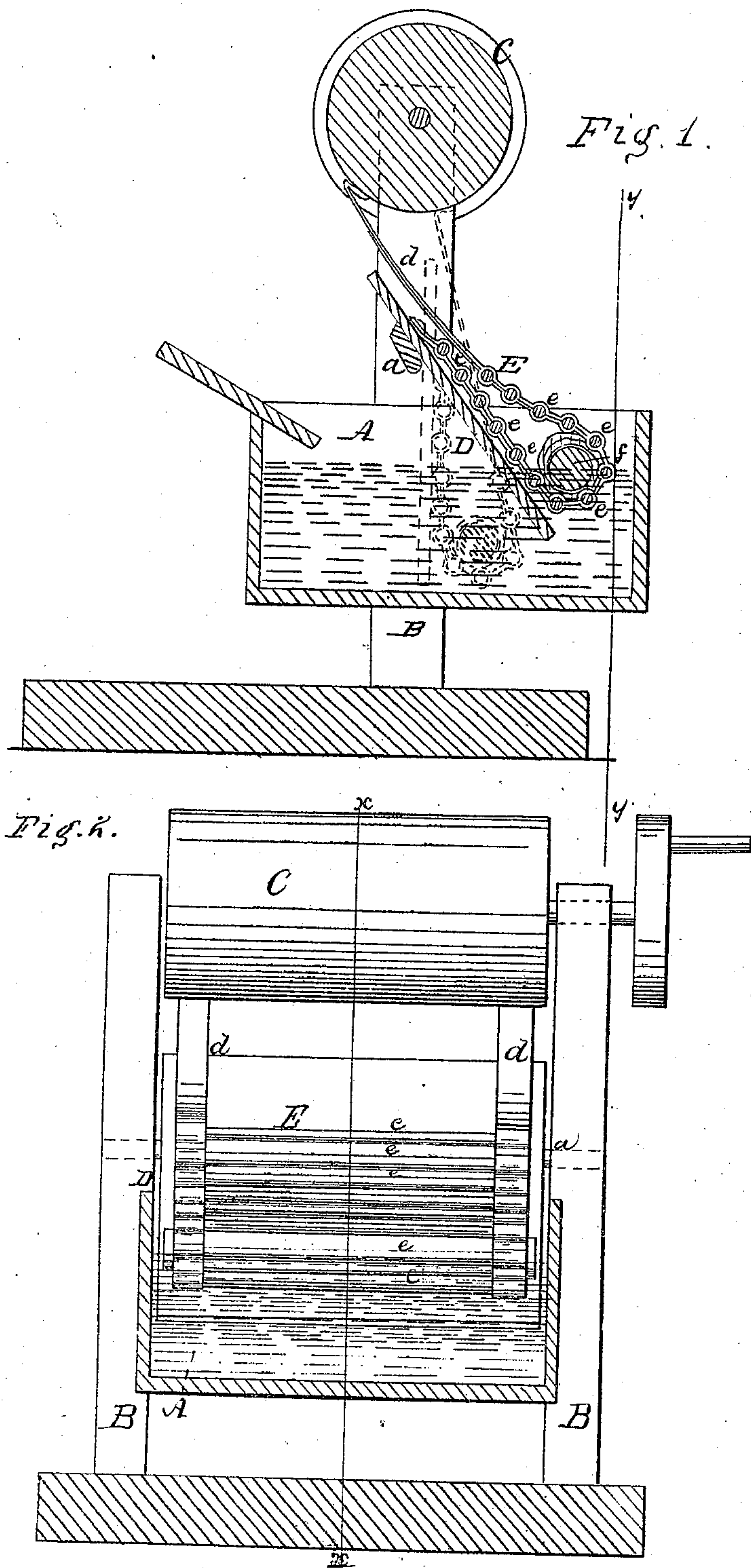


W. Fuzzard.
Fulling Machine.

N^o 15290

Patented Jul. 8, 1856.



UNITED STATES PATENT OFFICE.

WILLIAM FUZZARD, OF CAMBRIDGEPORT, MASSACHUSETTS.

MACHINERY FOR FELTING HAT-BODIES.

Specification of Letters Patent No. 15,290, dated July 8, 1856.

To all whom it may concern:

Be it known that I, WILLIAM FUZZARD, of Cambridgeport, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Machine for Felting Hat-Bodies and other Articles, Substances, or Materials which are Felted; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a vertical section of my improvement, *x, x*, Fig. 2 showing the plane of section. Fig. 2, is a front view of ditto, the box or water chamber being bisected, as indicated by *y, y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists in attaching an apron to a roller and swinging platform, as will be hereinafter fully shown and described whereby, upon giving the roller a reciprocating, vibratory or rocking motion the apron is moved up and down and the hat bodies or other articles which are placed thereon are subjected to the necessary friction and rolling or rubbing and are also kept sufficiently moist, as the apron is placed over a reservoir containing water, and the hat bodies or other articles or materials are immersed therein by the apron as it descends and are elevated from the water as the apron ascends.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a reservoir or box containing water. This box is secured between two uprights B B, on the upper part of which a roller or cylinder C, is placed.

D, represents a platform which is pivoted between the uprights B, B, so that the platform may be placed in a vertical or in an inclined position. This platform may be attached to a bar *a*, the ends of which may be fitted in the inner sides of the uprights B, B, so that the bar *a*, may be turned in its bearings in the uprights. By this means the platform is allowed to swing and may be adjusted as desired.

To the periphery of the roller or cylinder C, one end of an apron E, is attached, as

shown at *b* Fig. 1, and the opposite end is attached to the platform D near its upper end as shown at *c*. The apron E, may be formed of two flexible bands *d, d*, having transverse metallic rods *e*, attached to them, as shown clearly in Fig. 2.

The operation is as follows: The box A is supplied with the requisite quantity of water which may be kept in a heated state by a furnace placed underneath it. The hat bodies or other articles to be felted are rolled or placed around a cylinder *f*, and are placed within the fold of the apron E, as shown in red, Fig. 1. A rotating reciprocating motion is then given the roller or cylinder C, in any proper manner and the end of the apron which is attached to the roller or cylinder C, will be raised up and down, the hat bodies being subjected to a rolling motion, and also to a certain degree of pressure which may be increased or diminished by regulating the position of the platform D; for instance, when a slight pressure only, is required, the platform D is placed in a vertical position, as indicated by the dotted lines in Fig. 1, and as the apron E will then work nearly in a vertical position, the apron will, as it is raised, bear slightly against the hat bodies. When more pressure is required, the platform D is inclined so that the apron will rest and work upon it and the hat bodies will then be subjected to an increased pressure as the apron will bear or rest more directly upon them. This will be clearly understood by referring to Fig. 1. As the apron passes downward, the hat bodies are immersed in the water and are drawn out from the water as it descends, the hat bodies being subjected to the greater part of the rolling and pressure when above the water.

It is essential that the apron E, be so constructed that it will possess the requisite weight to give the necessary pressure to the hat bodies and also allow the water to escape from it as it ascends. I do not confine myself however to any precise construction of the apron as various ways may answer. The apron constructed as herein shown will answer a good purpose.

The above invention is extremely simple, may be constructed at a small cost and operates well.

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

The apron E, connected to the vibrating
5 or reciprocating roller or cylinder C, and to
the adjustable platform D, and arranged
in relation with the reservoir or box A, sub-

stantially as described, for the purpose
specified.

WILLIAM FUZZARD.

Witnesses:

JACOB EATON,
JESSE HALY.