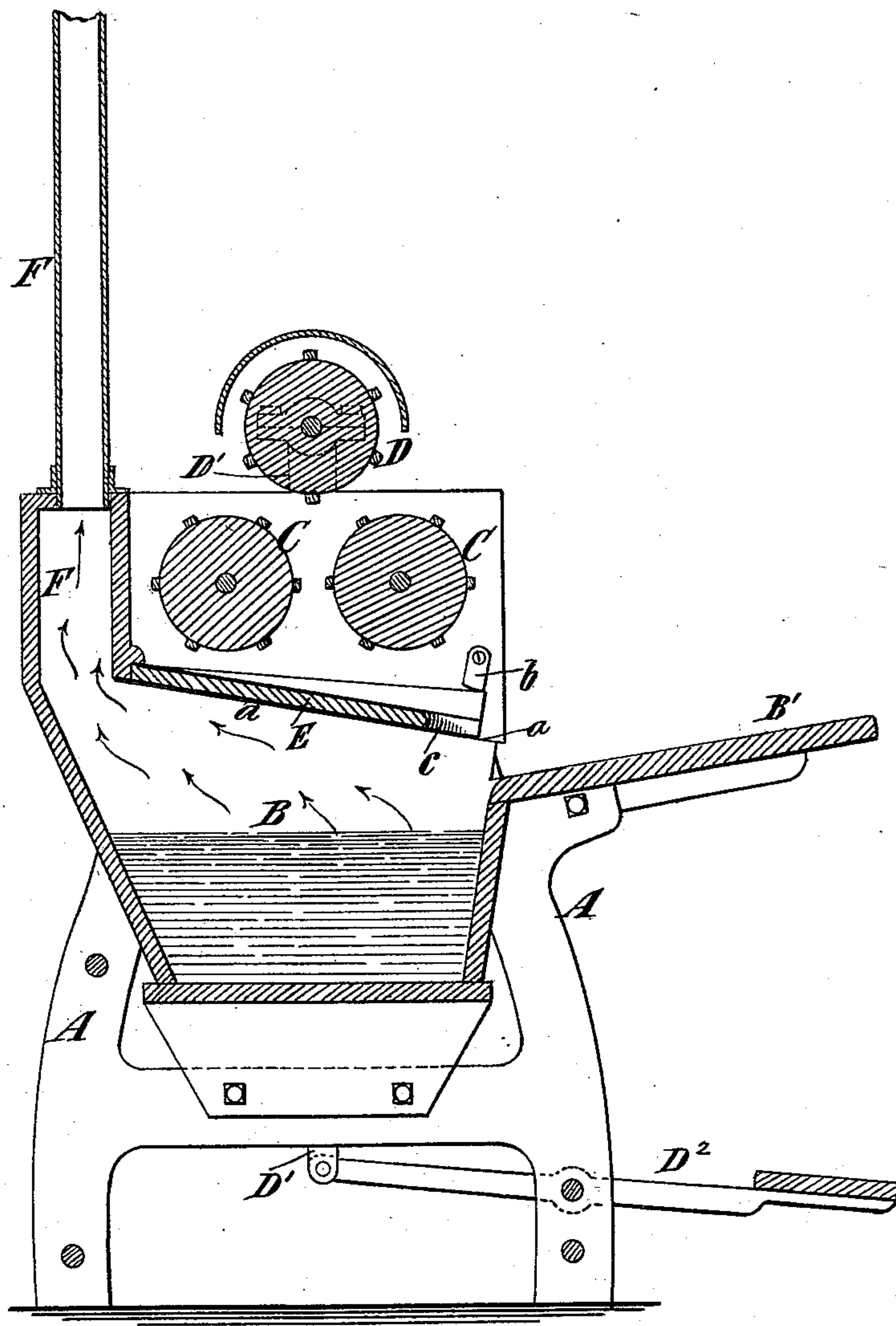
(No Model.)

C. H. MERRITT.

FELTING MACHINE.

No. 299,412.

Patented May 27, 1884.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES H. MERRITT, OF DANBURY, CONNECTICUT, ASSIGNOR TO JOHN
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FELTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 299,412, dated May 27, 1884.

Application filed April 28, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. MERRITT, of Danbury, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in Felting-Machines, of which

5 the following is a specification.
My invention relates to what are variously known as "felting," "sizing," or "planking" machines, which are extensively used in the
10 manufacture of hats. Such machines commonly consist of three or more rollers, between which the rolls of hat-bodies or other articles to be operated upon are placed, and immediately below which is an open vat,
15 which contains water which is heated nearly to the boiling-point. The steam or vapor from the hot water is allowed to escape freely from the vats and fill the building or room wherein the machines are situated; and the object of
20 my invention is to prevent the escape of the steam and vapor into the building or room, and to conduct it to a point outside the building.

The invention therefore consists in the combination, with the vat and rollers of a felting-machine, of a board or shelf arranged over the
25 vat and below the rollers, so as to close the vat, except at the front, to enable the operator to dip the articles to be felted into the water, and a flue or pipe leading from the vat
30 to a distant point, and serving to induce a draft which will carry off the steam and vapor from the vat and prevent its escape into the building or room where the machine is placed.
35 The board or shelf preferably pitches toward the front of the machine, so as to drain into the vat, and the escape flue or pipe is at the back of the machine or behind the rollers; but I may arrange said flue or pipe at any
40 other point. The board or shelf may be removably secured over the vat. The above features of construction form a part of my invention.

45 The accompanying drawing is a vertical section of such parts of a felting or sizing machine as are necessary to illustrate my invention.

50 A designates the frame of the machine, and B designates the vat secured therein. The water in the vat may be heated in any suitable manner, as by a steam-pipe entering it;

but as the devices for heating form no part of my invention, I have not shown them. In front of the vat B is the usual plank, B', whereon the operator rolls the hat-bodies or other articles to be operated on.

I have here shown a three-roller machine; but the invention is equally applicable to machines having any number of rollers.

C C designate the lower rollers, which are
60 journaled in fixed bearings, and D designates the upper roller, journaled in bearings which are connected by rods D' with the usual treadle, D².

Instead of leaving the vat B open at the top,
65 as is usual, I place over it a board or shelf, E. As here represented, it is removably secured in place. It rests upon ledges *a*, and is held down by buttons *b*. It may, and preferably does, pitch toward the front, so as to drain
70 into the vat B, and it is cut away at the front, as indicated at *c*, so as to leave an opening which will permit the operator to dip the rolls of hat-bodies or other articles into the vat.

F designates a flue or escape-pipe, which
75 leads from the vat at any suitable point. As here shown, it extends upward behind the rollers, and it may be carried upward through the roof, or to the outside of the building. By
80 this flue or pipe a natural draft is induced, which will cause the steam and vapor from the water in the vat B to pass backward and upward, as indicated by the arrows. The
85 pitch of the board or shelf E promotes this backward and upward draft, and air is caused to enter at the front to carry off all steam and vapor. By this means the building or room
90 containing the machines is kept comparatively free from steam and vapor, and the operator is relieved of much discomfort.

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

1. The combination, with the vat and rollers of a felting-machine, of a board or shelf
95 arranged over the vat and below the rollers, and a flue or escape-pipe leading from the vat below said board or shelf, substantially as and for the purpose described.

2. The combination, with the vat and rollers of a felting-machine, of a board or shelf
100 arranged over the vat and below the rollers, and pitching from the back forward, and a

flue or escape-pipe leading from the back of the vat upward behind the rollers, substantially as and for the purpose described.

3. The combination, with the vat and rollers of a felting-machine, of a board or shelf removably secured over the vat and below the rollers, and a flue or escape-pipe leading from

the vat below said board or shelf, substantially as and for the purpose described.

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Witnesses:

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