

C. ACKERMAN.
Fulling-Machines.

No. 157,086.

Patented Nov. 24, 1874

Fig. 1.

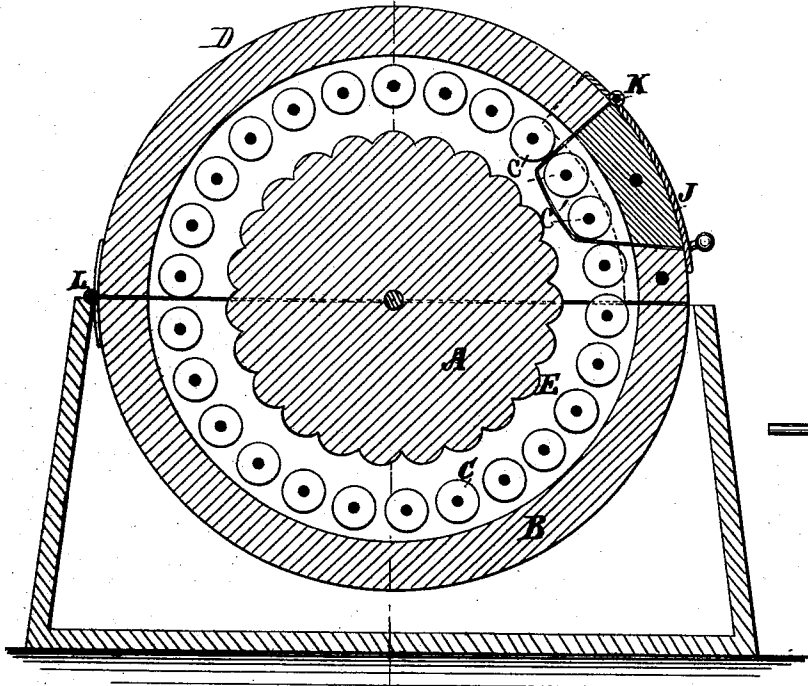


Fig. 2.

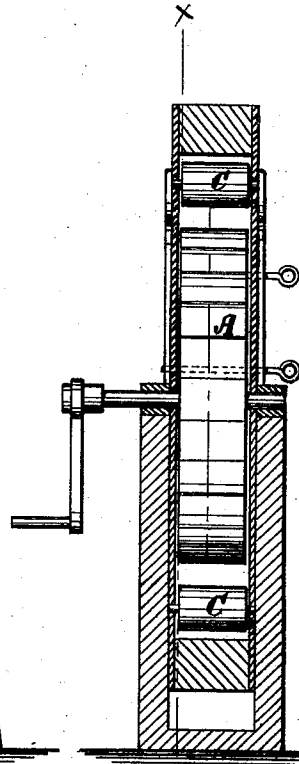
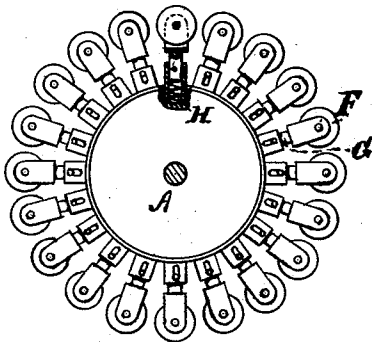


Fig. 3.



Witnesses:

A. Bennekenhof.
A. Schwick.

Inventor:

C. Ackerman

Per

Wm. H. H.

Attorneys.

UNITED STATES PATENT OFFICE.

CHRISTIAN ACKERMAN, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN FULLING-MACHINES.

Specification forming part of Letters Patent No. **157,086**, dated November 24, 1874; application filed May 10, 1873.

To all whom it may concern:

Be it known that I, CHRISTIAN ACKERMAN, of Newark, county of Essex, State of New Jersey, have invented certain new and useful Improvements in Fulling-Machines, for use in the manufacture of hats, &c.; and declare the following to be such a full, clear, and exact description thereof as will enable others skilled in the art to which my invention pertains to make and use it, reference being had to the accompanying drawings.

My invention relates to a novel machine constructed to present a continuous unbroken interior, that the felt may be acted upon for any desired length of time by continuous revolution in one direction, and the hot steam be so confined that it will act strongly upon the felt at all times, and not be permitted to escape; also, to a novel interior or drum wheel.

In the drawings, Figure 1 is a view in vertical cross-section of my sizing and felting machine; Fig. 2, a vertical longitudinal section of same. Fig. 3 presents the novel features in the drum or interior wheel.

A is a large interior wheel or drum, suspended so as to be revolved upon an axis. B is the exterior case or inclosure that contains sizing-compound. C are rollers, each turning upon its own axis that is seated into the two walls or ends of the case. D is the upper half of the case B, and is hinged at L, so that by turning it back the wheel A may be removed and the machine renovated. E is the space into which the felt is placed and carried around by the action of the roller A. J is a discharge-door or post, carrying upon its interior one or more rollers, C', corresponding to the rollers C, by which the series of rollers is made continuous and the machine unbroken. This door J is hinged at K, so that when it is desired to discharge the felts it can be raised so that they will be thrown out by the action of the roller or wheel A.

The operation of this device is as follows: The sizing-compound is placed in the case B, so that it rises up into the space E a sufficient

distance, and steam is admitted at the bottom, as usual. The wheel A is then revolved, and the felts are fed in at the door J. The latter is then closed down and fastened, and the felts are carried through the solution up over the wheel and again through the solution, &c., until the operator chooses to stop the process by opening the door J and permitting the felts to discharge therefrom.

The door J, while it serves to carry those rollers C' that complete the series of rollers C, acts at the same time to inclose and prevent the escape of the hot steam, and thus causes the felt to be rapidly and thoroughly acted upon.

I propose generally to employ such a roller or wheel, A, as is shown in Fig. 3—that is, one whose perimeter is provided with rollers F, properly secured to studs G, and rendered yielding by the spiral springs H. These rollers render it impossible that the felts, if clogged in the machine, should be given any erosive action. Such erosive action renders the felt thinner at the points so rubbed, and injures the quality of the product.

I know that a roller, A, has been made, provided with yielding slats or ribs; but such slats do not obviate the difficulties that are overcome by the rollers F.

Having thus fully described my invention, what I claim is—

The felting-machine herein described, consisting of the closed narrow cylindrical case, said case constructed in two half-sections, D B, hinged together at the rear, provided with the hinged door J K, loosely-turning rollers C placed on the inside of the top and bottom half of the case in a continuous unbroken series, and central revolving wheel A, provided with the spring-rollers F, all constructed, arranged, and adapted to operate substantially as and for the purposes described.

C. ACKERMAN.

Witnesses:

T. B. MOSHER,
ALEX. F. ROBERTS.