

Howell & Blanchard,

Dressing Leather,

N^o 13,819.

Patented Nov. 20, 1855.

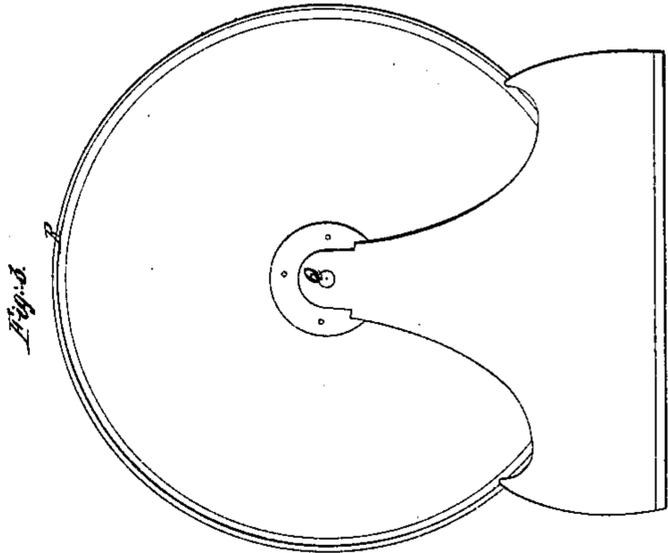
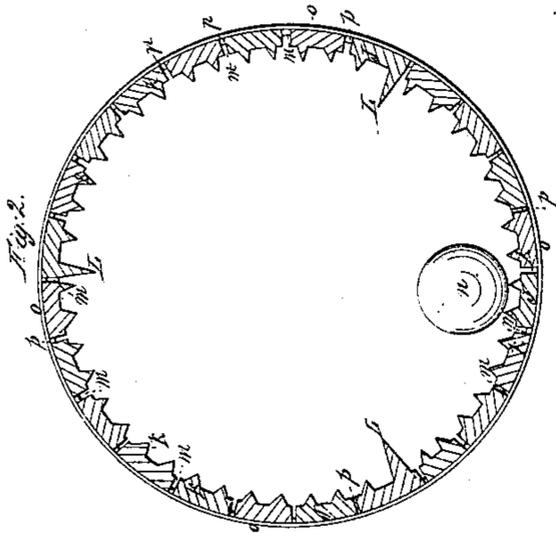
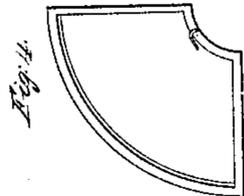
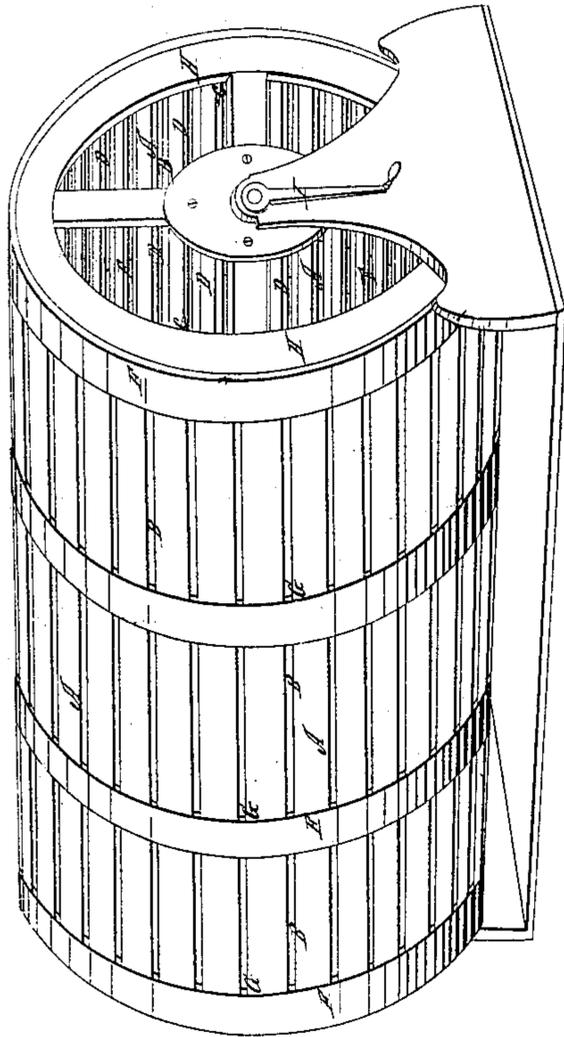


Fig. 1



Witnesses:
David C. Dred
Henry H. Howell

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UNITED STATES PATENT OFFICE.

THEODORE P. HOWELL AND NOAH F. BLANCHARD, OF NEWARK, NEW JERSEY.

TREATING LEATHER FOR ENAMELING.

Specification of Letters Patent No. 13,819, dated November 20, 1855.

To all whom it may concern:

Be it known that we, THEODORE P. HOWELL and NOAH F. BLANCHARD, of the city of Newark, county of Essex and State of New Jersey, have invented a new and useful Improvement in Machines for Softening Leather Preparatory to Enameling; and that we hereby declare the following to be a full, clear, and exact description and application of the same, reference being had to the annexed drawings, which drawings constitute a part of this specification.

Our rotary, leather softener, is a cylinder, constructed of staves or strips, about one-fourth of an inch apart, and are bound together by four wrought iron, hoops; the staves, are firmly bolted to the heads, at each end; there are also small wedges, between them under the hoops, to keep them from springing together; each stave or strip has two ribs, in the inside near the edges, running lengthwise of the cylinder, which serves as a rack, for pounding, or beating, the leather by the falling of the loaded, balls, upon it, when the cylinder is in motion. There are also three wider ribs placed at equal distances apart on the inside of the cylinder, which are called shelves, or heavers, from the fact that they carry the leather up to the top, of the cylinder; it then falls back with the balls, (which are india rubber, loaded, with shot to prevent their cutting the leather, which would be the case if they were made of any hard substance) upon the ribs, by which process it becomes as soft and pliable as cloth. The object of the spaces, between the staves is to let the dust which is beaten out of the leather, by the motion of the cylinder, and the falling of the balls, pass out (of the cylinder); if it was tight it would soon fill up, and stop the operation. The leather is placed with the ball in the cylinder one head of which is made solid the other is made to open, in order to admit of taking the leather to be softened, in or out, it is usually closed while in motion. A number of hides may be softened at the same time in a large cylinder that turns upon two short shafts, one of which is placed at the center of each head, and is kept in motion by a belt passing around it, driven by steam or horse power, a small one may be worked successfully by hand (with a crank).

The present mode of softening leather

preparatory to enameling is simply by beating it by hand over a block with one end hoisted up, while the other end rests, upon the ground, this block is filled with pins or strips, nailed, across it; the process is a very slow and laborious one.

Plate 1 is a view of the cylinder showing an oblique end. (A A,) is the staves; (B B,) the spaces; (C C), the large ribs or heavers; (D D,) the small ribs. (E) is the balls; (F F,) the hoops; (G G,) the wedges; (H H,) the open head; (I) the handle, or crank.

Plate 2 is a sectional view showing the staves and ribs, also the balls, spaces between the staves wedges. (J J,) the staves with the ribs attached to them; (k k,) the ribs; (L L,) wide ribs, shelves, or heavers; (m m) spaces; (n,) balls; (O) hoops; (P P) the wedges.

Plate 3 is solid end or head of cylinder. (Q,) is the short shaft; (R,) the hoop &c.

Plate 4 shows the loose end of cylinder or section of the head, which is removed in order to put the leather into the cylinder to be softened as shown Plate 1st, (H H).

We are aware that cylinders have been used for washing leather and other purposes in the manufacture of the same, but the application of a cylinder for softening leather after the above plan and construction has never we believe been made or used before our invention and use thereof; and by our rotary leather softener we are enabled to perform a much greater amount in any given time and with a vast deal less amount of expense and labor.

What we claim in our machine for softening tanned and dry leather is not the details thereof separately and apart from their use in combined action, but

We claim—

The combination of the cylinder, as constructed, with the elastic slotted bags as constructed and used for softening tanned and dry leather for japanning purposes.

In testimony whereof we hereto subscribe our names in presence of two witnesses.

THEO. P. HOWELL.
NOAH F. BLANCHARD.

Witnesses:

MOSES R. KING,
AARON M. KING.