

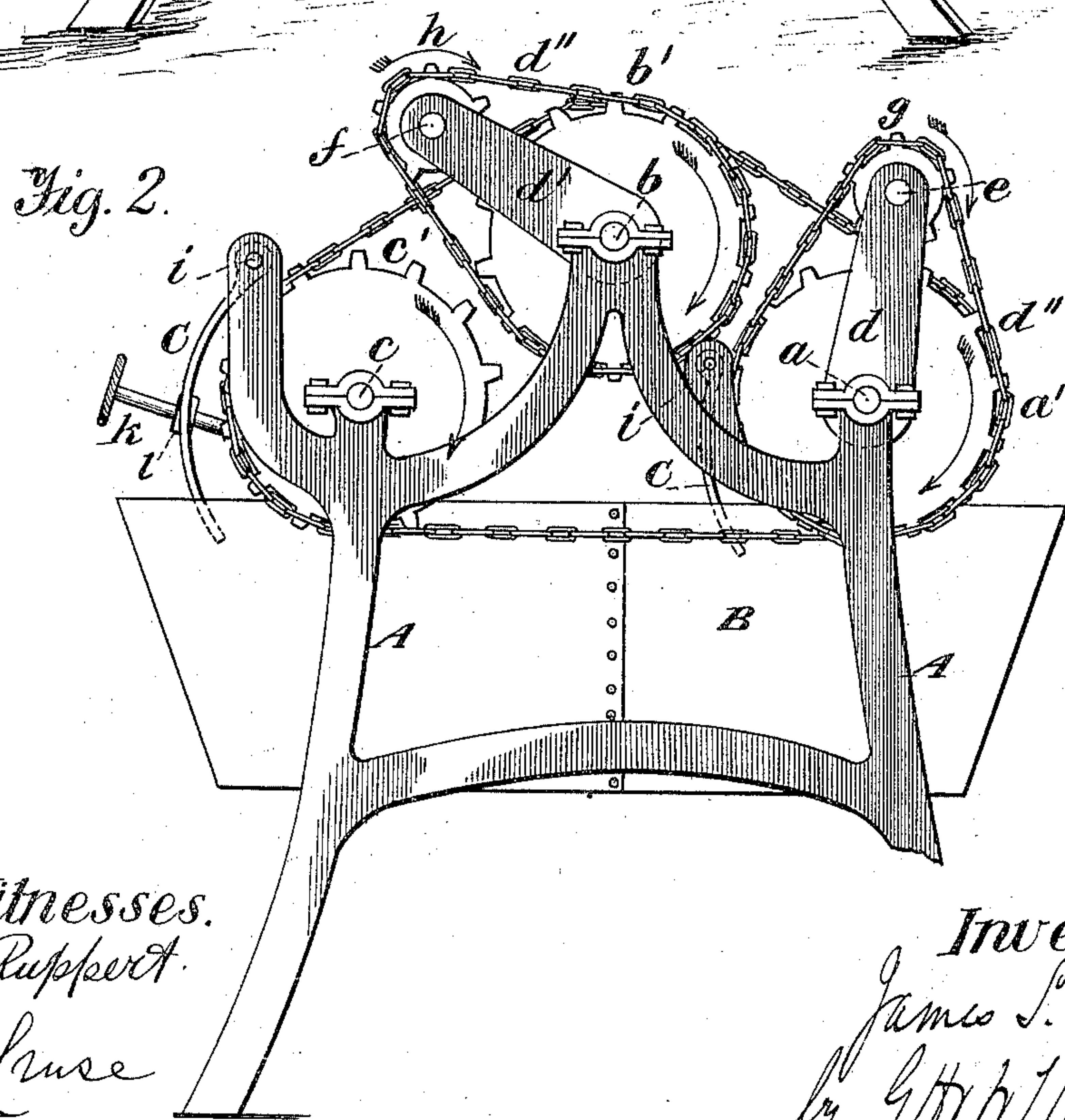
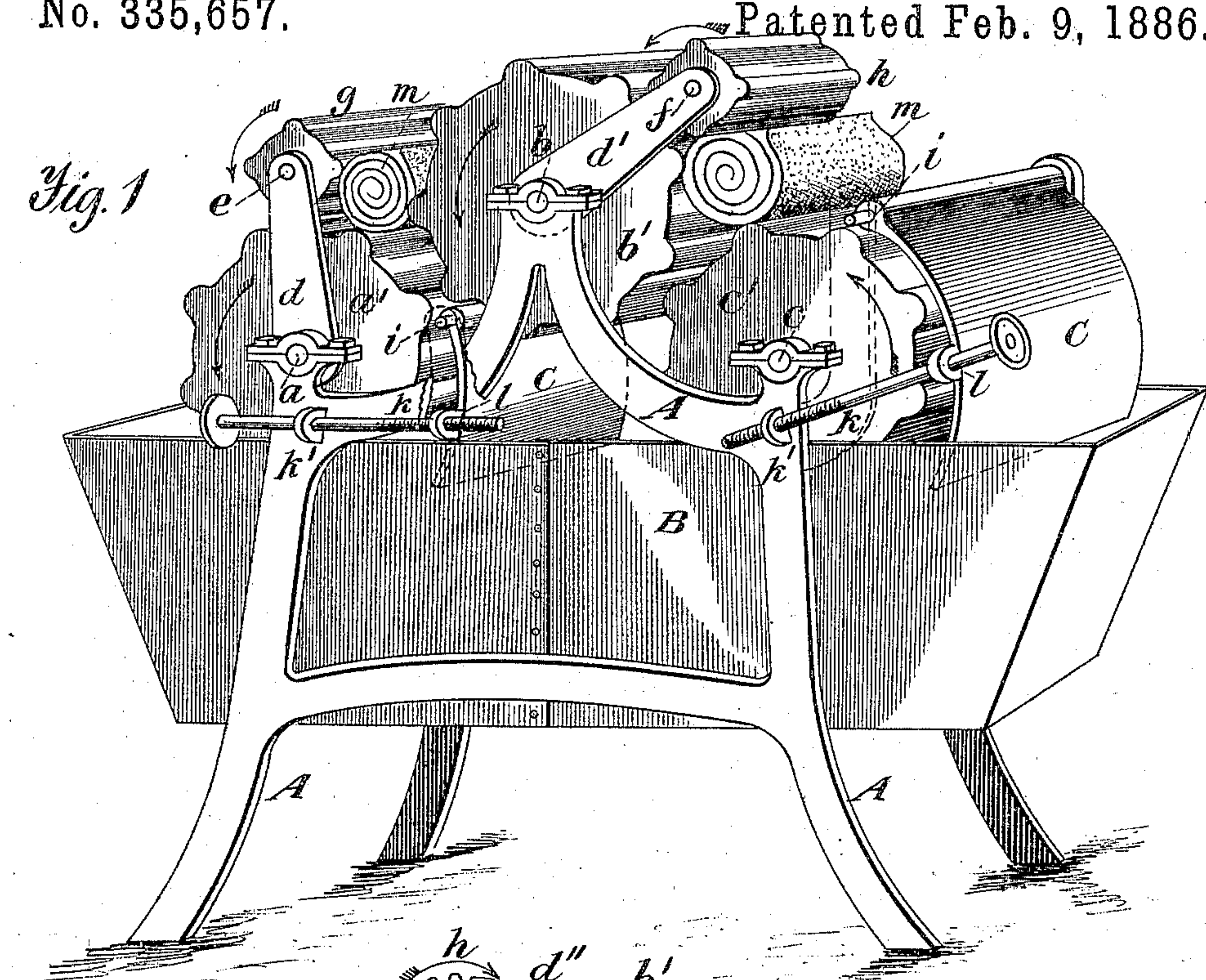
(No Model.)

J. S. TAYLOR.

HAT SCALDING AND FELTING MACHINE.

No. 335,657.

Patented Feb. 9, 1886.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES S. TAYLOR, OF DANBURY, CONNECTICUT.

HAT SCALDING AND FELTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 335,657, dated February 9, 1886.

Application filed August 31, 1885. Serial No. 175,774. (No model.)

To all whom it may concern:

Be it known that I, JAMES S. TAYLOR, of Danbury, in the county of Fairfield and State of Connecticut, have invented certain new and
5 useful Improvements in Hat Scalding and Felting Machines, of which the following is a specification, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

10 Figure 1 is a perspective view of my improved machine. Fig. 2 is an end view of the machine.

Similar letters of reference indicate similar parts in the respective figures.

15 A is the frame of the machine, and B the hot-water vat supported thereby. The frame A is provided with suitable bearings, in which are mounted the shafts *a b c* of rollers *a' b' c'*. Each end of the shaft *a* is provided with a
20 link, *d*, a similar link, *d'*, being placed at each end of the shaft *b*. A shaft, *e*, is mounted in the links or bars *d*, upon which shaft a roller, *g*, is mounted. A similar shaft, *f*, is mounted in the links or bars *d'*, upon which shaft a
25 roller, *h*, is mounted. The construction is such that the rollers *g h* revolve freely upon their shafts *e* and *f*, and have a radial movement upon the shafts *a* and *b*.

30 The small rollers *g* and *h* are revolved by means of cords or chains *d''* passing over them and the large rollers, respectively. Movement may be imparted to the large rollers *a' b' c'* by suitable gearing or chains or cords.

35 The rollers *a' b' c'* and *g h* may be of any suitable construction, corrugated, fluted, plain, straight, or otherwise.

40 C C are guards, which are placed as shown with reference to the rollers *a' c'*. The guards C are pivoted or hinged at their upper sides at *i* to stationary parts of the frame.

45 The guards C are made adjustable to or from the rollers *a' c'* by means of screws *k*, which work in lugs or nuts *k'*, formed upon the frame A. The screws *k* are swiveled to the guards C at the lugs *l*, so as to revolve freely in said lugs.

50 The operation is as follows: The vat B, containing scalding water, which is kept heated by a steam-coil or other means, and the rollers *a' c'* dipping in the water, the goods to be

felted are rolled up in the cloth in the usual manner, as shown at *m*, and placed in the chambers formed at the respective ends of the machine, between the end rollers, *a' c'*, and the center roller, *b'*. The small rollers *g h*, which
55 are what are termed in other of my patents "workers," are caused to rest or bear upon the rolls of goods with the required pressure, and as rotation is imparted to the several rollers of the machine the felting operation is
60 effected.

The function of the guards C, which, it will be seen, extend into the water contained in the vat B, is to carry up the necessary quantity of water to the rolls of goods in the felting
65 operation, the curve of the guards being such as to cause the water to be thrown directly upon the goods. The adjustment of the guards allows the quantity of water carried up by the rollers *a' c'* to be regulated, and causes the
70 deflection of the water at the proper angle to the goods. The outer guard C also serves to keep the water from being thrown against the operator by centrifugal force. A continuous stream of hot water is thus carried up to the
75 goods, and they are rapidly and effectually felted.

It will be seen that this machine is double, two rolls of goods being operated upon at the same time, and that one operator can readily
80 work both ends of the machine.

Having described my invention, I claim—

1. The combination, in a hat-felting machine, of a vat, B, rollers *a' b' c'*, workers *g h*, and curved guards C, substantially as set
85 forth.

2. The combination, in a hat-felting machine, of rollers *a' c'*, vat B, and curved adjustable guards C, substantially as set forth.

3. The combination, in a hat-felting machine, of the vat B, a roller, and a curved
90 guard for carrying the water up from the vat to the goods in the direction of the movement of the roller, substantially as set forth.

4. In a hat-felting machine, the combination
95 of a vat, a roller, and an adjustable curved guard, substantially as set forth.

5. The combination, in a hat-felting machine, of a vat, a main roller, a curved guard, and a worker, substantially as set forth.
100

6. The combination, in a hat-felting machine, of a vat, curved guards, main rollers, workers mounted upon links or bars supported by the shafts of the main rollers, and
5 ropes or chains for imparting rotation from the main rollers to the workers, substantially as set forth.

In testimony whereof I hereunto set my hand and seal.

JAMES S. TAYLOR. [L. S.]

Witnesses:

WILLIAM BETTS,
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