(No Model.)

2 Sheets—Sheet 1.

W. C. YEAGER.

LEATHER ROLLING MACHINE.

No. 310,160. Patented Dec. 30, 1884.

Fig. 1.

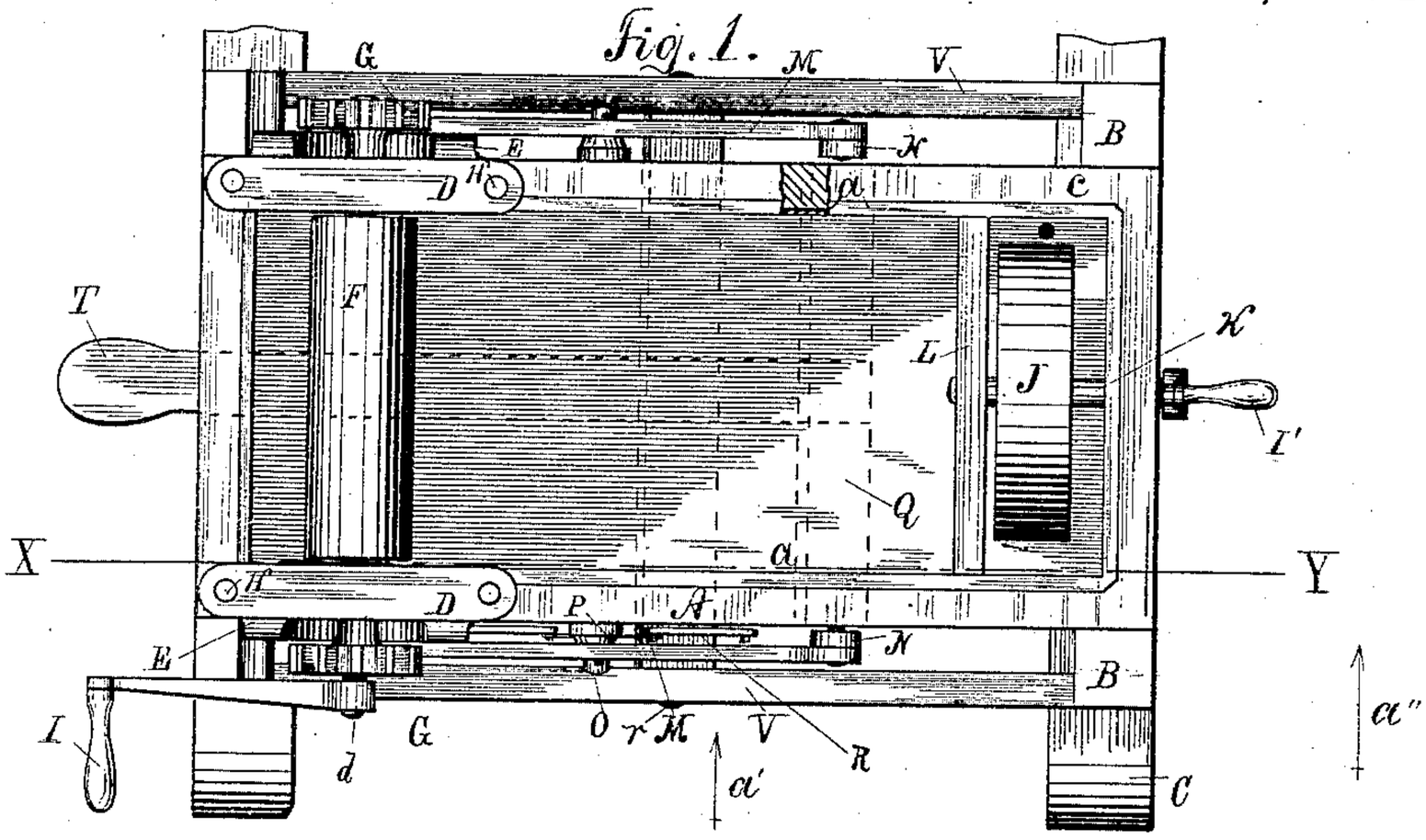
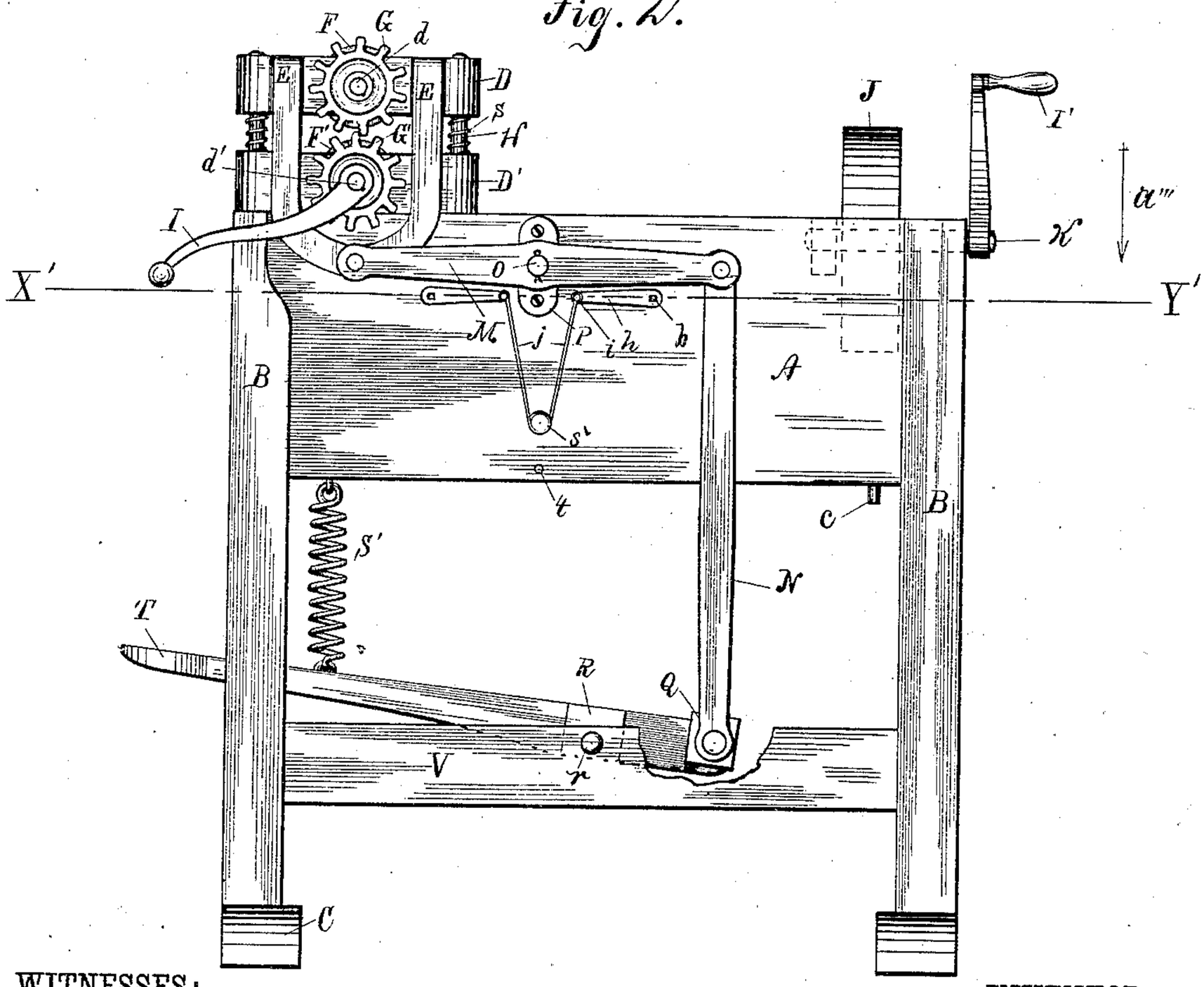


Fig. 2.



WITNESSES:

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W. B. Hollocker.

INVENTOR

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

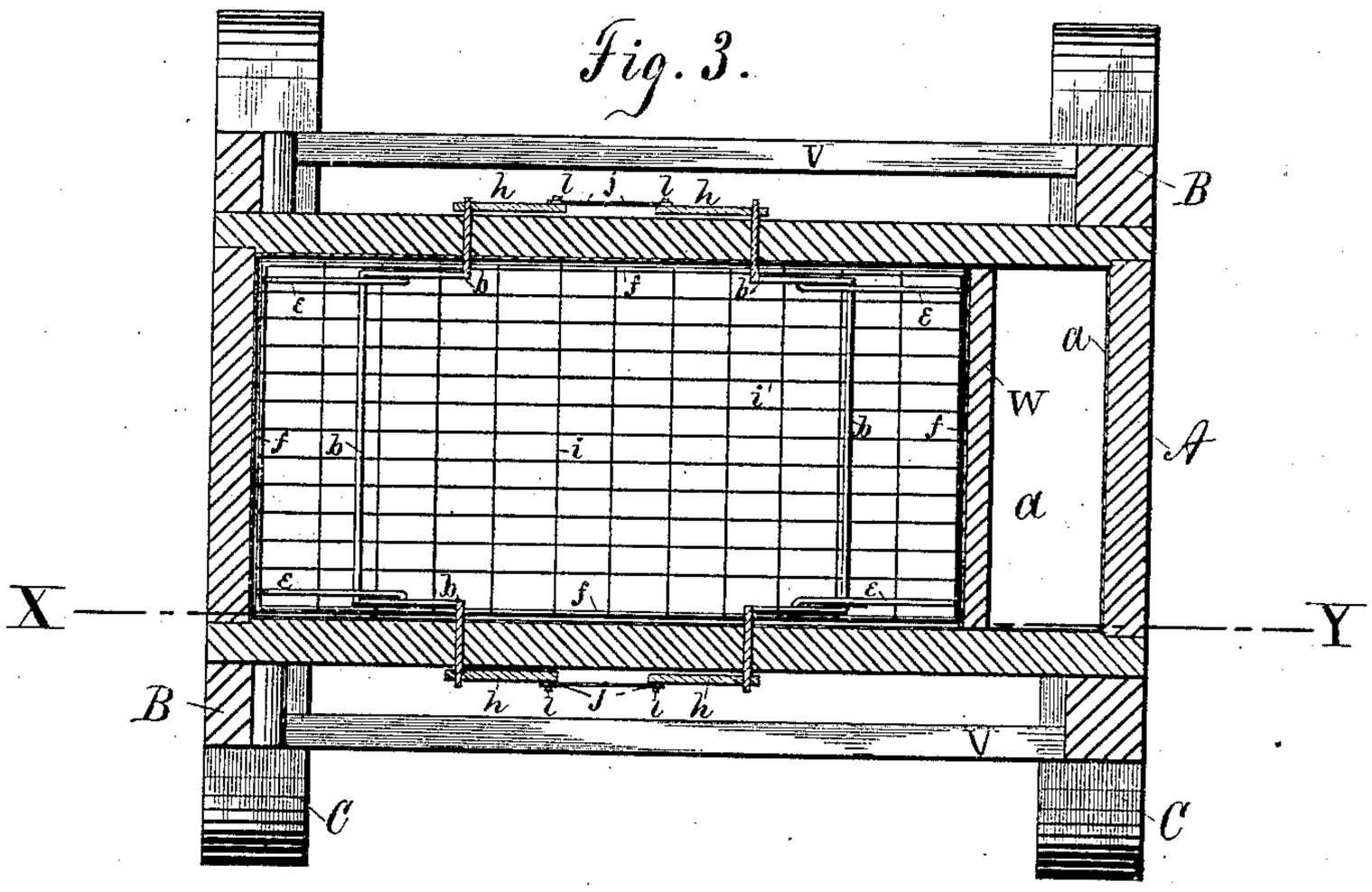
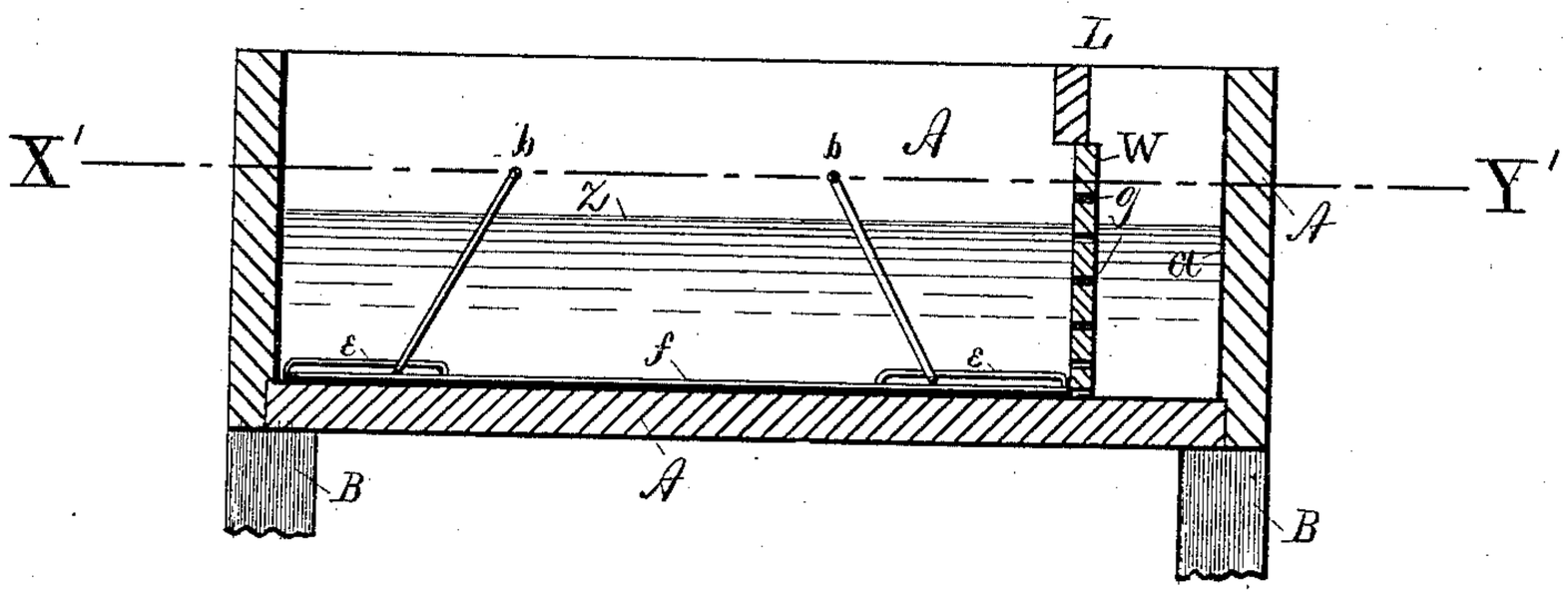


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM C. YEAGER, OF BROWNTOWN, WISCONSIN, ASSIGNOR OF ONE-HALF TO PETER S. YEAGER, OF WADDAM'S GROVE, ILLINOIS.

LEATHER-ROLLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 310,160, dated December 30, 1884.

Application filed May 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. YEAGER, a resident of Browntown, in the county of Green and State of Wisconsin, have invented certain new and useful Improvements in Leather-Rolling Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention is an improved combined machine for shoemakers' use, comprising a tank for soaking leather, a pair of coacting leather-rollers mounted on said tank, a tray resting on the bottom of said tank, and provided with means for lifting it with the leather placed on it, and a grindstone hung within said tank and moistened by the water therein.

The machine is fully described and explained in the following specification, and shown in the accompanying drawings, in which—

Figure 1 is a plan of the machine; Fig. 2, a side elevation thereof looking in the direction indicated by the arrow *a'*, Fig. 1; Fig. 3, a horizontal section looking downward through the line *x' y'*, Fig. 2, and Fig. 4 a vertical section through line *x y*, Fig. 1, looking in the direction indicated by the arrow *a'*, Fig. 1, the leather-rolling mechanism being removed.

In these views, A is a wooden tank with a metallic lining, *a*, flanged at the upper edge. B are the legs, bolted to the tank, and C cross-bars fastened to the legs to form a base. V are side bars fastened to the legs B, and acting as braces therefor, and at the same time supporting the pivots of the bar R, as hereinafter set forth.

On the sides of the tank A, near one end thereof, are fastened two stationary bearings, D', in which is journaled the shaft *d'* of a roller, F', preferably of iron, and of suitable size for the use for which it is designed.

In each of the bearings D' are set two vertical guides, H, which pass through and hold in place two movable bearings, D, and in said bearings D is journaled the shaft *d* of a second roller, F, of the same size as the roller F', and adapted to co-operate therewith.

On the shafts *d d'* are mounted two pinions, G G', which are in the same vertical plane and in engagement with each other, and a crank, I, on the shaft *d'* affords a means of rotating the two pinions G G', and the corresponding rollers, F F', in opposite directions. Coiled springs S, wound about the guides H, press the roller F upward, and thus separate the two rollers sufficiently to admit between them any thickness of leather on which they are required to operate.

On the outer face of each of the movable bearings D is formed integrally, or rigidly fastened, a yoke, E, consisting of two vertical arms extending downward on opposite sides of the pinion G', and joined by a curved cross-bar below the pinion.

At the center of the lower member of each of the yokes E is pivoted one end of a lever, M, whose center is pivoted on a gudgeon, O, fastened to the side of the tank, and the opposite end of each of the levers M is pivoted to the upper end of a vertical connecting-rod, N. The lower ends of the two connecting-rods are pivoted to the opposite ends of a cross-bar, Q, which is at right angles to a treadle, T, and is fastened rigidly to the end thereof. A second cross-bar, R, parallel to the cross-bar Q, is fastened rigidly to the treadle T, and oscillates on pivots *r*, passing through the side bars, V, and into the ends of the cross-bar. The pivots *r* form the fulcrum of the treadle T, and it is evident that downward pressure on the free end of the treadle must raise the cross-bar Q and connecting-rods N and depress the yokes E, bearings D, and roller F. The roller F may be thus pressed down until it is in contact with the roller F', and any desired pressure may be put on the rollers, and on any substance passed between them. As soon as the downward pressure is removed from the free end of the treadle the springs S tend to force the roller F upward, and they may be made strong enough to raise the roller, and the treadle also. I think it best, however, to raise the free end of the lever T by means of a spring, S', fastened to the treadle near its free end, and to the bottom of the tank. At the opposite end of the tank from the rollers F F' is hung a grindstone, J, one end of whose shaft K is journaled in the end of the tank, and the other in a cross-bar, L, extending across the tank and fastened to the sides thereof. A crank, I', is mounted on the outer end of the shaft K, and

affords a means of turning the stone. The lower part of the stone is in the water of the tank, and the stone is thus kept wet with the same water used for soaking the leather to be passed between the rollers F F′. A tube, *c*, in the bottom of the tank, serves to draw off the water when desired. In the bottom of the tank lies a tray composed of an outer frame, *f*, and a netting composed of wires *i*, fastened to said frame. Guide-wires *e* are fastened to the frame at the corners and extend a suitable distance along the sides thereof. Across the tray, near each end, lies an iron rod, *b*, which passes under the two guide-rods *e*, is bent upward at right angles just inside the side walls of the tank, and has both its ends bent outward and passed horizontally through the sides of the tank. The ends of the rods *b* are squared, and on each of them is fastened a lever, *h*, Figs. 2, 3.

On the free ends of the levers *h*, on each side of the tank, is suspended a wire bail, *j*, formed preferably with a spring loop, *s′*, at its center, as shown in Fig. 2. It is evident that if the bails *j* be drawn down the tray must be raised by the rods *b*, which pass under the guide-rods *e*, and on the sides of the tank are pins *t*, over which the loops *s′* of the bails may be fastened to hold the tray up. The tray extends from the end of the tank at which the rolls are placed to a perforated partition, *g*, extending downward from the cross-bar L, which supports the grindstone. The rods *b* are shown and have been spoken of as provided at both ends with levers *h*. I have, however, found in practice that it is only necessary to have these levers and the bail *j* on one side of the tank, the rigidity of the rods *b* being sufficient to carry up both sides of the tray together.

The operation of the tray, the tank, and the leather-rollers is evident. The leather to be used is placed on the tray, which is allowed to sink to the bottom of the tank, to be soaked. When ready for rolling, it is taken out by raising the tray, which lifts the leather from the water and enables the operator to get it much more conveniently than when it lies in the bottom of the tank in the water. The leather is then placed between the rollers, pressure is applied by means of the treadle T, and the rollers are turned by means of the crank I until the leather is rolled sufficiently. The water pressed from the leather runs into the tank, and the leather itself as it leaves the rolls drops on the tray ready for use.

Having now described my invention and explained its operation, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the tank A, the leather-rollers F F′, mounted thereon, and means, substantially as shown and described, for raising and lowering the roller F and for rotating said rollers in opposite directions, substantially as and for the purpose set forth.

2. The combination of the tank A, the stationary bearings D′, attached thereto, the movable bearings D, sliding vertically on guides H, the rollers F′ F, mounted on shafts *d′ d*, journaled in said bearings, respectively, the yokes E, attached to said bearings D, and the levers O N T, constructed, combined, and operating substantially as set forth, and adapted to press the roller F downward upon the roller F′, substantially as shown and described, and for the purpose set forth.

3. The combination of the tank A, the tray *f i*, guide-rods *e*, bent rods *b*, passing under said guide-rods, levers *h*, and bails *j*, all operating substantially as and for the purpose set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM C. YEAGER.

Witnesses:

MICHAEL STOEKOPF,

WALLACE GREENE.