

(No Model.)

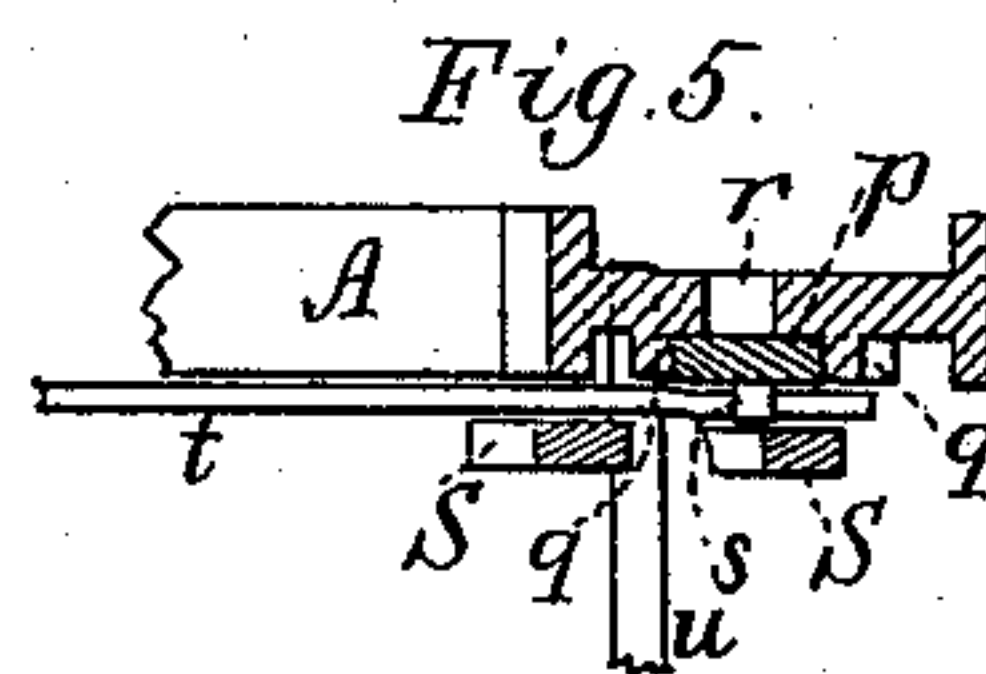
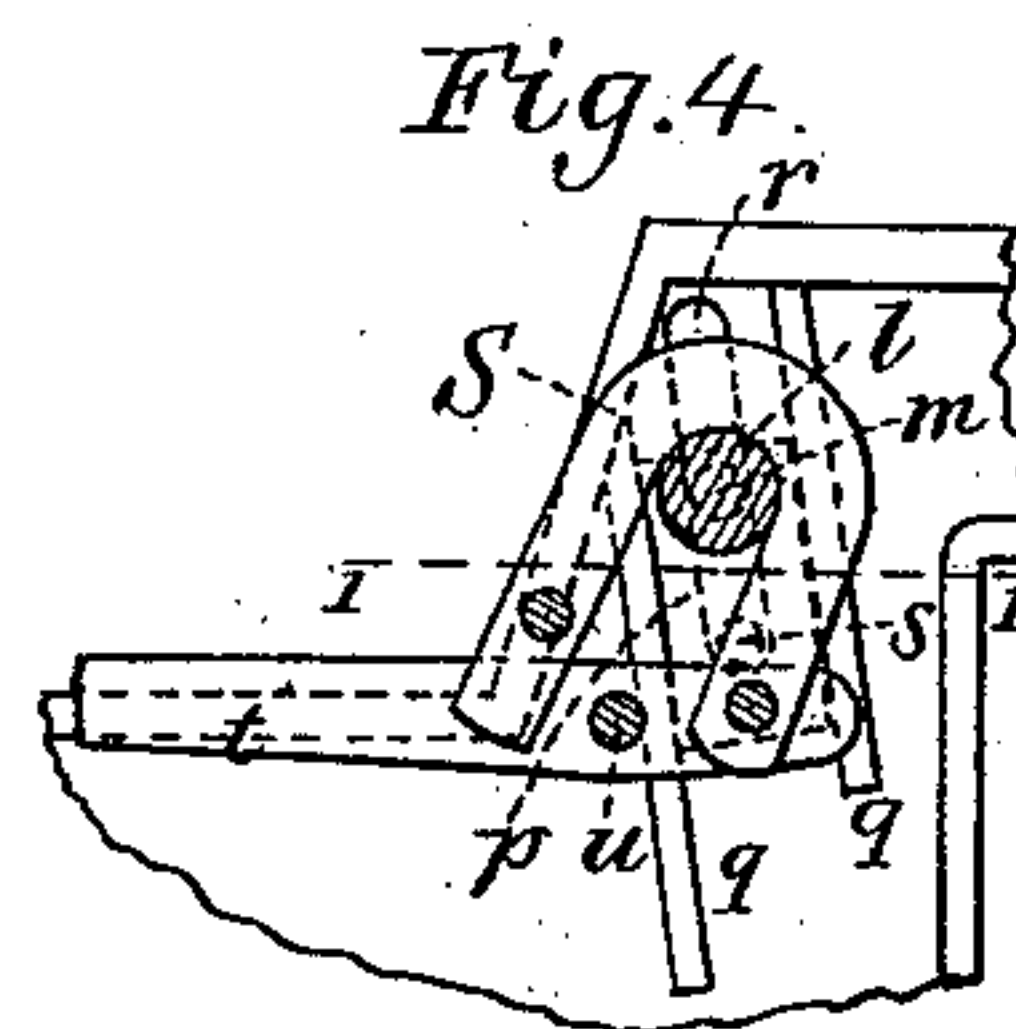
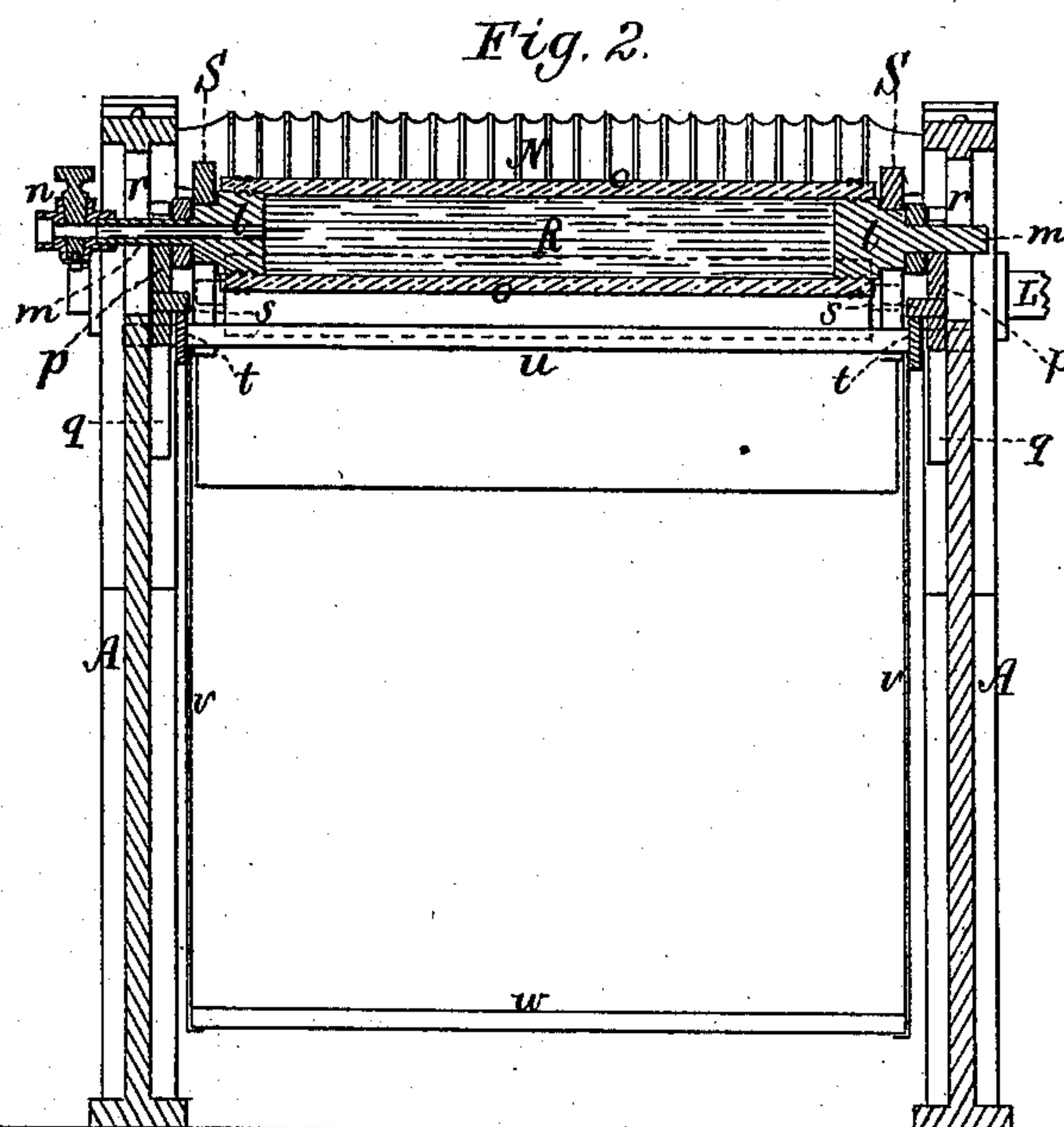
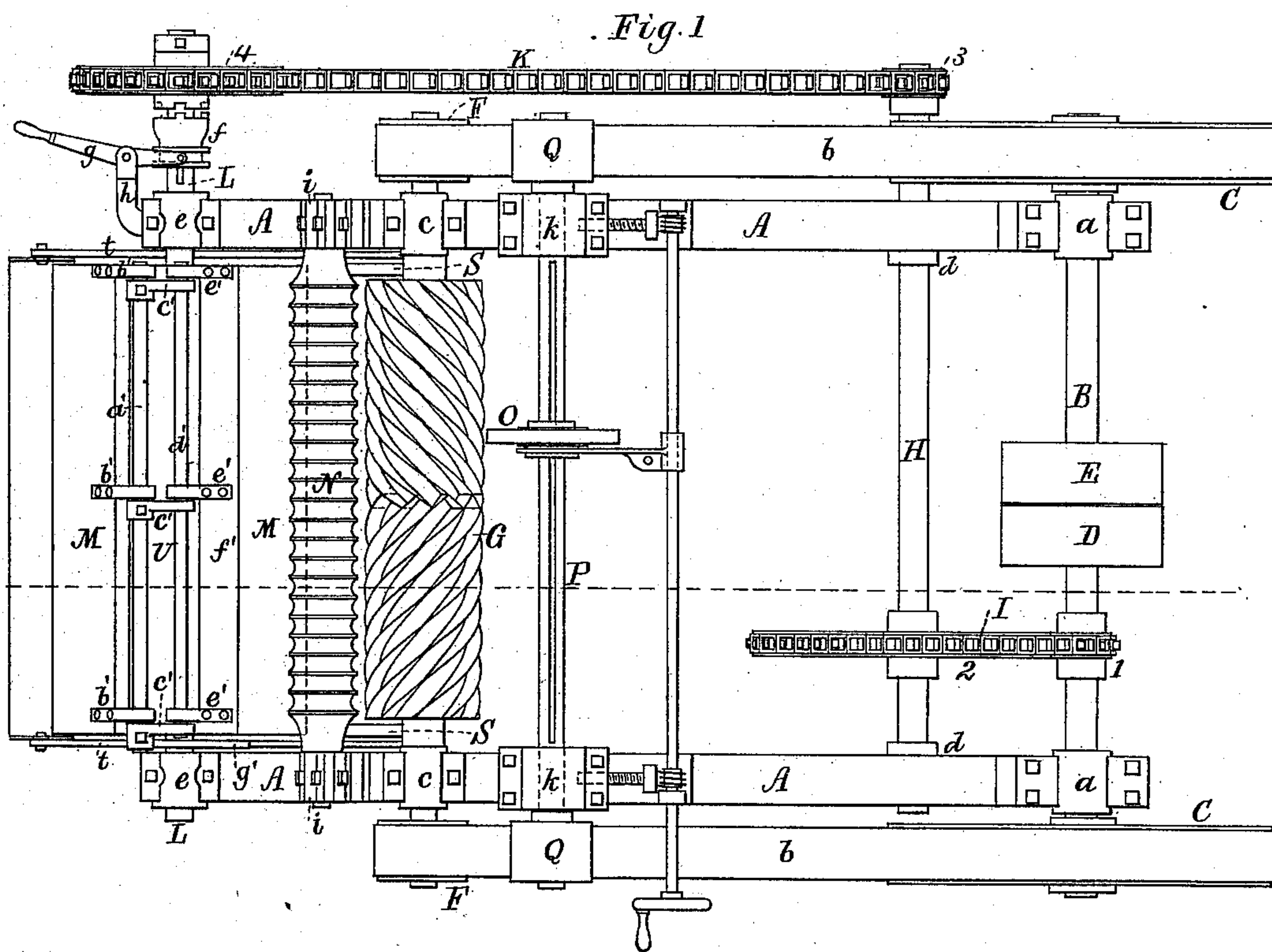
2 Sheets—Sheet 1.

J. ROOD.

MACHINERY FOR SHAVING OR DRESSING GREEN HIDES OR SKINS.

No. 401,905.

Patented Apr. 23, 1889.



Witnesses.

A. F. Piper
W. E. Piper.

Inventor,

John Rood.
by Singleton & Piper, atty's

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Fig. 3.

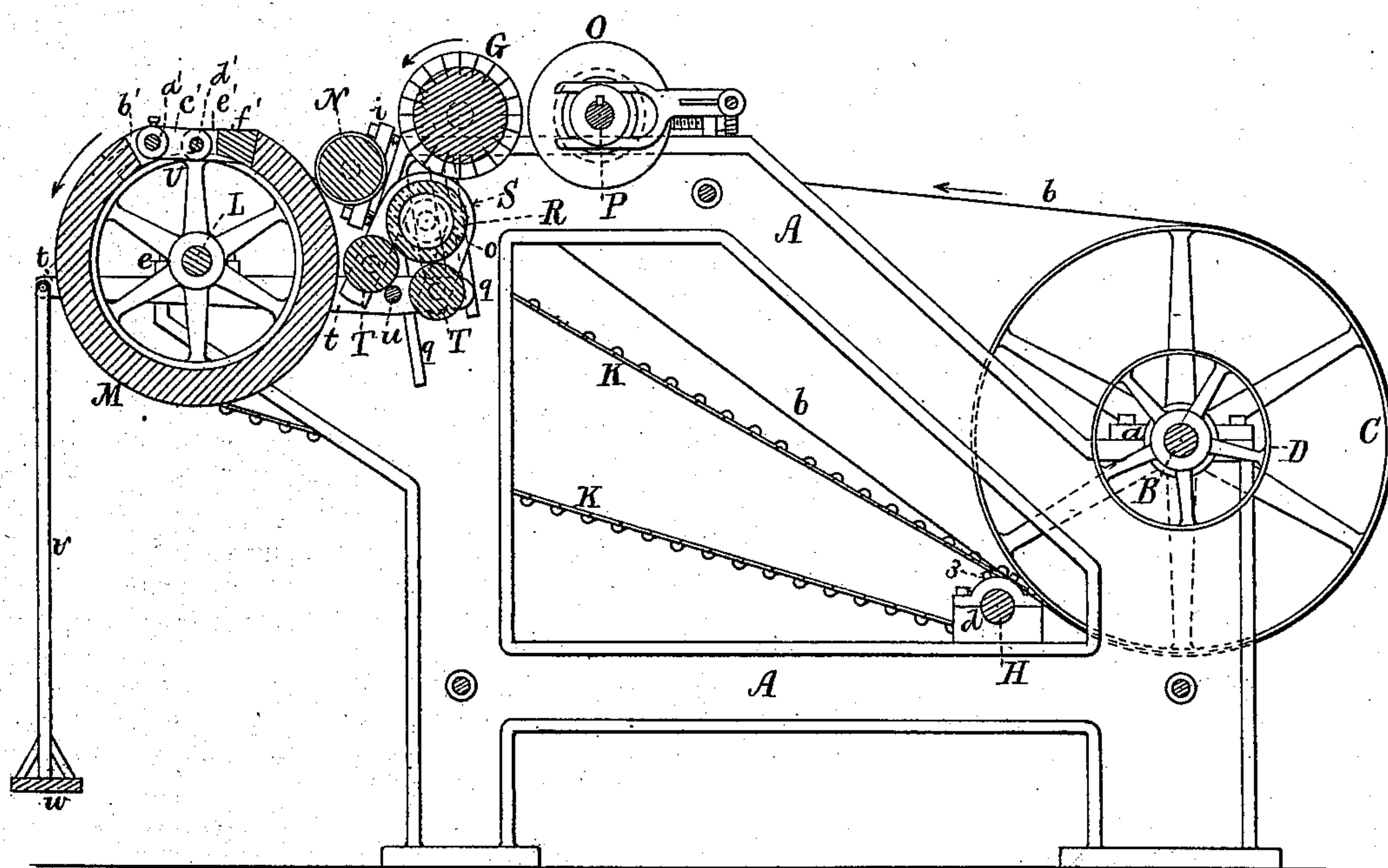
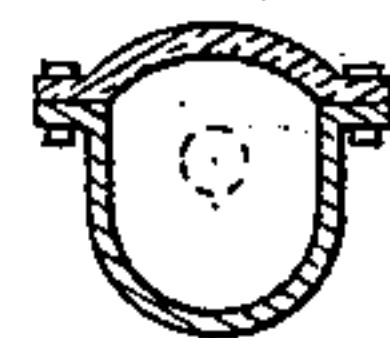


Fig. 6.



Fig. 7.



Witnesses.

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W. C. Piper.

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UNITED STATES PATENT OFFICE.

JOHN ROOD, OF SALEM, MASSACHUSETTS, ASSIGNOR TO ROOD & VAUGHAN,
OF SAME PLACE.

MACHINERY FOR SHAVING OR DRESSING GREEN HIDES OR SKINS.

SPECIFICATION forming part of Letters Patent No. 401,905, dated April 23, 1889.

Application filed July 27, 1888. Serial No. 281,183. (No model.)

To all whom it may concern:

Be it known that I, JOHN ROOD, a citizen of the United States, residing at Salem, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Machinery for Shaving or Dressing Green Hides or Skins; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 is a top view, Fig. 2 a vertical and transverse section, and Fig. 3 a vertical and longitudinal section, of a machine of my invention for dressing green hides or skins, as will be hereinafter described. Fig. 4 is a side view of one of the yokes S and a portion of the frame, and Fig. 5 a horizontal section on line 1 1 of said Fig. 4. Fig. 6 is a longitudinal section, and Fig. 7 a transverse section, of a modification of the yielding bed.

The object of my invention is to provide a machine that will remove from the entire inner surface of a fresh or green hide or skin, notwithstanding the variation in thickness of parts of the skin, the fatty tissue, &c., without doing injury to the dermis or true skin, or that part of the hide or skin to be tanned. Heretofore machines made for this purpose have not successfully removed said fatty tissue from the thinner portions of the hide without doing injury or removing more than is necessary or desirable from the thicker portions, thus impairing the true skin or portion to be tanned and rendering it of less value for the purpose of splitting.

In the drawings, A denotes the frame of the machine, supported at one end of which in bearings *a a*, is a driving-shaft, B, on which are arranged fast pulleys C C and D, a loose pulley, E, and a sprocket-wheel, 1. Endless belts *b b* pass around the pulleys C C and the pulleys F F, secured to the shaft of the cutter-cylinder G, supported in bearings *c c* on the frame, as shown.

H is a shaft sustained in bearings *d d* in the frame, and has secured to it sprocket-wheels 2 and 3. An endless chain, I, extends about the sprocket-wheels 1 and 2, and another endless chain, K, around the sprocket-wheels 3 and 4, the latter wheel turning loosely on the shaft L of a drum, M, fixed thereto, said shaft being sustained in boxes *e e* on the frame. Arranged on the shaft L is a sleeve, *f*, which is splined to the shaft and can be slid thereon by a lever, *g*, connected to said sleeve and pivoted to a bracket, *h*, fastened to the frame. The sleeve *f* and the hub of the sprocket-wheel 4 constitute a clutch to connect said wheel 4 to the shaft L.

The drum M is provided with a clamping mechanism, U, arranged in an opening therein, as shown, it consisting of a rod, *a'*, supported in bearings *b'*, secured to one edge of the opening, said rod having arms *c'* clamped thereto, in the ends of which is pivoted a rod, *d'*. Encompassing said rod are bearings *e'*, which are secured to a bar, *f'*, which, when the clamp is closed, bears against the other side of the opening in the drum. The clamp is operated by a handle, *g'*. (See Fig. 1.)

N is a corrugated roll supported in boxes *i i*, secured to the frame.

O is the sharpening-wheel, arranged so that it can be slid on the shaft P, and also be revolved by it by means of the pulleys Q, which receive their motion from the belts *b*.

The boxes *k k*, which support the shaft P, are connected with a mechanism by which they can be moved lengthwise on the frame, so as to admit of the periphery of the sharpening-wheel being revolved against the edge of the knives for the purpose of sharpening them as may be required; and afterward can be withdrawn from the same.

Underneath the cutter-cylinder G is a yielding bed, which is represented in Fig. 2 as being made with cylindrical heads *l l*, provided with journals *m m*, one of which is tubular and opens communication with the interior of the bed and is provided with a stop-cock, *n*. The body *o* of the bed is composed of a heavy rubber tube secured at its ends to the said heads. The journals *m m* of

the bed extend through slides *p p*, arranged between guides *q q*, projecting from the frame A, and into and through slots *r r*, formed in each side of the said frame, as shown, and serve to guide the bed in its movements. Each slide *p* has a stud, *s*, against which rests the shorter arm of a lever, *t*, pivoted on a rod, *u*, supported in the frame. The longer arms of the levers *t* are connected by rods *v* with a treadle, *w*. Hanging on shoulders formed on the heads *l l* of the bed are yokes S S, which receive and support the journals of two rolls, T T, which sustain the bed throughout its length.

The interior of the body of the bed R is filled with an elastic substance or with a fluid—such as water, air, or gas—which is forced into it under pressure and compressed therein to the necessary extent to give to the said body the required rigidity, but still admit of its conforming to the variations in the thickness of the hide while being borne down upon said bed and acted upon by the knives of the cutter-cylinder.

Sometimes, instead of forming the entire body of the bed of a flexible material, I construct the larger portion of the body of metal, and form that part of it which bears the hide against the knives of the cutter-cylinder of a flexible material, as shown in Figs. 6 and 7. In this case I dispense with the yokes S and supporting-rolls T.

The cutter-cylinder is provided on its external surface with two series of knives, each series being arranged to extend from one end of the cylinder toward the other end thereof and in a spiral direction, the direction of each series being opposite to that of the other series. The knives of each series are extended beyond the middle of the cylinder longitudinally thereof until they abut each against the other, said cylinder being the same as shown and described in the United States Patent No. 383,914, granted on June 5, 1888, to myself and Ira Vaughan.

The office of the corrugated roll N is to prevent the skin from moving or being moved in a direction transversely of the machine by the cutter-cylinder while said skin is being dressed by it, as, owing to the arrangement of the knives of the said cylinder, the hide or skin would be so moved if a larger portion of it should be on one side of the middle of the cutter-cylinder, which often occurs, as a hide or skin varies in width in portions of it.

Having described my invention, what I claim is—

1. In a machine for shaving or dressing hides or skins, the yielding bed, substantially as described, its body being hollow and filled with an elastic substance or with a fluid under pressure, as set forth, said bed being supported in slides arranged in the frame and operated or moved therein by the levers *t* and the treadle *w*, connected therewith, in combination with the cutter-cylinder and grinding-wheel arranged and provided with mechanism, essentially as explained, for operating said cylinder and wheel, as set forth.

2. The yielding bed, substantially as described, its body being hollow and filled with an elastic substance or with a fluid under pressure, essentially as set forth, said bed being supported in slides in the frame and having yokes S arranged on it, as shown, for supporting the bed-sustaining rolls T T, the whole being operated or moved by the levers *t* and the treadle *w*, connected therewith, combined with the drum M, provided with the clamping mechanism, the cutter-cylinder, and grinding-wheel arranged and provided with mechanism, essentially as explained, for operating said drum, cylinder, and wheel, as set forth.

3. The yielding bed formed with a hollow body and filled with an elastic substance or with a fluid under pressure, as set forth, said bed being supported in slides arranged in the frame and having mechanism for moving it toward the cutter-cylinder, as shown, in combination with the corrugated roll N and the cutter-cylinder and grinding-wheel arranged and provided with mechanism, essentially as explained, for operating said cylinder and wheel, as set forth.

4. The yielding bed formed with a hollow body and filled with an elastic substance or with a fluid under pressure, as set forth, said bed being supported and having mechanism for moving it toward the cutter-cylinder, as shown, in combination with the corrugated roll N, the drum M, provided with the clamping mechanism, and the cutter-cylinder and grinding-wheel arranged and provided with mechanism, essentially as explained, for operating said drum-cylinder and wheel, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN ROOD.

Witnesses:

S. N. PIPER,
C. F. DANIELS.