

No. 610,613.

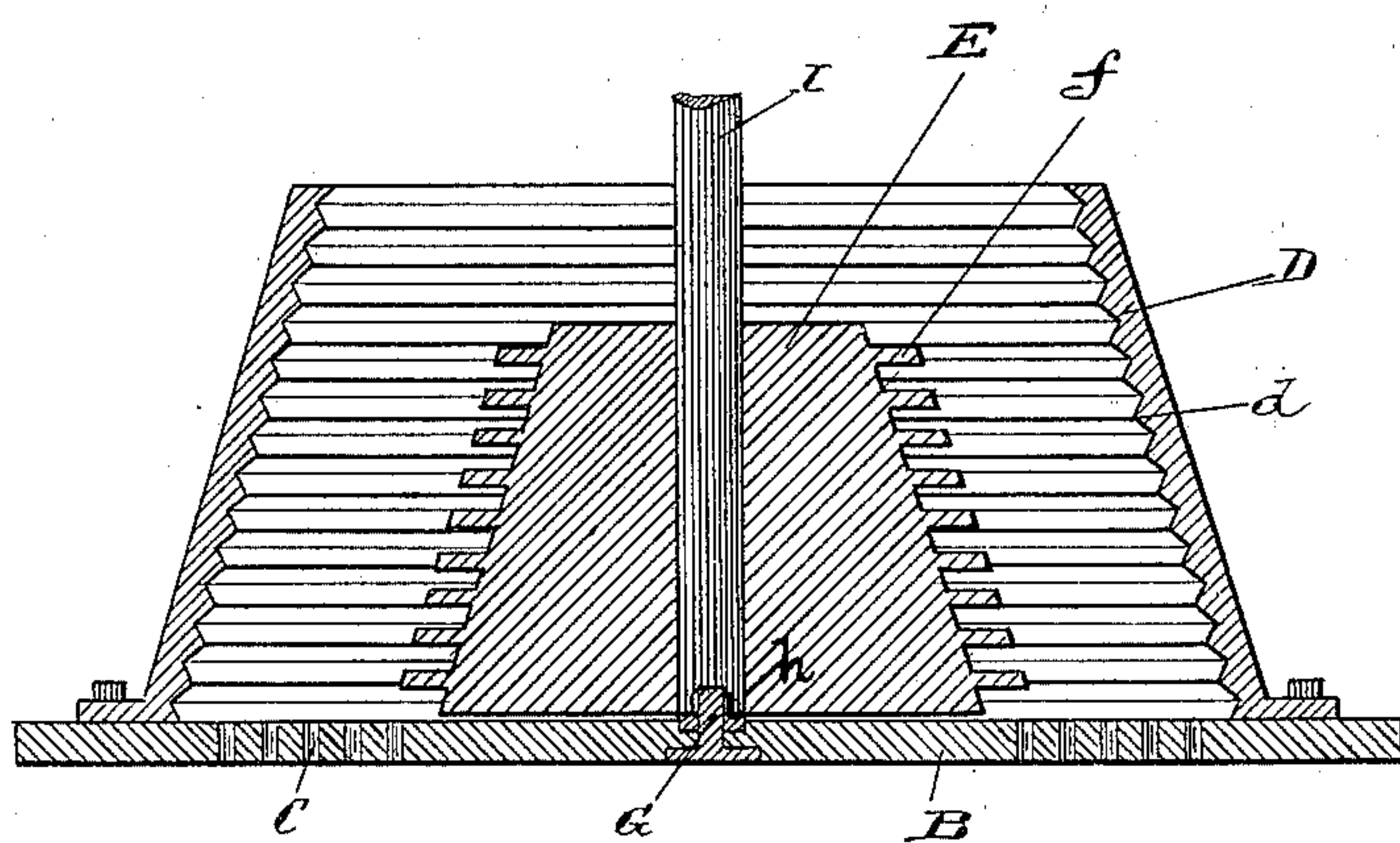
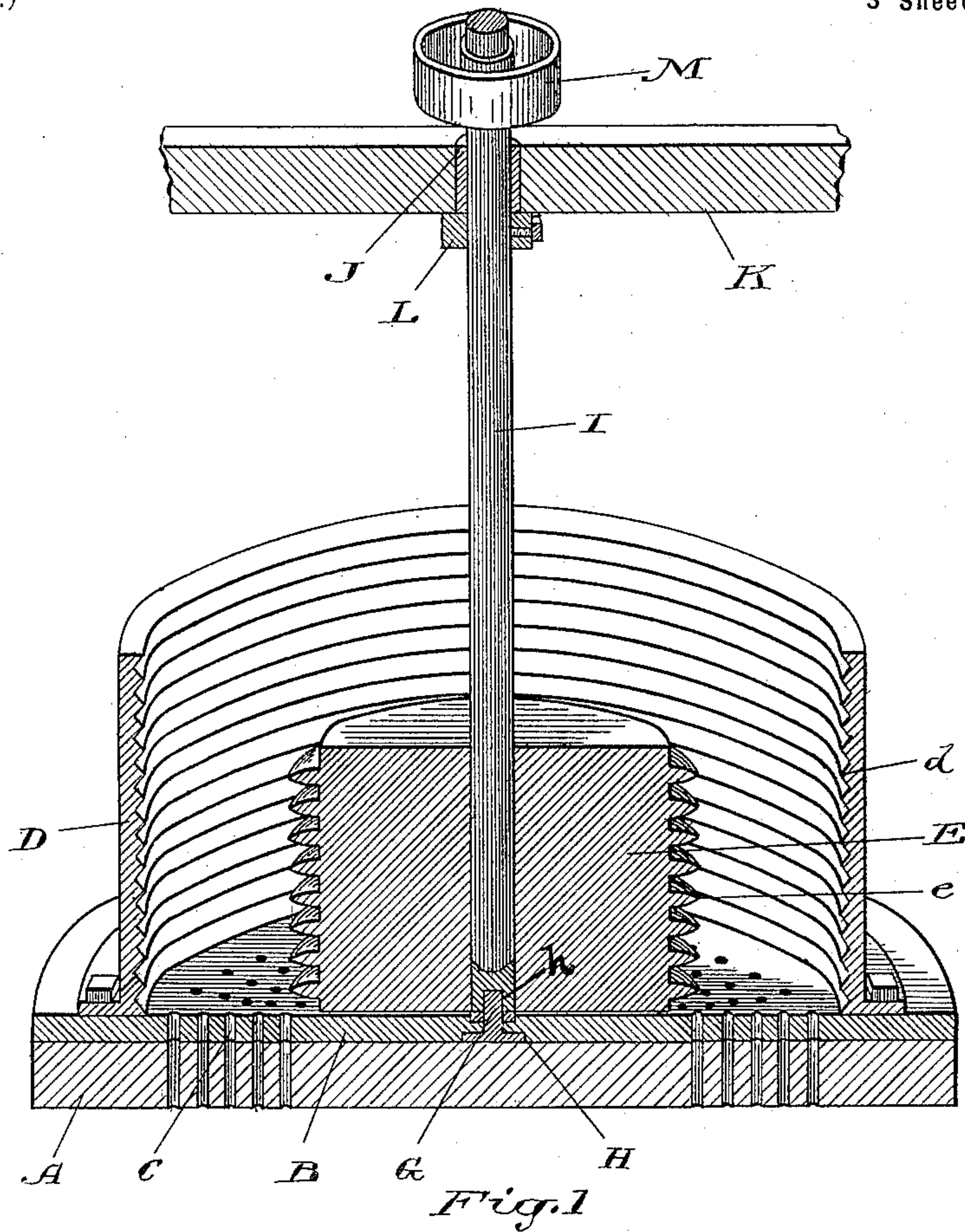
Patented Sept. 13, 1898.

W. S. SHAW.
LEATHER DRESSING MACHINERY.

(Application filed Nov. 13, 1897.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses

J. E. Cameron
M. A. Westwood

Inventor

W. S. Shaw
by C. H. Riches
his Attorney

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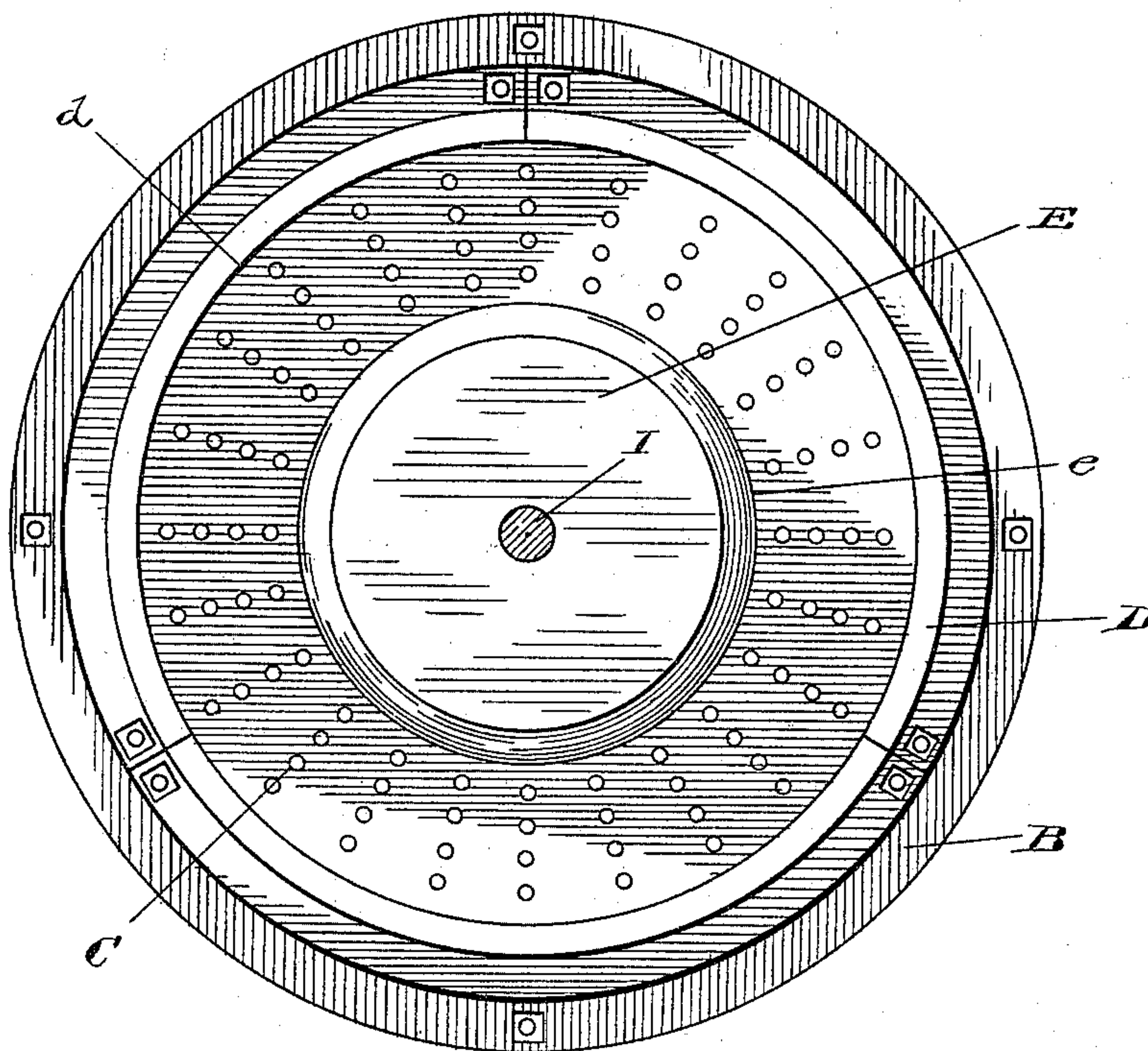


Fig. 2

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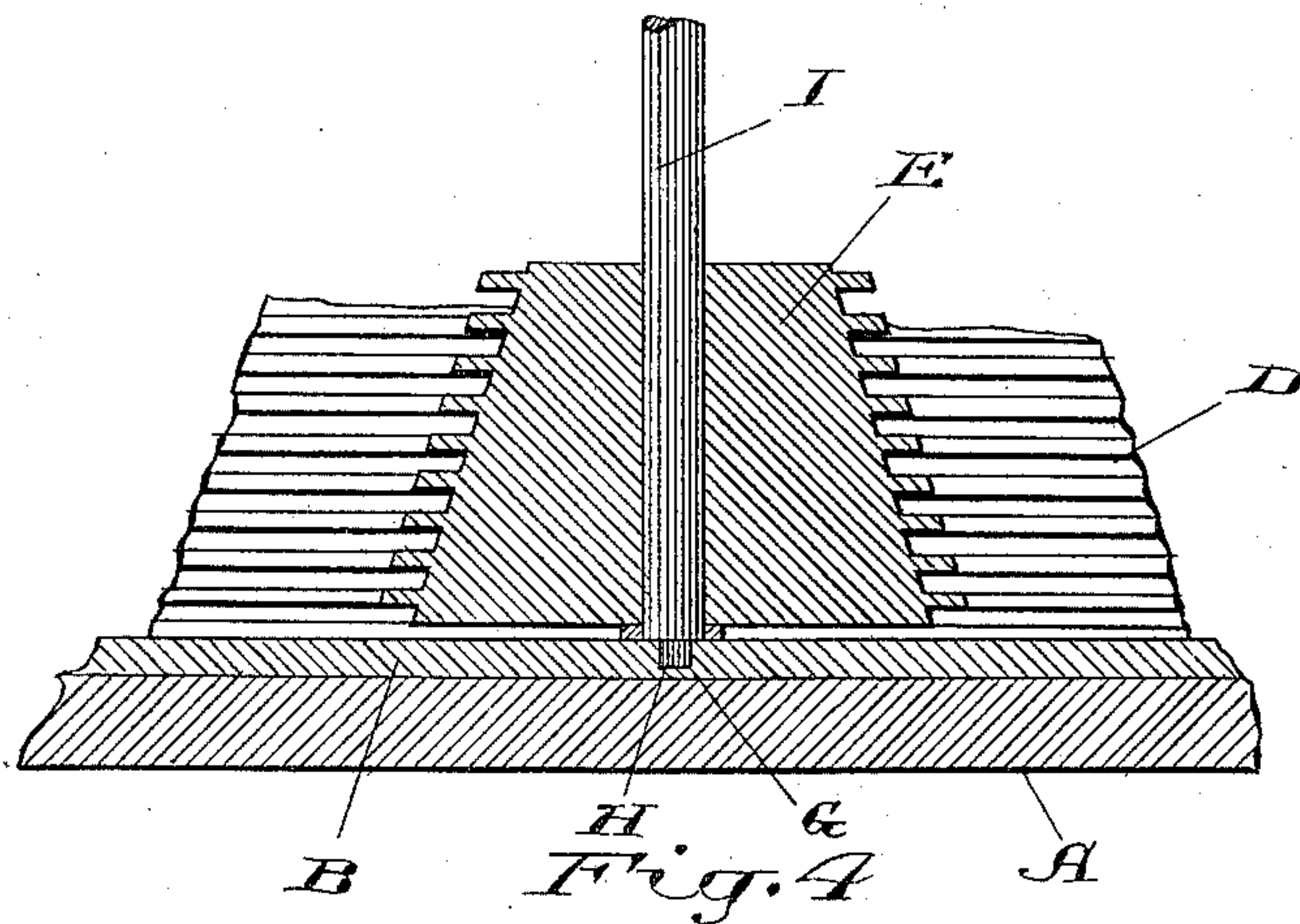
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3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

WILLIAM S. SHAW, OF BRACEBRIDGE, CANADA.

LEATHER-DRESSING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 610,613, dated September 13, 1898.

Application filed November 13, 1897. Serial No. 658,659. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SUTHERLAND SHAW, of Bracebridge, in the district of Muskoka and Province of Ontario, Canada, have invented certain new and useful Improvements in Leather-Dressing Machinery; and I hereby declare that the following is a full, clear, and exact description of the same.

10 This invention relates to certain new and useful improvements in leather-dressing machinery, and relates more particularly to that class of leather-dressing machinery employed to soften or break the stock; and the object of
15 the invention is to so construct the machine that it will occupy a comparatively small amount of space and can be rapidly, easily, and inexpensively operated to quickly soften or break the hides; and the invention consists, essentially, of a circular or frusto-conical shaped bin or tub having its inner face
20 corrugated and adapted to receive and contain the hides to be softened or broken, a cylindrical or frusto-conically shaped hollow hammer or beater centrally located within
25 the bin or tub, having its outer face corrugated or provided with pins to work the stock into a plastic or semiplastic condition, a pivot for the under side of the hammer or beater,
30 a vertical shaft extending upwardly from the top of the hammer or beater journaled in a vertical bearing mounted in a cross-beam, and a pulley or other power-transmitter mounted on the shaft, by means of which a rotary motion is imparted to the shaft or hammer or
35 beater, as hereinafter more fully set forth, and more particularly pointed out in the claims.

In the drawings, Figure 1 represents a perspective vertical section of the hide-tanning machine. Fig. 2 represents a plan view of the
40 same. Fig. 3 is a view of an alternative form of machine. Fig. 4 is a view of a second alternative form.

Like letters of reference refer to like parts throughout the specification and drawings.

A represents the foundation of the machine, constructed, preferably, of stone, iron, or other substantial and heavy material, in order that
50 it will resist the vibratory motion placed upon the various parts during the operation of the machine.

B represents the base proper, which is bolted

or strapped to the foundation A. The base B is preferably of a circular shape and is provided with a series of perforations C, which
55 perforations are continued through the foundation A for the purpose of draining off the liquid contents of the bin or tub. Surrounding the base B is a circular vertical wall D, the inner face of which is provided with a series of concentric corrugations *d*. The base
60 B and the circular wall D form the bin or tub for the reception of the hides. The wall D, as shown in Fig. 3 of the drawings, converges from the bottom to the top, making the bin
65 or tub of a hollow frusto-conical shape.

E represents the hammer or beater, centrally located within and correspondingly shaped to the bin. The hammer or beater E consists of a shell, preferably of cast metal,
70 of a frusto-conical shape. The outer face of the hammer E is provided with a series of corrugations *e* or pins *f*, projecting, preferably, at an acute angle to the outer face. As shown in Fig. 4, the center of the under side is provided with a pivot-pin G, set in a socket or
75 pivot-bearing H, formed in the base B.

I represents a shaft passing upward through the center of the hammer or beater E, the upper end of which is journaled in a vertical
80 bearing J, mounted in a cross-beam K. The hammer E may be sweated on the shaft I or it may be fastened to the shaft in any other manner commonly known to the trade. As shown in Figs. 1 and 3, the lower end of the
85 shaft I is provided centrally with a socket *h*, into which projects a pivot-pin G, connected to the base B. The cross-beam K is of sufficient strength and rigidity to check any vibratory motion on the part of the shaft I
90 during the operation of the machine. Fitted to the shaft I on the under side of the cross-beam K is a collar L, which fits snugly against the under side of the bearing J. Mounted on
95 the shaft I above the cross-beam K is a belt-pulley M, by means of which motion and power is transmitted to the shaft I. Instead of using the pulley M a bevel-gear may be fitted to the shaft and motion imparted by means of a counter-shaft having a bevel-gear
100 meshing with the bevel-gear of the shaft I, or any of the other ordinary methods of imparting motion to the shaft may be employed.

By having the inner face of the bin or tub

corrugated and the outer face of the hammer or beater corrugated or provided with pins the hides can be thoroughly broken and softened during the operation of the machine.

5 In Fig. 3 the walls of the bin or tub are shown to converge from the bottom toward the top, making the bin of a hollow frusto-conical shape, while in Fig. 1 the walls are shown to be straight up and down, making
10 the bin of a cylindrical shape.

By using the rotary hammer mounted upon a rotary shaft the machine can be constructed to occupy but a comparatively small space and can be run at the highest attainable rate
15 of speed. By constructing a leather-dressing machine on this principle a saving can be effected in the original cost and in the cost of operating it, and in addition the work can be thoroughly performed expeditiously and
20 without injury to the stock.

The pivot G, if desired, may be independently connected to the under side of the hammer or it may be a continuation of the shaft I.

25 I do not confine myself to any particular shape for the bin nor the hammer or beater, nor do I confine myself to any particular method for imparting a rotary motion to the shaft or hammer or beater, as I may make
30 them of any shape and of any size to suit any capacity of plant.

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

35 1. In a hide tanning or milling machine the combination of a bin, consisting of a perfo-

rated base, and a vertical wall surrounding the base having its inner face corrugated, a hammer centrally located within the bin having its outer face corrugated or provided with
40 pins, a central pivot for the hammer fitting into a pivot-socket in the base of the bin, a vertical shaft passing centrally through the hammer, a cross-beam, bearings in the cross-beam for the vertical shaft, and means for
45 imparting motion to the vertical shaft, and means for fastening the hammer to the shaft, substantially as specified.

2. In a hide tanning and milling machine the combination of a bin, consisting of a cir-
50 cular-shaped perforated base a circular vertical wall extending upwardly from the base having its inner face corrugated, a central pivot-bearing fitted in the base, a hide-hammer having its outer face corrugated or pro-
55 vided with pins, a pivot for the under side of the hammer mounted in the pivot-bearings, a vertical shaft extending centrally through the hammer, means for fastening the ham-
55 mer to the vertical shaft, a cross-beam, a vertical bearing mounted in the cross-beam for the shaft, a collar fitted to the shaft on the under side of the bearing, and a belt-pulley mounted on the shaft on the upper side of the cross-beam by means of which motion is
60 imparted to it, substantially as specified.

Bracebridge, November 5, 1897.

W. S. SHAW.

In presence of—

JOHN THOMSON,
JOHN ASHWORTH.