

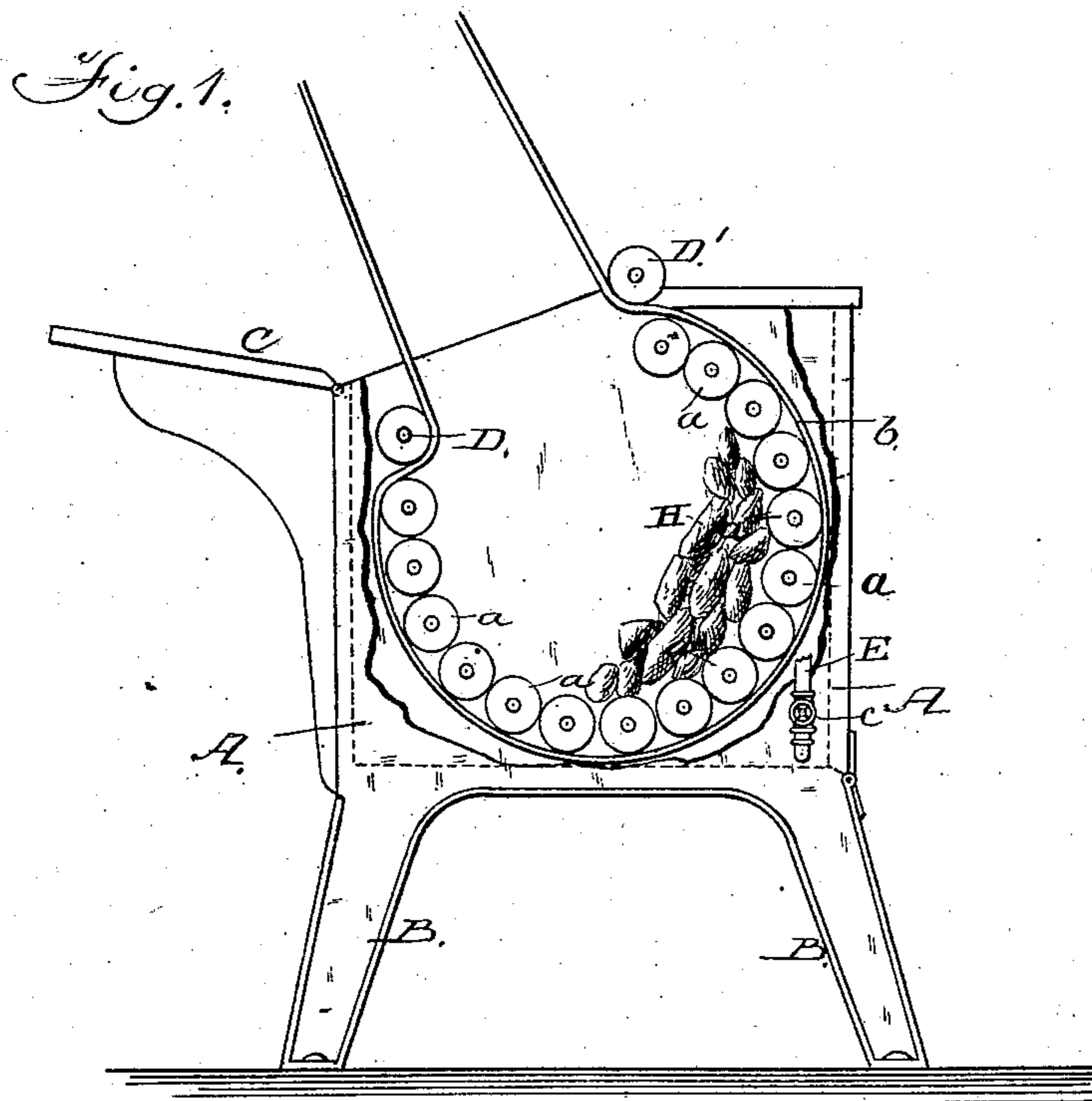
(No Model.)

M. CHITTENDEN.

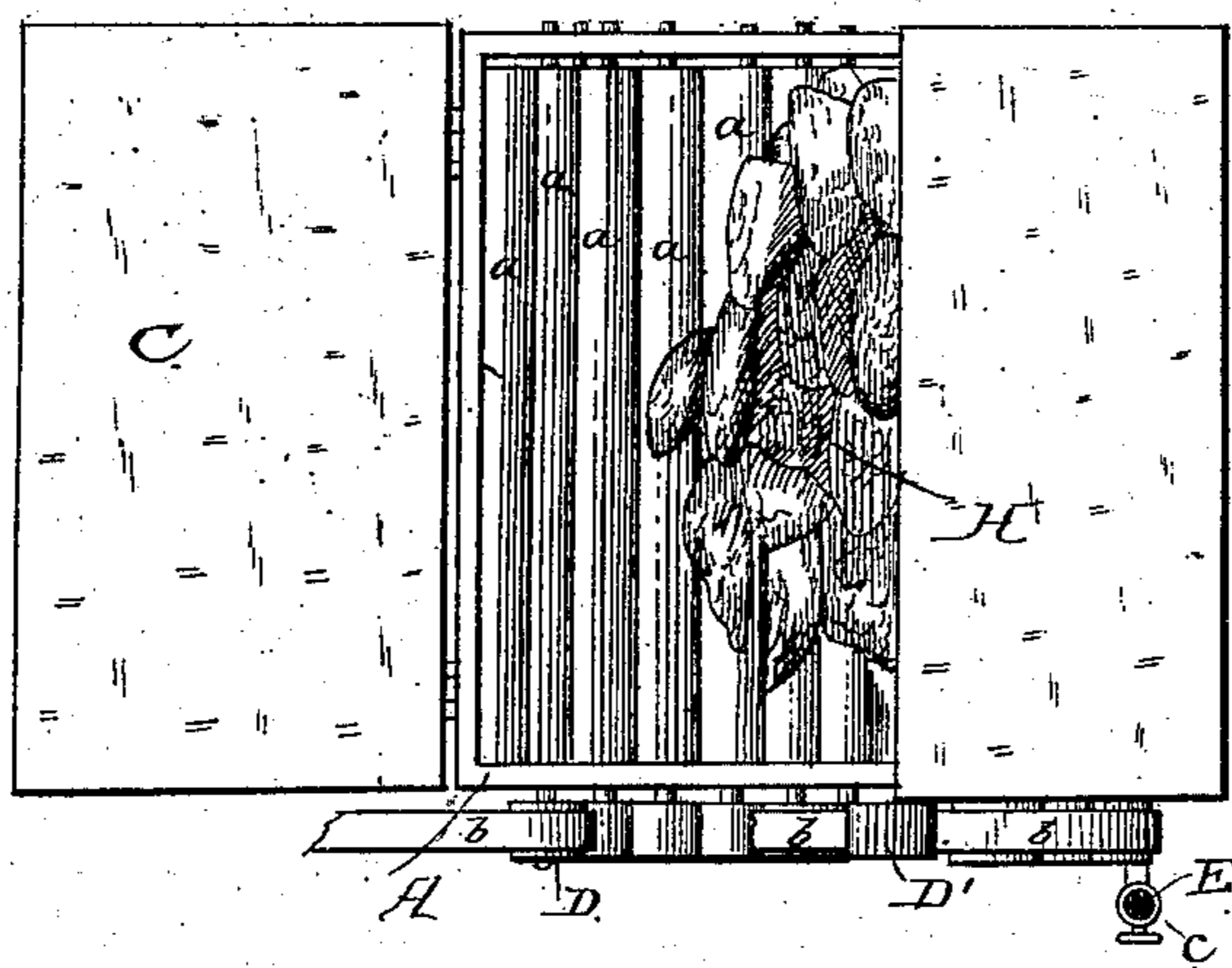
HAT SIZING MACHINE.

No. 256,461.

Patented Apr. 18, 1882.



*Fig. 2.*



Witnesses;

Walter Fowler,  
Silas Thompson

Inventor;

Morgan Chittenden

# UNITED STATES PATENT OFFICE.

MORGAN CHITTENDEN, OF DANBURY, CONNECTICUT.

## HAT-SIZING MACHINE.

SPECIFICATION forming part of Letters Patent No. 256,461, dated April 18, 1882.

Application filed June 23, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, MORGAN CHITTENDEN, a citizen of the United States, residing at Danbury, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Hat-Sizing Machines; 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.

My invention relates to hat sizing or hardening machines in which the hats, properly folded, are made to revolve as if in a cylinder by means of a series of small long rollers placed in a cylindrical form and operated by suitable gears or belt, made all of them to revolve the same way at the same time and causing the hats to roll as if in a rotating cylinder. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an end view of the machine with a part of the end broken out to show the position and method of working the rollers by the belt and of the hats inside of the chamber formed by the rolls. Fig. 2 is a top plan view of the machine, with the lid open, which also forms a table or plank for crozing and folding the hats upon, the position of the belt, the hats in the machine, and the steam-pipe with its valve for adjusting the flow of the steam.

The box A A, the ends of which form the bearings of the series of rolls *a a a*, the legs B B, and the hinged lid C constitute the frame of the machine.

D D' are idlers so set as to keep the belt *b* in position against the upper rolls on either side, so that the machine can be placed at any desired angle from the driving pulley and secure uniform action of the belt *b* on all the rolls, causing them all to revolve in one way.

E is a steam-pipe, with its valve *e*, through which steam is carried into the chamber under the rolls, and, passing freely between the rolls, keep the hats H hot and moist as they are rolled in the machine.

The hinged lid C, when opened, forms a plank to fold or croze the hats H on, and when closed keeps the chamber close and the temperature equal in all parts of the chamber.

When the belt *b* is properly strained it bears equally on all the rolls *a a a*, causing them all to revolve in one way, and compels the hats H in the chamber to roll as if in a revolving cylinder; while the machine retains its position ready for opening the lid C at any time to inspect the work or to change or croze the hats H.

I am aware that hats have been made to roll in a cylinder or barrel-like machine in different times and ways. I therefore do not claim such a combination, broadly; but

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

1. In a hat-sizing machine, the combination, with a tank or tub and rollers, of a lid or cover for an opening in such tank, hinged in position and adapted to be turned back for use as a hatter's plank, substantially as described.

2. The tank, its steam-pipe and plank, combined with a series of rolls and a belt to drive such rolls simultaneously all in one direction and at the same speed, substantially as described.

3. The series of fixed rollers *a a* and the belt *b* to drive them, combined with the idlers D D' and the receiving tank or box, substantially as described.

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

MORGAN CHITTENDEN.

Witnesses:

THEODORE DEMUTH,  
DAVID B. BOOTH.