

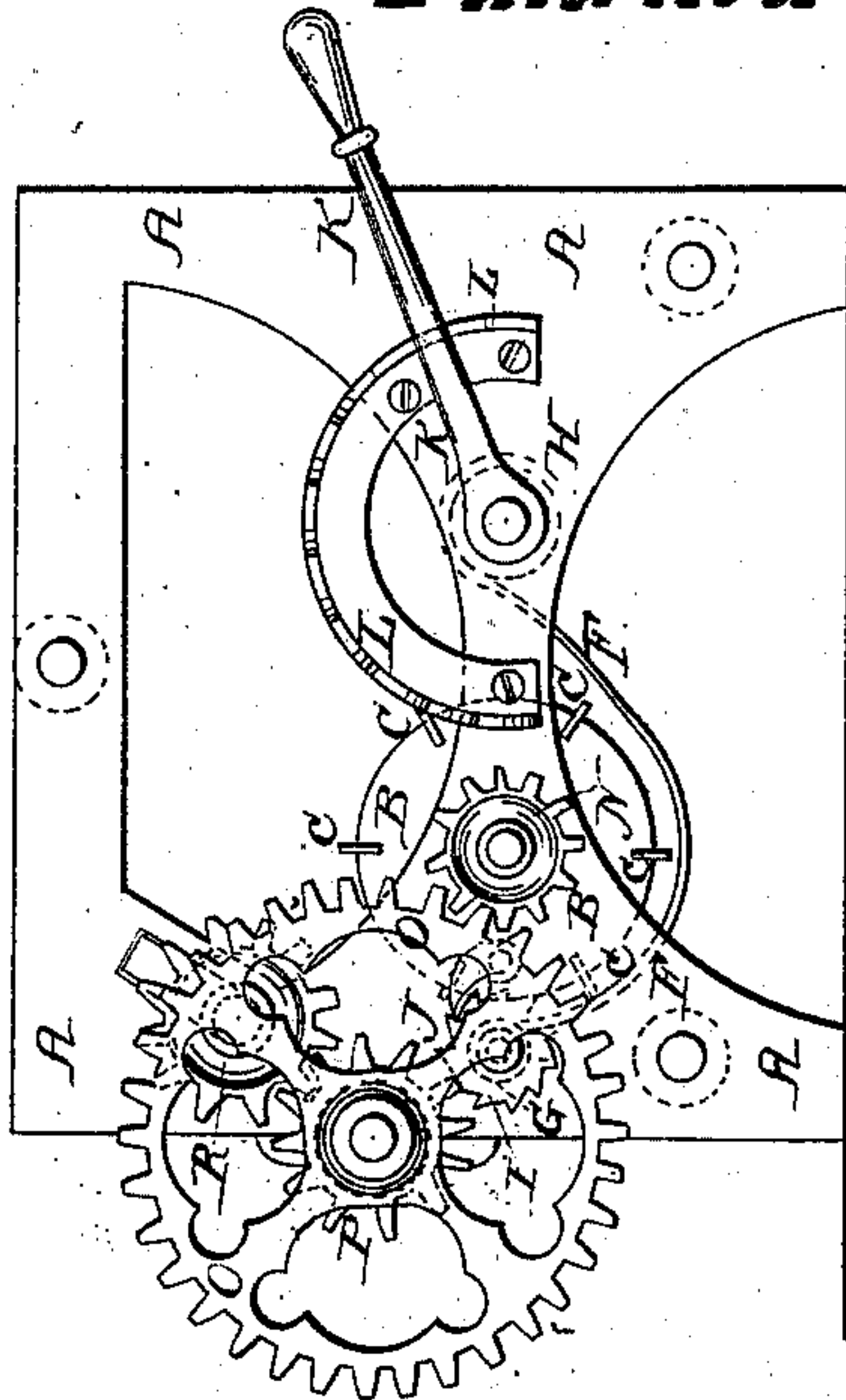
*J. Schultz,*

*Preparing Hides,*

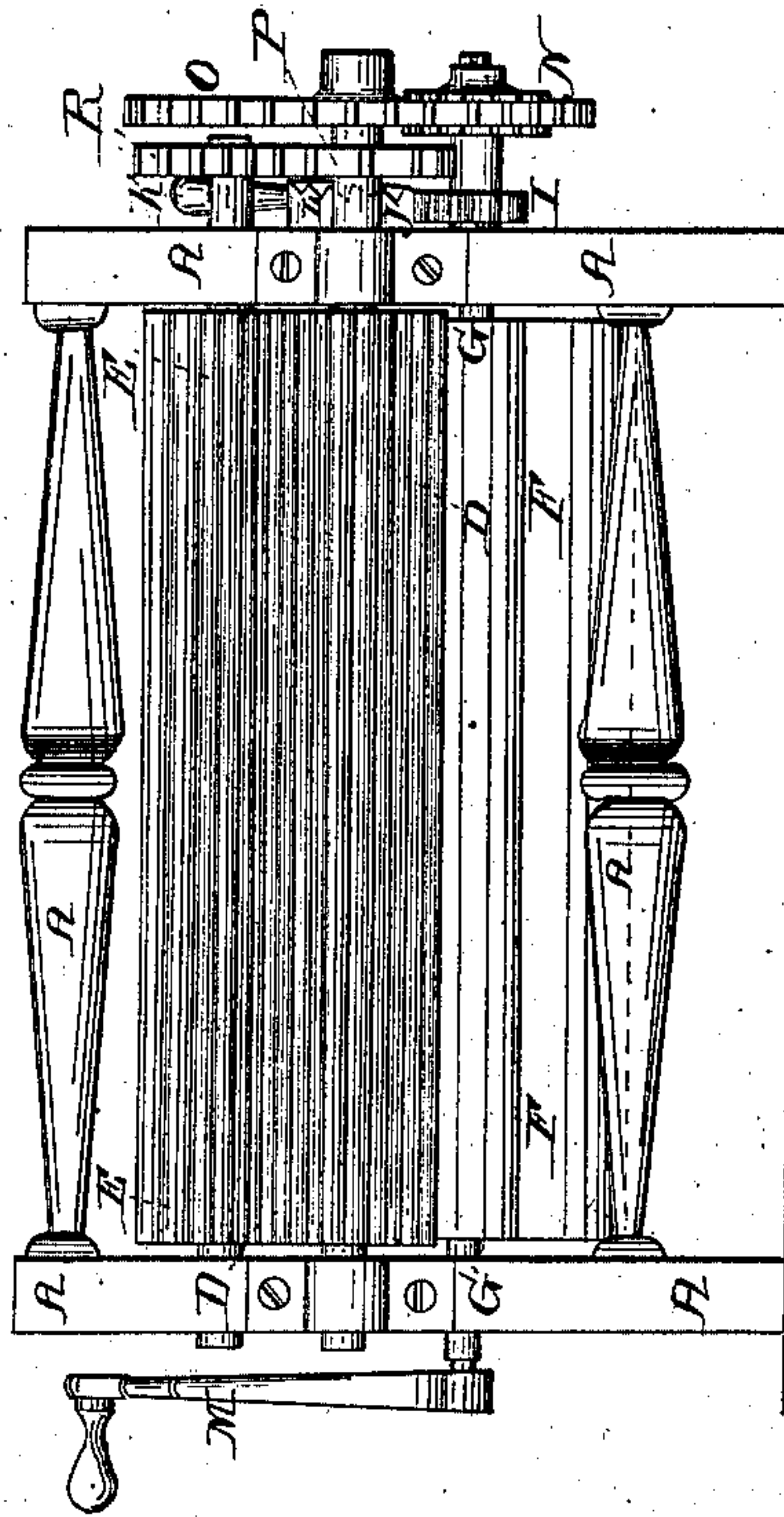
*N<sup>o</sup> 66,176.*

*Patented June 25, 1867.*

*Fig; 2.*



*Fig; 1.*



*Witnesses*

*Theo. Fische*  
*Wm. Treu*

*Inventor,*

*J. Schultz*  
*Per Munn & Co*  
*Attorneys*

# United States Patent Office.

JUDSON SCHULTZ, OF ELLENVILLE, NEW YORK.

*Letters Patent No. 66,176, dated June 25, 1867.*

## IMPROVED MACHINE FOR UNHAIRING HIDES.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, JUDSON SCHULTZ, of Ellenville, in the county of Ulster, and State of New York, have invented a new and improved Machine for Unhairing Hides; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of my improved machine.

Figure 2 is an end view of the same.

Similar letters of reference indicate like parts.

My invention has for its object to furnish an improved machine by means of which hides may be unhaired and leather scrubbed, scoured, or washed conveniently, thoroughly, and rapidly; and it consists in the combination of an apron or belt, wound upon or passing around two rods or rollers, with the knife-cylinder; in the combination of a pawl and ratchet-wheel and of a ratchet-lever and rack with the ends of the belt-rollers, for the purpose of tightening and holding the belt and shifting its position; and in arranging the belt or apron, knife-cylinder, and feed-rollers with each other in such a manner that the hides or leather may pass from the feed-rollers beneath the knife-cylinders in the same direction in which the said cylinder is revolved, but at a less velocity.

A is the frame of the machine, near the middle part of which is pivoted a cylinder, B, having knives or scrapers C attached to its face and extending longitudinally with it. To the rear part of the frame A are pivoted the feed-rollers D and E, in such a position that the upper side of the lower roller D may be about upon a level with the upper side of the knife-cylinder B. The surfaces of the rollers D and E are grooved or fluted longitudinally, and the upper one, E, is set a little in advance of the lower one, for convenience in feeding in the hides. The journals of the upper roller E revolve in bearings in the frame A of the machine, the upper parts of which bearings are movable, and are held down to their places by rubber or other springs, so that the said roller may adjust itself to the varying thickness of the hides passing between it and the roller D. F is an apron, the ends of which are attached to the rods or cylinders G and H, and which is wound upon the roller G, so that as one part of said apron becomes worn, its position may be shifted so as to expose another part to the action of the hides and knife-cylinder. If desired, the ends of the apron F may be secured to each other so as to change it to a belt, the position of which may be shifted by revolving one or the other of the rollers around which it passes. The apron or belt F may be made of canvas, leather, or rubber, as may be desired. The rollers or rods G and H revolve in bearings in the frame of the machine in about the same horizontal line with the bearings of the knife-cylinder B. To the projecting end of the journal of the roller G is attached a ratchet-wheel, I, upon the teeth of which the pawl J takes hold, to keep the said roller from revolving. To the projecting end of the roller H is attached the end of the pawl-lever K, by means of which the said roller is revolved to shift or tighten the apron or belt F, and which is held in place by catching upon the teeth of the rack L, attached to the frame A. The machine is driven by applying power to the projecting end of the journal of the knife-cylinder B by means of a crank, M, pulley, or other convenient means. To the other projecting end of the journal of the said knife-cylinder is attached a gear-wheel, N, into the teeth of which mesh the teeth of the large gear-wheel O attached to the journal of the feed-roller D, which also has a small gear-wheel, P, attached to it, meshing into the teeth of the gear-wheel R, of exactly the same size, attached to the journal of the feed-roller E. By this arrangement of the gearing the two feed-rollers will be driven at the same velocity, which will be considerably slower than the velocity of the knife-cylinder B.

In using the machine, the hides or leather are fed in between the feed-rollers D and E, and pass below the knife-cylinder B, between it and the apron or belt F, and moving at a much less velocity than the surface of the said cylinder, the unhairing, scouring, scrubbing, or washing being done by the knives C while moving in the same direction as the hide or leather is moving, rendering it impossible for the hide or leather to wrinkle or fold under the action of the knives.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the apron or belt E, wound upon or passing around the rollers G and H, with the knife-cylinder B, substantially as herein shown and described, and for the purpose set forth.



2. The combination of the ratchet I, pawl J, pawl-lever K, and rack L, with the journals of the apron or belt-rollers G and H, for the purpose of holding and tightening the belt or apron F, and shifting its position, substantially as herein shown and described.

3. Arranging the apron or belt F, the knife-cylinder B, and feed-rollers D and E with each other, substantially in the manner herein shown and described, so that the hides or leather may be fed to the knife-cylinder B in the same direction in which the said knife-cylinder is moving.

4. Arranging the gearing N O P R in the manner herein shown and described, so that the feed-rollers D and E may be driven at a less velocity than the knife-cylinder B, as and for the purpose herein set forth.

JUDSON SCHULTZ.

Witnesses:

AMOS GILLET.

HIRAM H. TERWILLIGER.