

J. J. O'SULLIVAN.
FELTING MACHINE.

No. 171,693.

Patented Jan. 4, 1876.

Fig: 1.

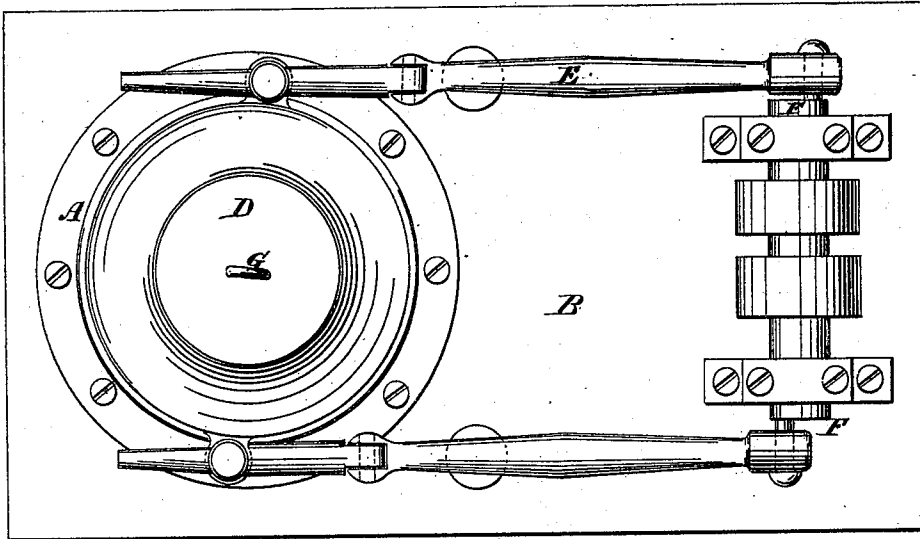
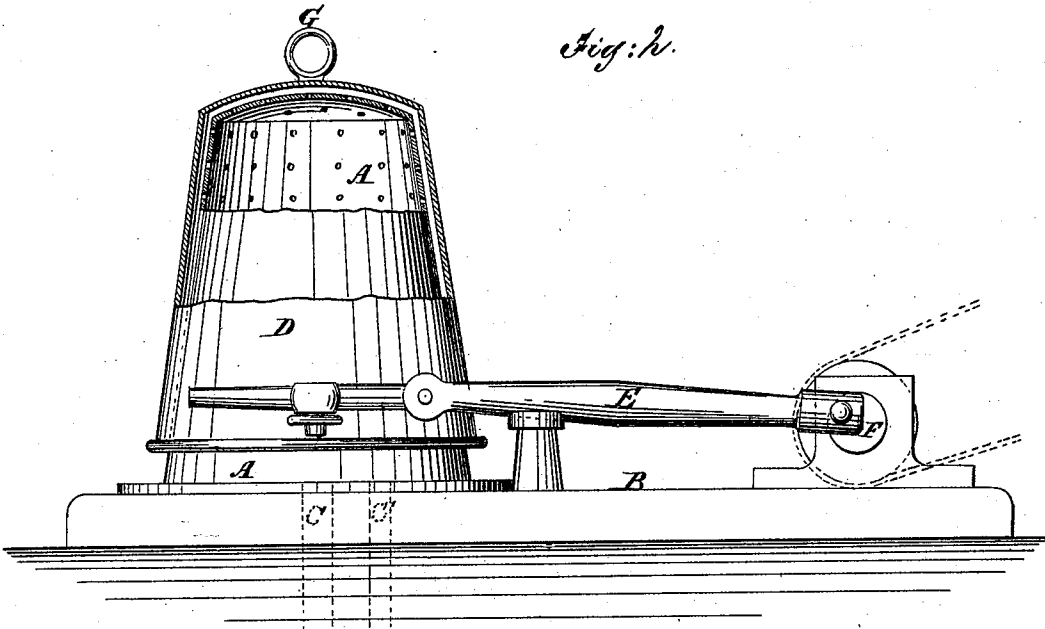


Fig: 2.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

JEREMIAH J. O'SULLIVAN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN FELTING-MACHINES.

Specification forming part of Letters Patent No. **171,693**, dated January 4, 1876; application filed October 2, 1875.

To all whom it may concern:

Be it known that I, JEREMIAH J. O'SULLIVAN, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Hat-Hardening Machine, of which the following is a specification:

The object of this invention is to construct a machine which will harden a fur or wool hat-body complete with one operation, and thereby save a large amount of labor, and finally produce a more uniform result.

By my invention I dispense with putting in layers, breaking down, stopping off, hardening off, tip-hardening, and all other handling usual in the old process of hat-hardening.

The construction and operation of my invention will be fully understood from the following description, reference being had to the accompanying drawing, in which—

Figure 1 represents a plan of my invention. Fig. 2 is a side elevation of the same, parts being broken away to show the interior construction.

Similar letters of reference indicate corresponding parts.

In the case here presented, A represents a hollow perforated cone attached to the table B. The said cone has an opening, C, in its base for the admission of steam, and a second opening, C', for the escape of water of condensation. D is a hollow cone, of similar shape to the cone A, but made a little larger, so that it may set over it, as shown in the drawing.

The process of hat-hardening by my invention is as follows: First, having raised the

cone D from the cone A, I place the hat-body over the cone A. I then place the cone D over the same, and then admit steam through the pipe C to the perforated cone. This heats and moistens the hat-body, and while this is going on I cause the upper cone to have a rapid reciprocating motion by connecting it with the arms E E from the eccentric F F, thus enabling me to harden a whole hat complete in about one minute, more or less, according to height of material. The cones, being perfectly true, will cause the whole hat to be finished with an evenness heretofore unable to be obtained, there being no crosses, soft edges, cut or rolled edges, soft places, petershaming, or other objectionable features.

In order to regulate the pressure of cone D, I propose using a spring-balance, or its equivalent, applied at its top G.

In some cases it may be found more desirable to give the reciprocating motion to the lower cone, or to both, and, therefore, I do not limit myself to the movement of a single cone, as above described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with hollow cone A, having steam-inlet and water-outlet, of the cone D, having a rotary reciprocating motion, as and for the purpose specified.

JEREMIAH J. O'SULLIVAN.

Witnesses:

CHARLES H. NASH,
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