

J. FISHBACK.

Apparatus for Treating Hides and Skins.

No. 195,999.

Patented Oct. 9, 1877.

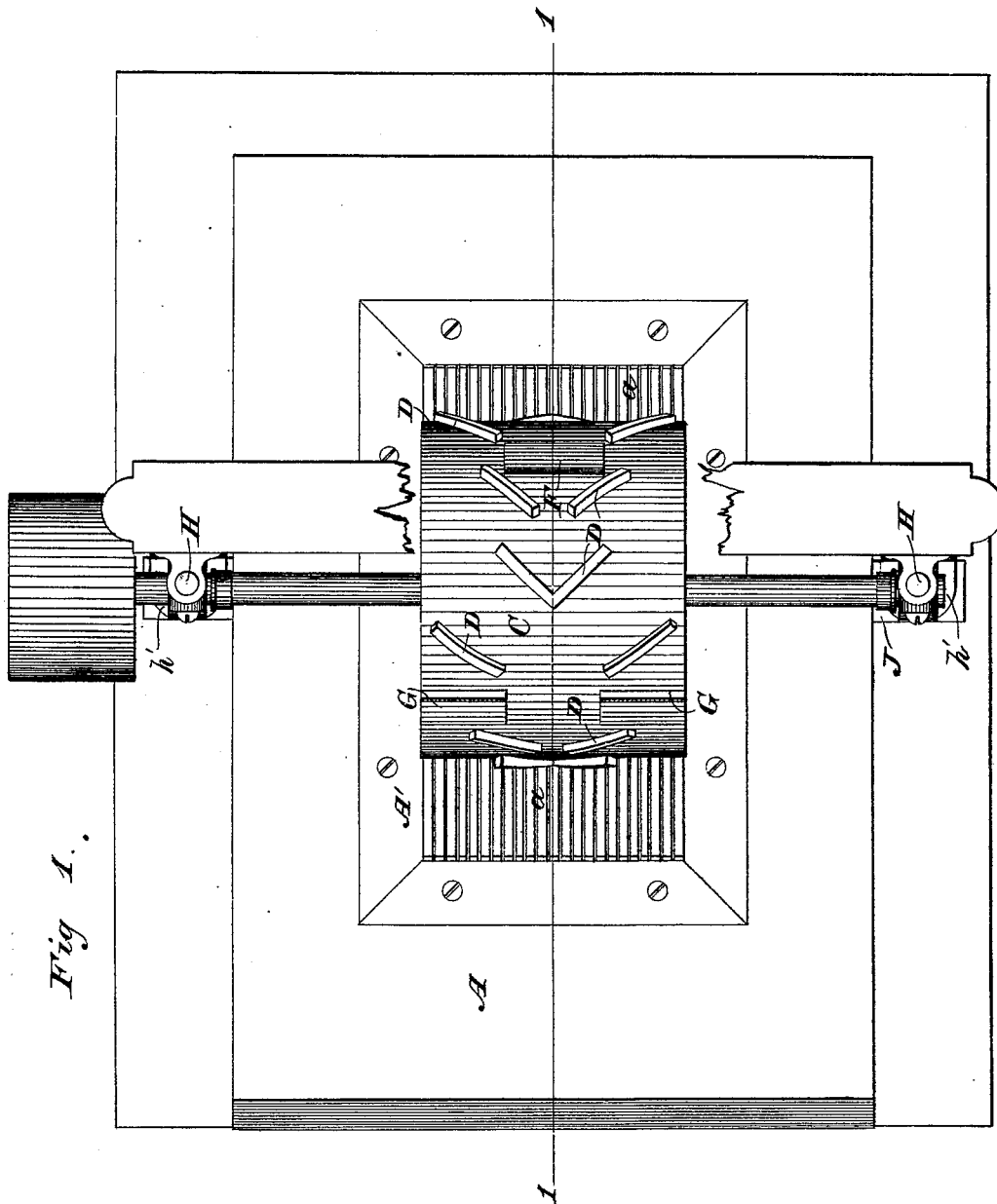


Fig 1.

WITNESSES

Wm A. Skinkle
Geo W Brock

INVENTOR

John Fishback.

By his Attorneys.

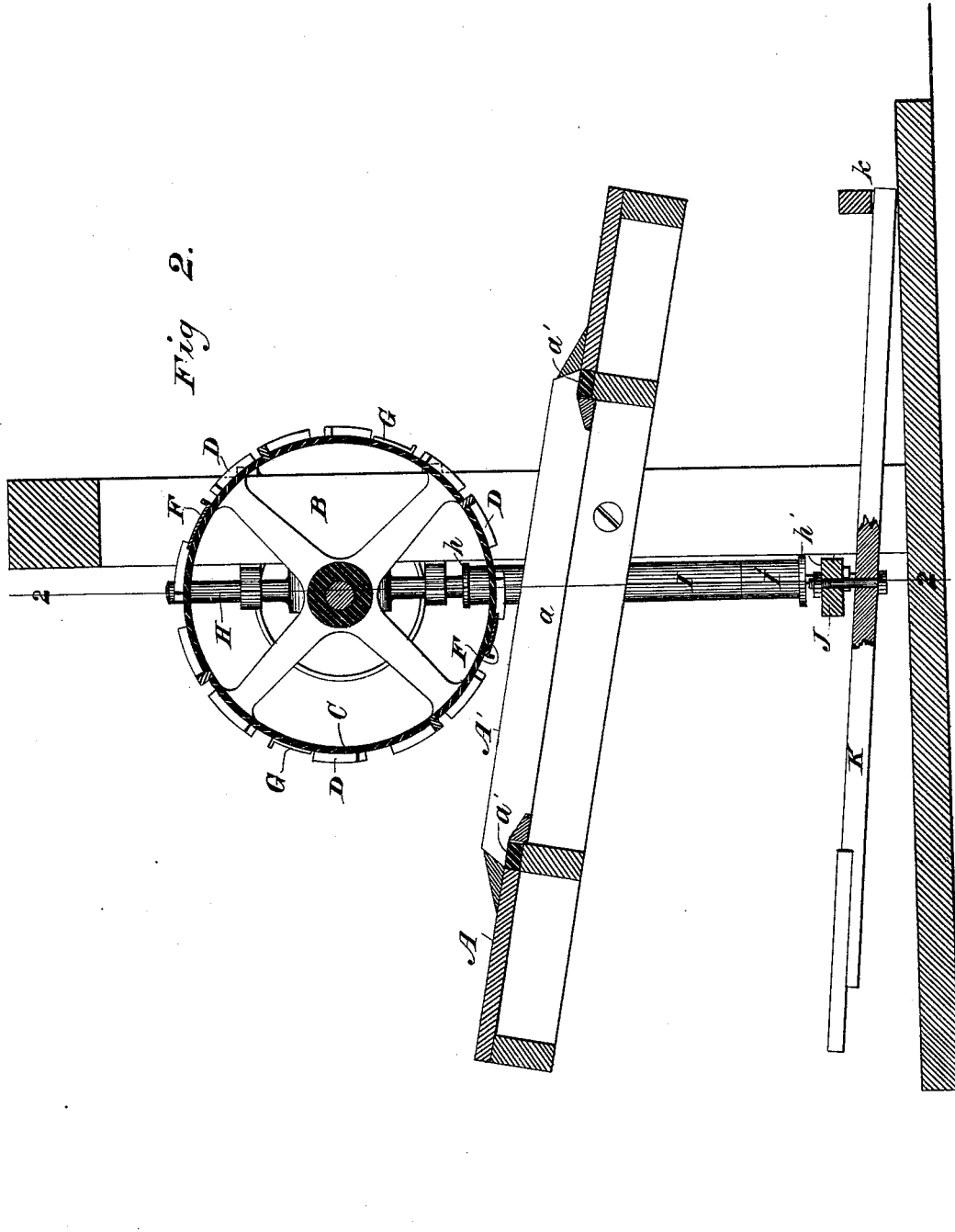
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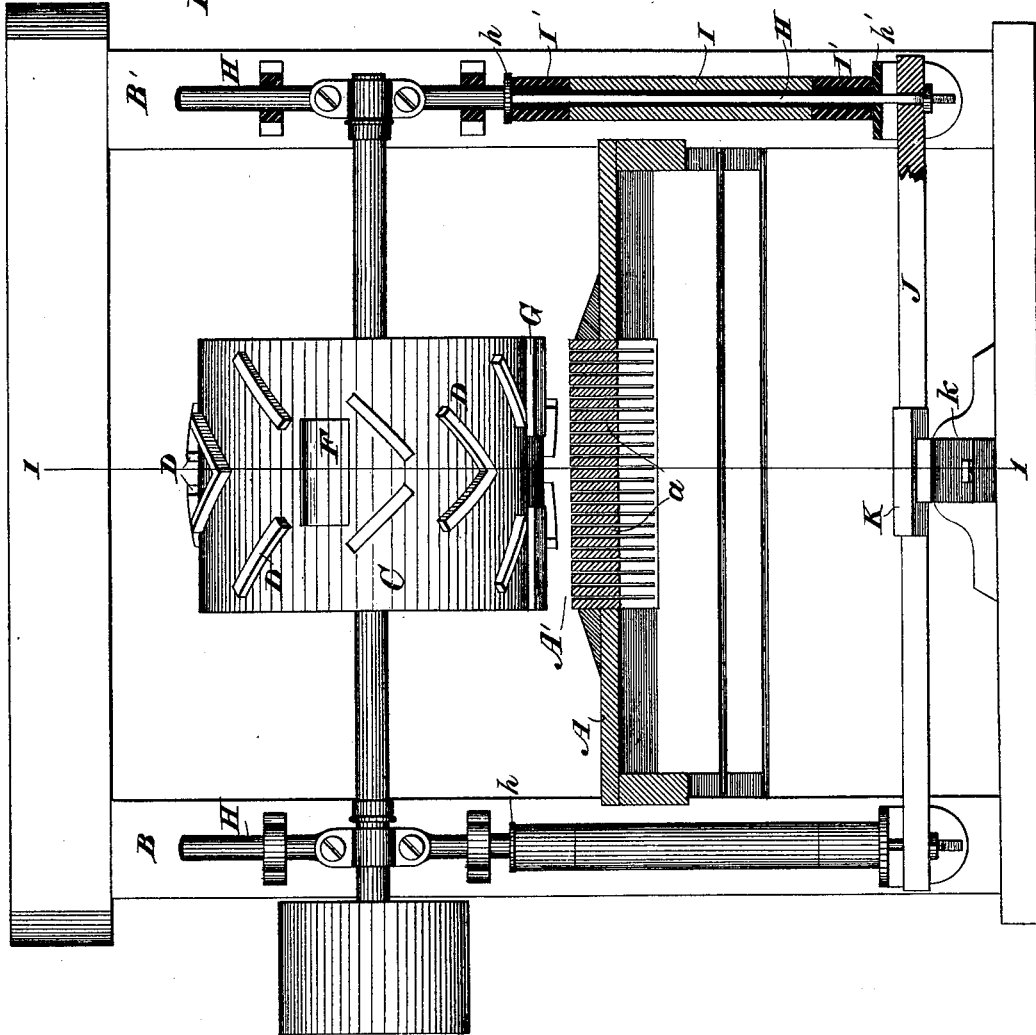
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Fig 3.



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UNITED STATES PATENT OFFICE.

JOHN FISHBACK, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN APPARATUS FOR TREATING HIDES AND SKINS.

Specification forming part of Letters Patent No. **195,999**, dated October 9, 1877; application filed September 26, 1877.

To all whom it may concern:

Be it known that I, JOHN FISHBACK, of Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Apparatus for Treating Hides and Skins, of which the following is a specification:

The object of my invention is to destroy the small air vesicles or cells contained in the body of the hide or skin, which, in ordinary tanning, prevent the entrance of the tannin until they are decomposed, and to render the fiber of the hide or skin soft, yielding, and elastic, which ends I attain by subjecting them to the action of pounding-stones and stretching-knives, arranged in a suitable manner upon the periphery of a rapidly-revolving cylinder.

My invention further consists in the peculiar arrangement and construction of the apparatus for carrying out the objects of my invention.

The accompanying drawings show my improvements as embodied in the best way now known to me. Obviously, however, the details of construction may be varied within certain limits without departing from the spirit of my invention.

Figure 1 represents a plan or top view of the apparatus. Fig. 2 represents a vertical central section therethrough on the line 1 1 of Figs. 1 and 3; and Fig. 3 represents a front elevation, partly in section, on the line 2 2 of Fig. 2.

A table, A, provided with a raised portion or platform, A', upon which the hides or skins to be treated are placed, is supported at a suitable height between uprights B B'. This platform A' consists of a series of yielding slats, a, a rubber strip, a', being preferably placed under the ends of the slats, both in front and rear.

Above this platform, supported upon a shaft which has its bearings in suitable boxes supported upon the uprights B B', is mounted a cylinder, C, of comparatively large diameter, the periphery of which is provided with a series of stones, D, preferably of fine grit and very hard. These stones are mortised or otherwise secured in or upon the cylinder, and are arranged diagonally thereon.

There are several sets of stones intended to

be used upon each cylinder, each set consisting of three pairs of stones arranged in the following manner: The first pair is located near the edges of the cylinder; the next pair, which are immediately in rear of the first, and form, in reality, but one stone, of a V shape, are located upon the center of the cylinder, and are designed to act upon the portion of the hide or skin untouched by the edge stones; and the third pair, immediately in rear of the center stones, overlap both the inner ends of the edge stones and the outer ends of the center stones, and contribute to the more perfect treating of the hide.

Intermediate between each set of stones there is arranged upon the cylinder, in a horizontal position, a system of knives, scrapers, or stretchers, consisting, alternately, of a single central knife, F, which acts upon the central portion of the hide or skin, and a pair of knives, G G, extending from the edge of the cylinder inward, which act upon the remaining portions of the hide untouched by the knife F.

To enable the operator to bring the revolving cylinder down upon the hide or skin lying upon the platform to be treated with sufficient pressure and with a yielding force to accommodate inequalities in the thicknesses of the hides or skins, I give the cylinder a capacity of vertical adjustment by mounting its shaft in boxes supported upon rods H, moving vertically in suitable brackets secured upon the uprights B B'. The lower ends or extensions of these rods are enveloped by suitable springs, consisting, in the present instance, of a wooden tube, I, provided with short rubber tubes or springs I', one at each end thereof, these springs being confined between a collar, h, on the rods and a bracket, h', on the uprights. Through these brackets the rods H pass, and also through a cross-piece, J, being secured upon the under side of said cross-piece by screw-nuts or otherwise. The cross-piece J is connected to a foot-lever or treadle, K, pivoted at k, by which means the operator has command over the cylinder with his foot, the springs raising the cylinder from the table when the pressure of the operator's foot is withdrawn.

Power may be applied to the shaft of the cylinder in any well-known way, a band-pulley being shown in the present instance.

The operation of the apparatus is as follows:

The hide or skin is placed upon the platform, and the rapidly revolving cylinder brought down upon it by the foot-lever. The stones, from their peculiar arrangement, pound the hide and stretch it from the center to the sides of the cylinder and across the fiber. The knives, owing to their horizontal location upon the cylinder, stretch the fiber lengthwise in the direction of rotation of the cylinder, the joint action of both stones and knives removing the hair and dirt contained in the hides or skins and the surplus flesh, and leaving the fiber in a soft, yielding, and elastic condition, which is retained after the hides have been tanned and finished into leather.

It is also very beneficial to hides and skins that have been already tanned to subject them to the process and apparatus hereinbefore described.

When very light skins are being treated it is preferable to have an apron of rubber cloth or leather, or both, on top of the raised platform of the table, and directly under the cylinder, to act as a cushion, the wooden slats being too hard for very thin skins.

I claim as of my own invention—

1. The combination of the platform or table for supporting the hide, the cylinder, the pounding and stretching stones, and the stretching or scraping knives, when said stones and scrapers are arranged relatively to each other and the supporting-platform, substantially in the manner described, so as, respectively, to draw upon the hide or skin diagonally, and in the direction of rotation of the cylinder, thus

stretching the hide or skin laterally, as well as longitudinally, at a single operation, for the purpose of rendering it soft, yielding, and elastic.

2. In a machine for treating hides, the cylinder provided with a series of stones diagonally arranged upon its surface, and with knives, scrapers, or stretchers arranged horizontally thereon between each set of stones, substantially as described.

3. The combination, substantially as hereinbefore set forth, of the cylinder, its shaft-bearings mounted upon vertically-adjustable rods, the springs acting upon said rods, and the foot-lever, whereby the cylinder may be brought in contact with the hides and skins with a yielding pressure and accommodate varying thicknesses thereof.

4. The combination, substantially as hereinbefore set forth, in a machine for treating hides and skins, of a yielding platform, upon which the hides are placed, a yielding cylinder provided with pounding and stretching stones and knives on its periphery, and a foot-lever to control the movements of the cylinder and bring it down with more or less pressure upon the table, whereby both cylinder and platform may yield to accommodate the hide.

In testimony whereof I have hereunto subscribed my name.

JOHN FISHBACK.

Witnesses:

DATUS E. MYERS,
CYRUS T. NIXON.