

(No Model.)

J. S. TAYLOR.

MACHINERY FOR SCALDING AND FELTING HAT BODIES.

No. 313,127.

Patented Mar. 3, 1885.

Fig. 1.

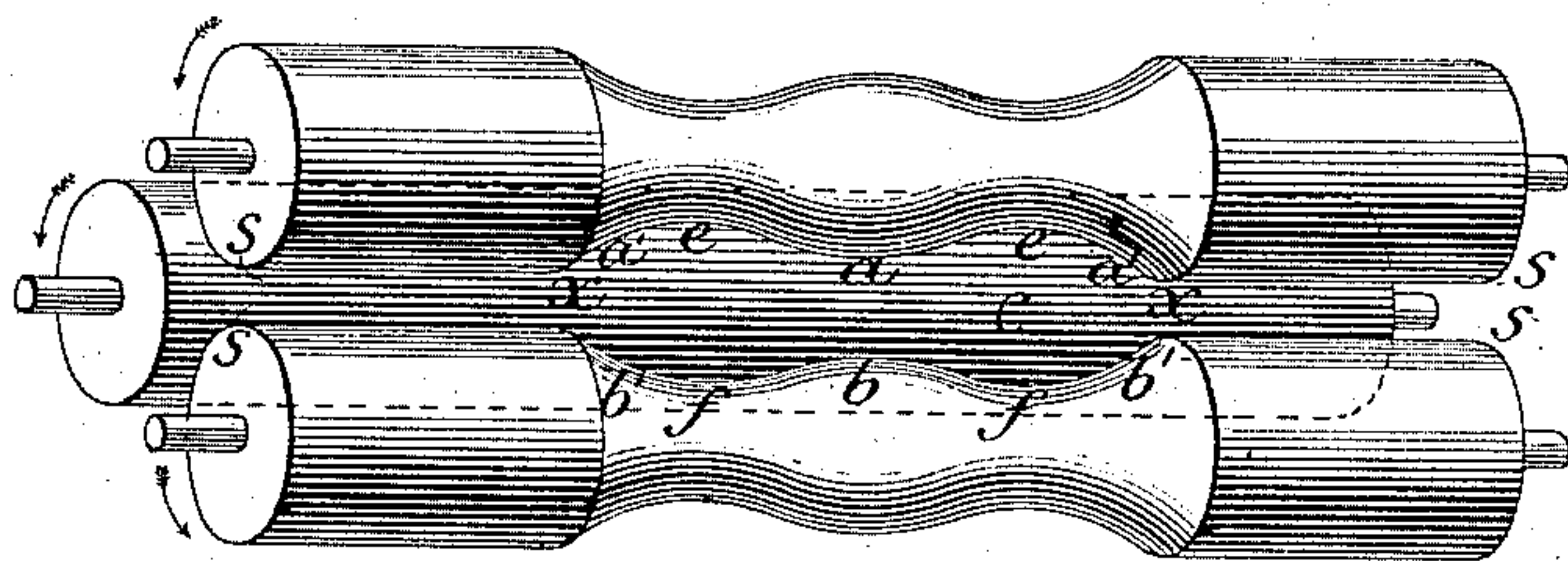


Fig. 2.

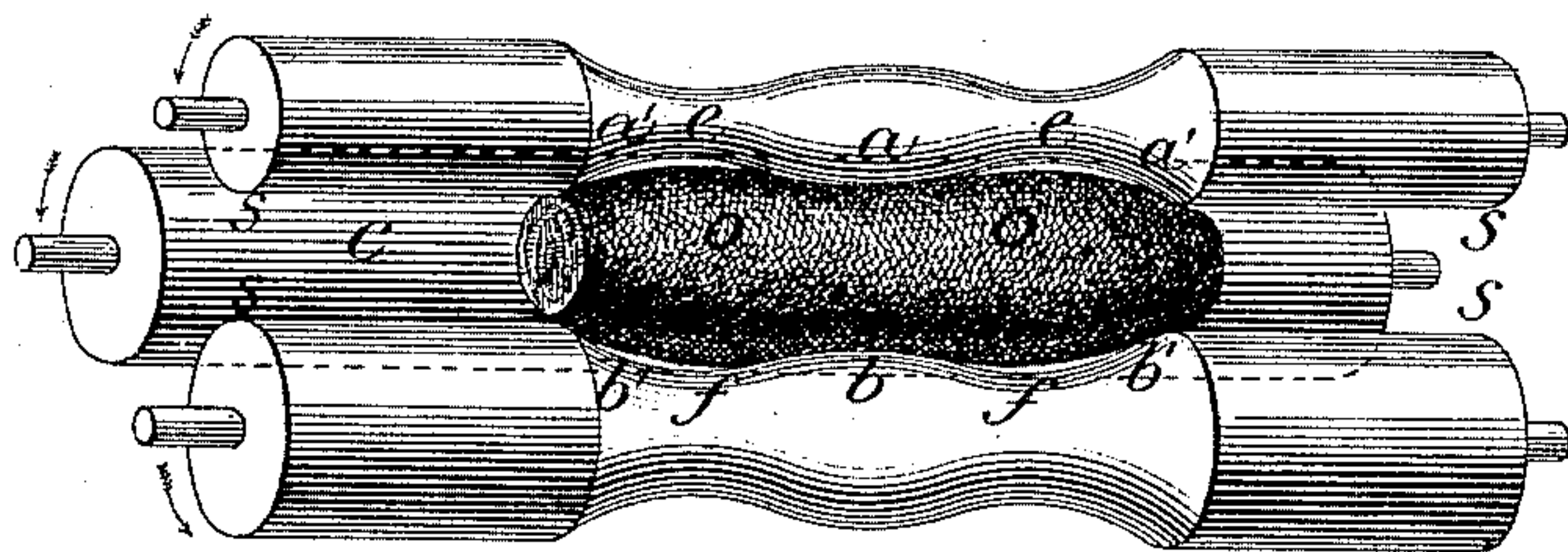
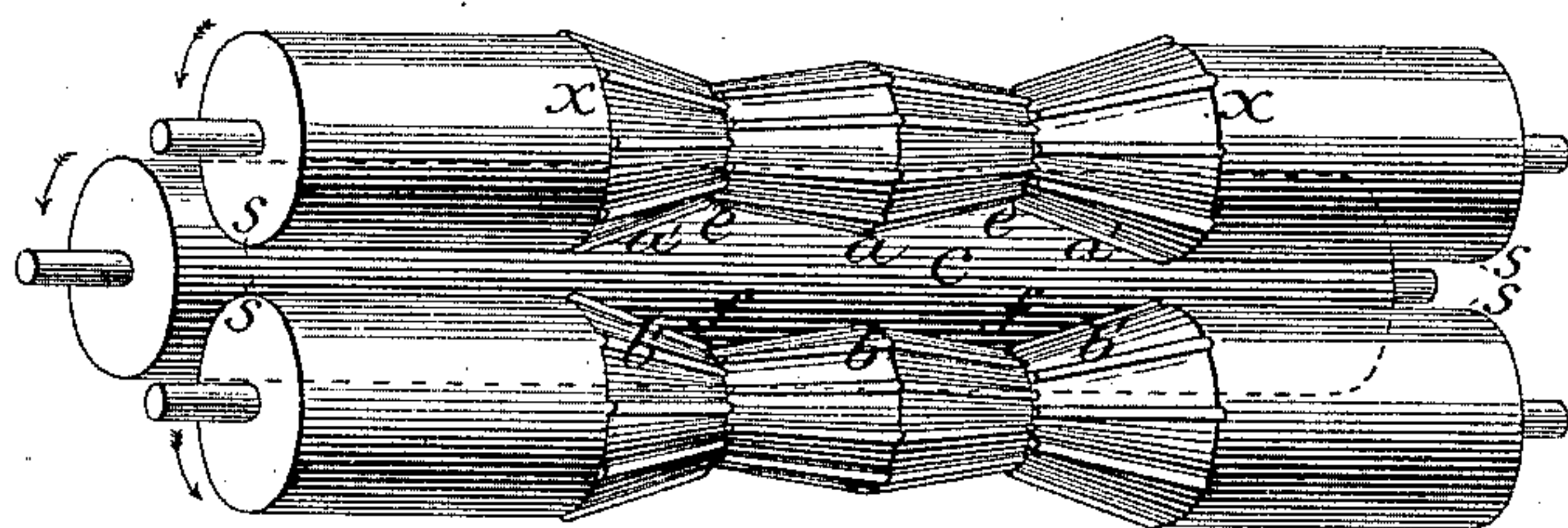


Fig. 3.



Witnesses:
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JAMES S. TAYLOR, OF DANBURY, CONNECTICUT.

MACHINERY FOR SCALDING AND FELTING HAT-BODIES.

SPECIFICATION forming part of Letters Patent No. 313,127, dated March 3, 1885.

Application filed February 25, 1884. (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 useful Improvements in Machinery for Scalding and Felting Hat-Bodies, of which the following is a specification.

The object of this invention is to increase and improve the felting qualities of that class of machines which are provided with three or more rollers so arranged as to form a chamber lengthwise of said rollers, in which chamber the roll of hats is manipulated in the process of scalding and felting.

In the accompanying drawings, Figure 1 is a perspective view of a series of rollers embodying my invention. Fig. 2 shows a modified form of rollers with a roll of hats in the act of being felted. Fig. 3 shows a further modification.

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

Referring to Fig. 1, two of the rollers are turned so as to form the central spherical section, *a* or *b*, and the concave depressions *e* or *f*, the said depressions uniting with the spherical centers and with the end cylindrical portions of the rollers at *a'* or *b'*, thus forming with the third or plain roller the pocket or chamber *c*. The central portion of the chamber *c* is of a shape formed by the irregularly-turned surfaces of the central portions of the rollers, the end portions of the chamber being straight, as from *x* to *S*. In Fig. 2 substantially the same construction of rollers is found, except that the upper irregularly-formed roller is of smaller diameter than the corresponding lower roller. The roll of hats is shown by *O*. In Fig. 3 the rollers are not convex and concave, but provided with angular and ribbed surfaces.

In operating the machine, the roll of goods is saturated in scalding water and deposited in a cloth in the pocket or chamber. The pressure upon the goods will, of course, be greatest where the surfaces of the operating-rollers are brought most closely together, the

action with reference to the varying pressures being clearly represented in Fig. 2. The construction is such as to distribute the felting action over or upon the roll of goods in a manner to effect the best results.

I am aware that heretofore rollers having plain cylindrical ends have been used, the central portion of said rollers being made convex, the convex central portion connecting at either end with the cylindrical parts by an abrupt shoulder or abutment at a right angle to said cylindrical portions. Such rollers are not the equivalent of my invention, as, regardless of the differences of construction which are apparent between said rollers and those herein described, the effect produced by the use of my rollers is entirely unique and distinct from any effect which can be produced by the rollers heretofore used and as above referred to. By the use of my rollers an excessive pressure can be obtained at the longitudinal center line, while at either side of said center line the roll of hats is comparatively free from pressure, as indicated in Fig. 2 of the drawings hereto appended. It is apparent that such an effect cannot be produced by a roller in which all portions of the convex center bear continuously upon the goods. Neither does my invention contemplate the abrupt shoulder or abutment above referred to, my invention being designed to avoid the destructive action of sharp edges upon the goods; but,

Having described my invention, I claim—

In a hat scalding and felting machine, the combination of a series of rollers arranged to form a pocket or chamber, two or more of said rollers being provided with a central enlargement connecting at either end with a depression or depressed portion, each of said depressed portions in turn connecting by a gradual ascent with the end or cylindrical portions, substantially as set forth.

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Witnesses:

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