No. 787,259. PATENTED APR. 11, 1905.

G. W. BAKER.

HIDE OR LEATHER WORKING MACHINE.

APPLICATION FILED JAN. 28, 1904.

4 SHEETS—SHEET 1.

Fig. 1.

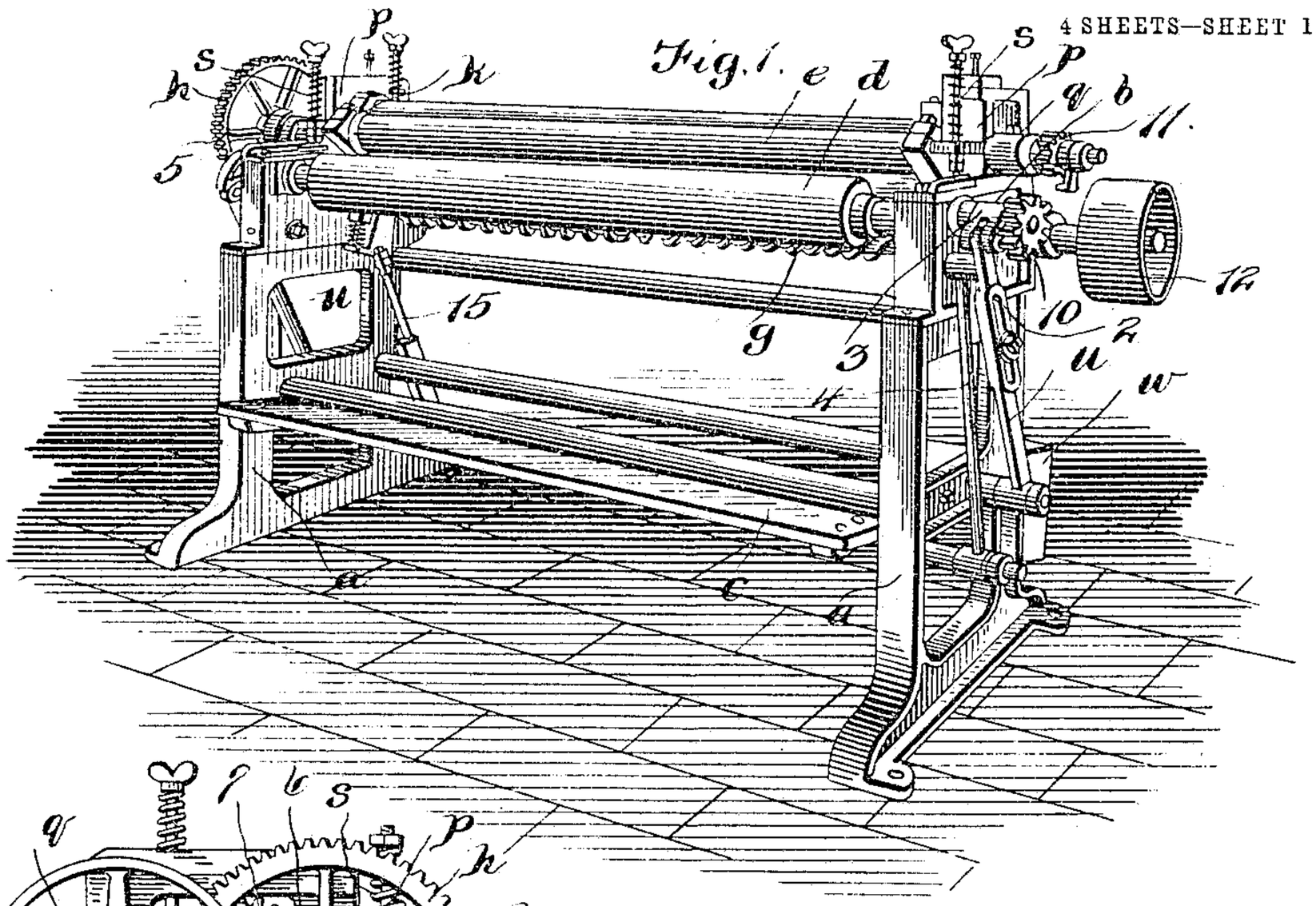


Fig. 2.

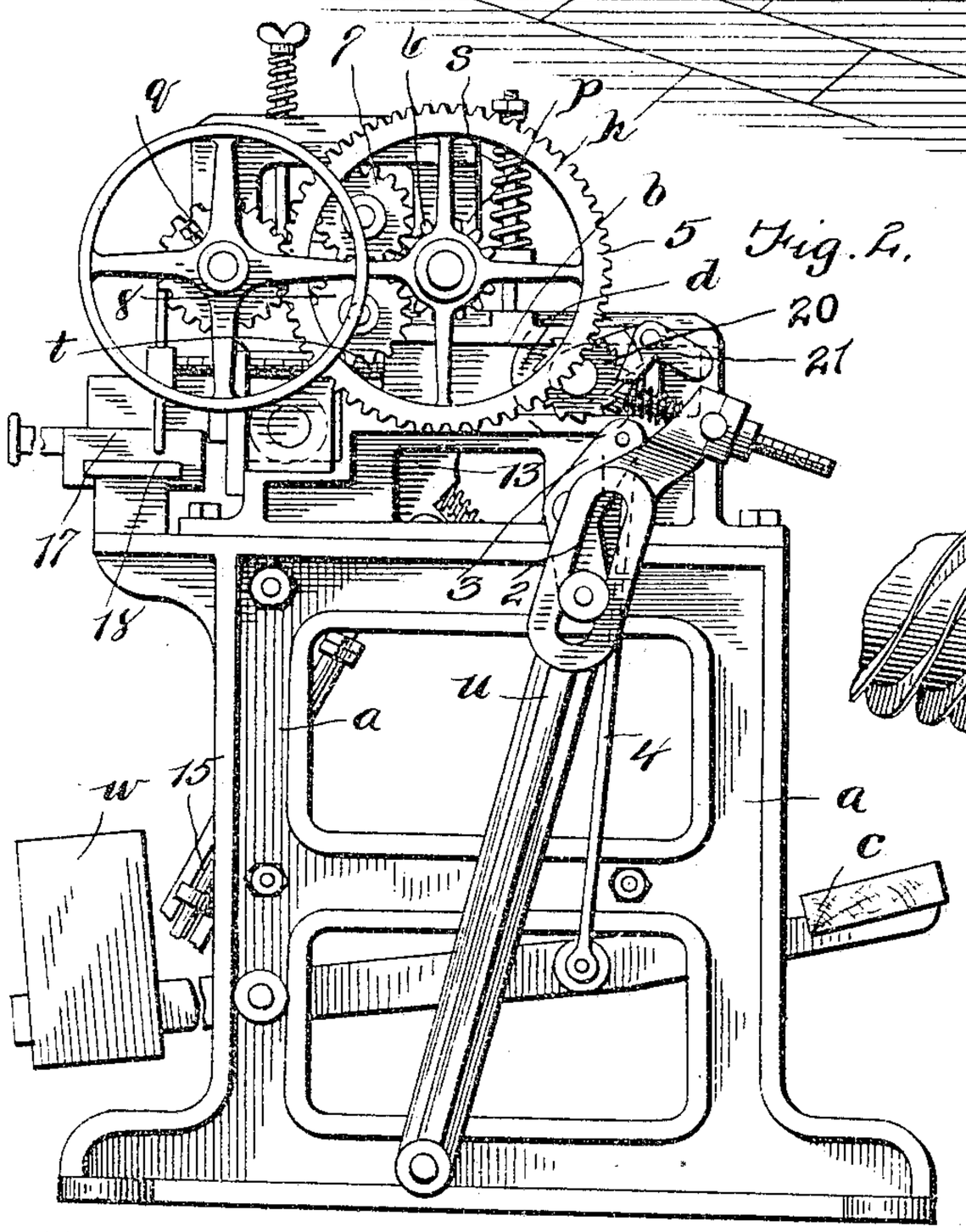
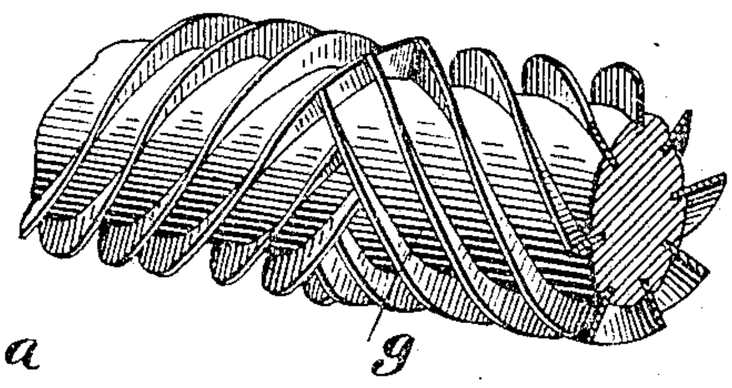


Fig. 6.



Witnesses

P. A. Boswell.
George M. Anderson

Inventor

Geo. W. Baker

By E. W. Anderson

his Attorney

No. 787,259. PATENTED APR. 11, 1905.

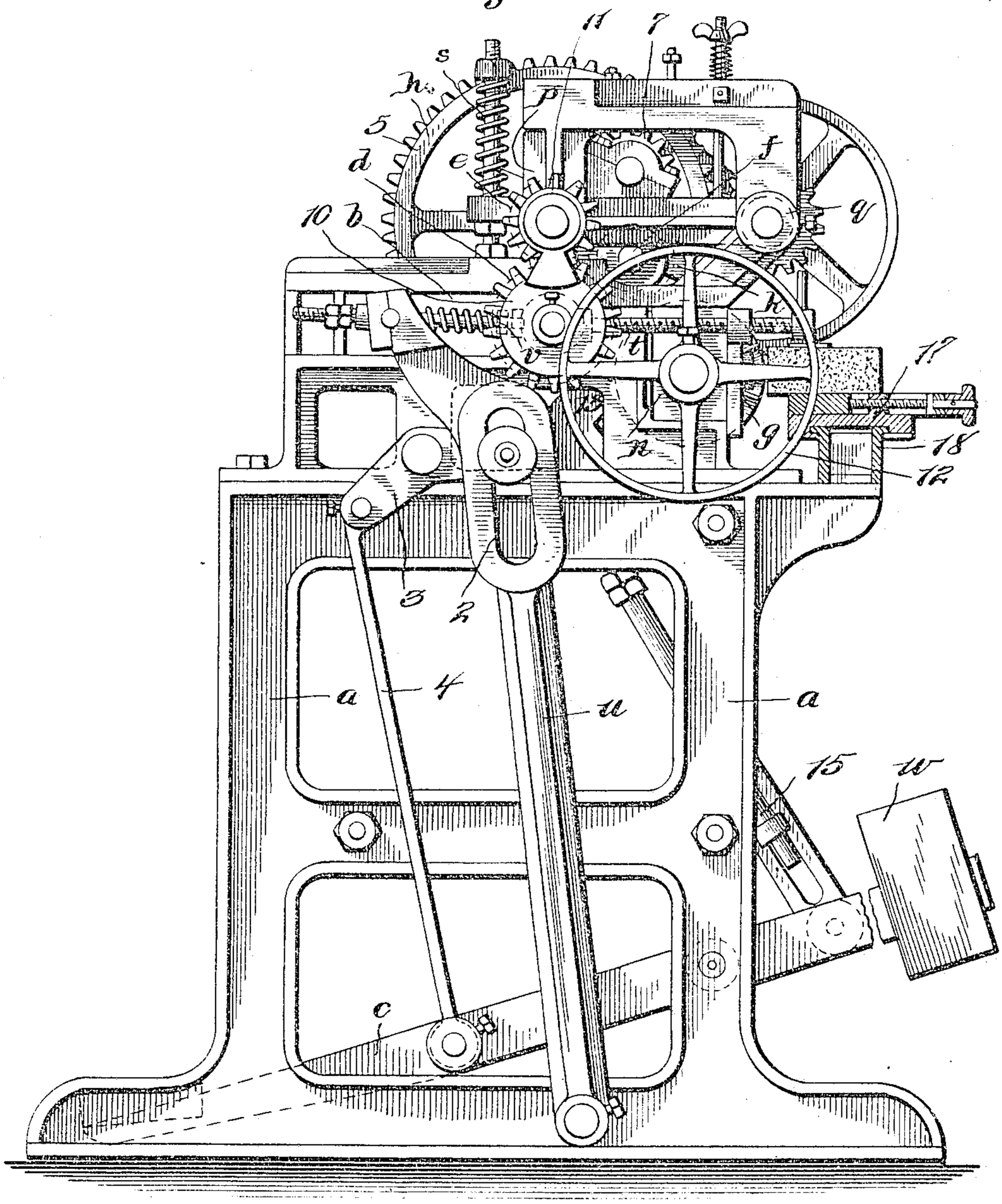
G. W. BAKER.

HIDE OR LEATHER WORKING MACHINE.

APPLICATION FILED JAN. 28, 1904.

4 SHEETS—SHEET 2.

Fig. 3.



Witnesses

R. A. Boswell.

George M. Anderson

Inventor

Geo. W. Baker

By E. W. Anderson

Its Attorney

No. 787,259. PATENTED APR. 11, 1905.

G. W. BAKER.

HIDE OR LEATHER WORKING MACHINE.

APPLICATION FILED JAN. 28, 1904.

4 SHEETS—SHEET 3.

Fig. 9.

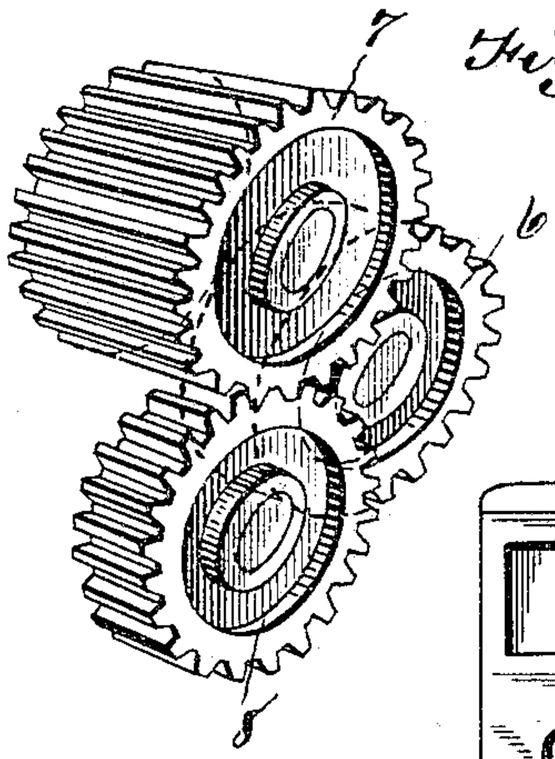


Fig. 4.

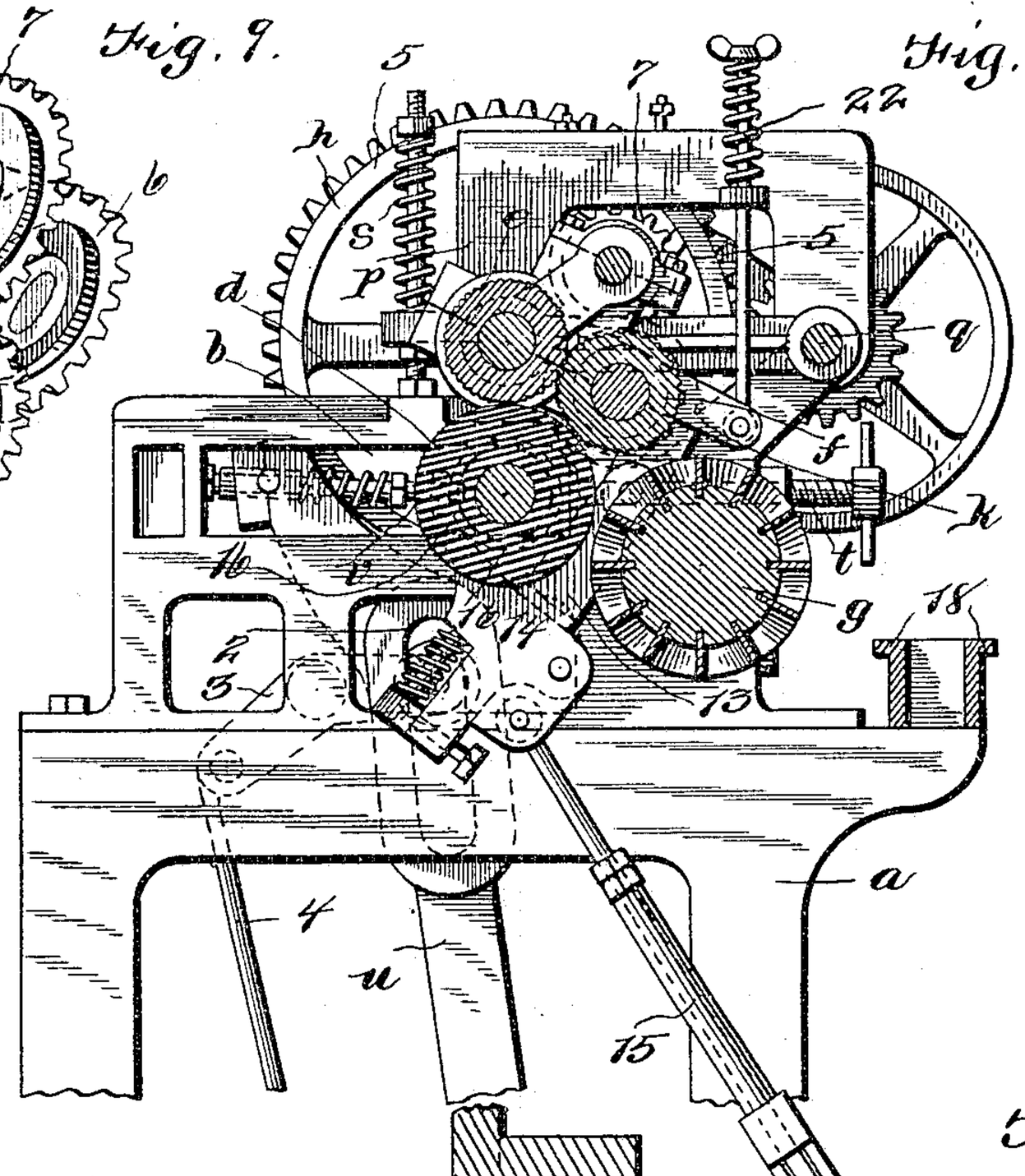


Fig. 10.

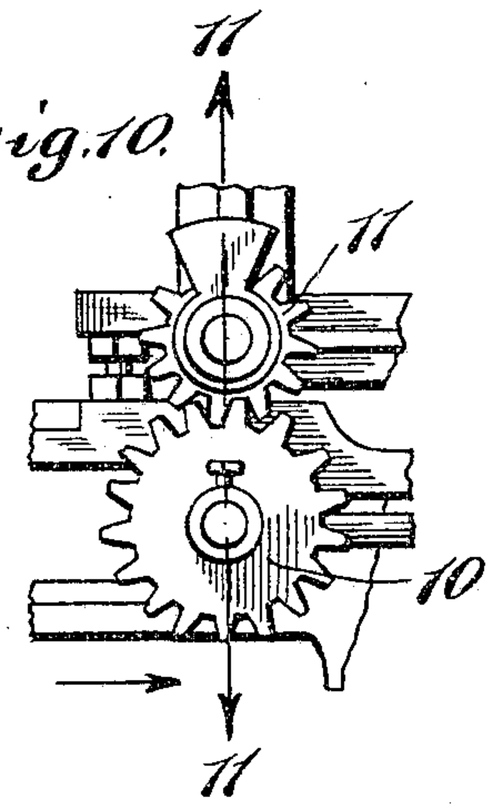
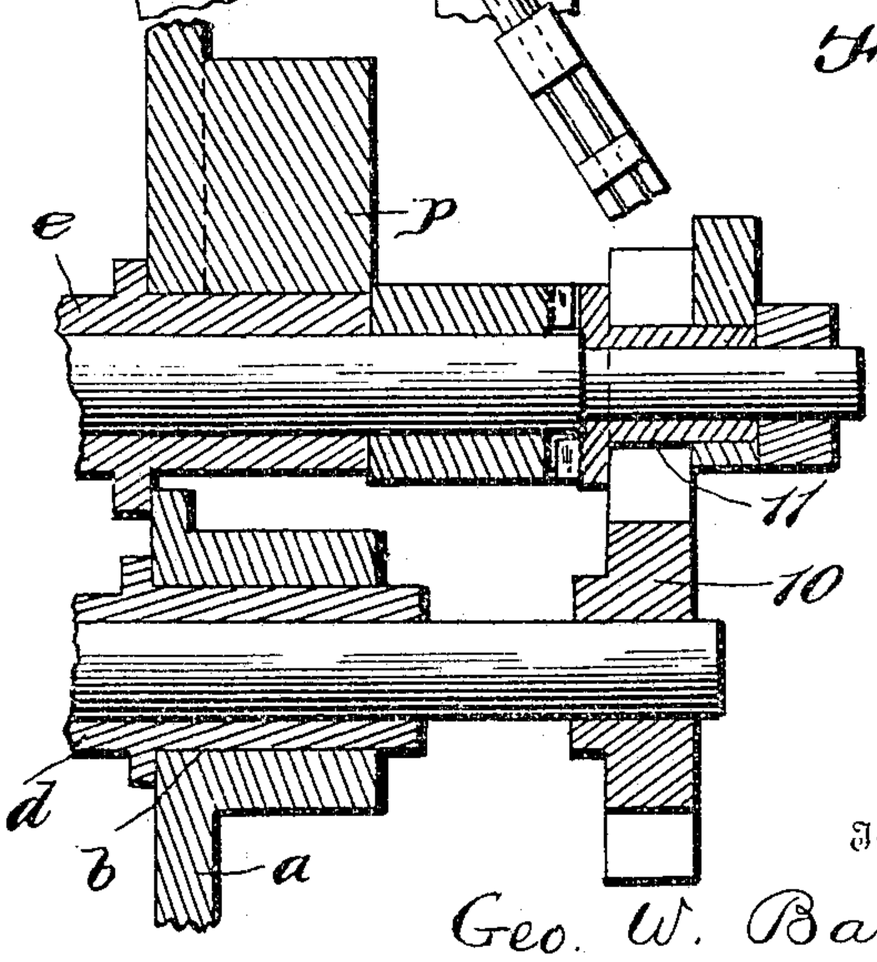


Fig. 11.



Inventor

Geo. W. Baker

Witnesses

R. A. Boswell.

George M. Anderson.

By E. W. Anderson

his Attorney

No. 787,259. PATENTED APR. 11, 1905.

G. W. BAKER.

HIDE OR LEATHER WORKING MACHINE.

APPLICATION FILED JAN. 28, 1904.

4 SHEETS—SHEET 4.

Fig. 5.

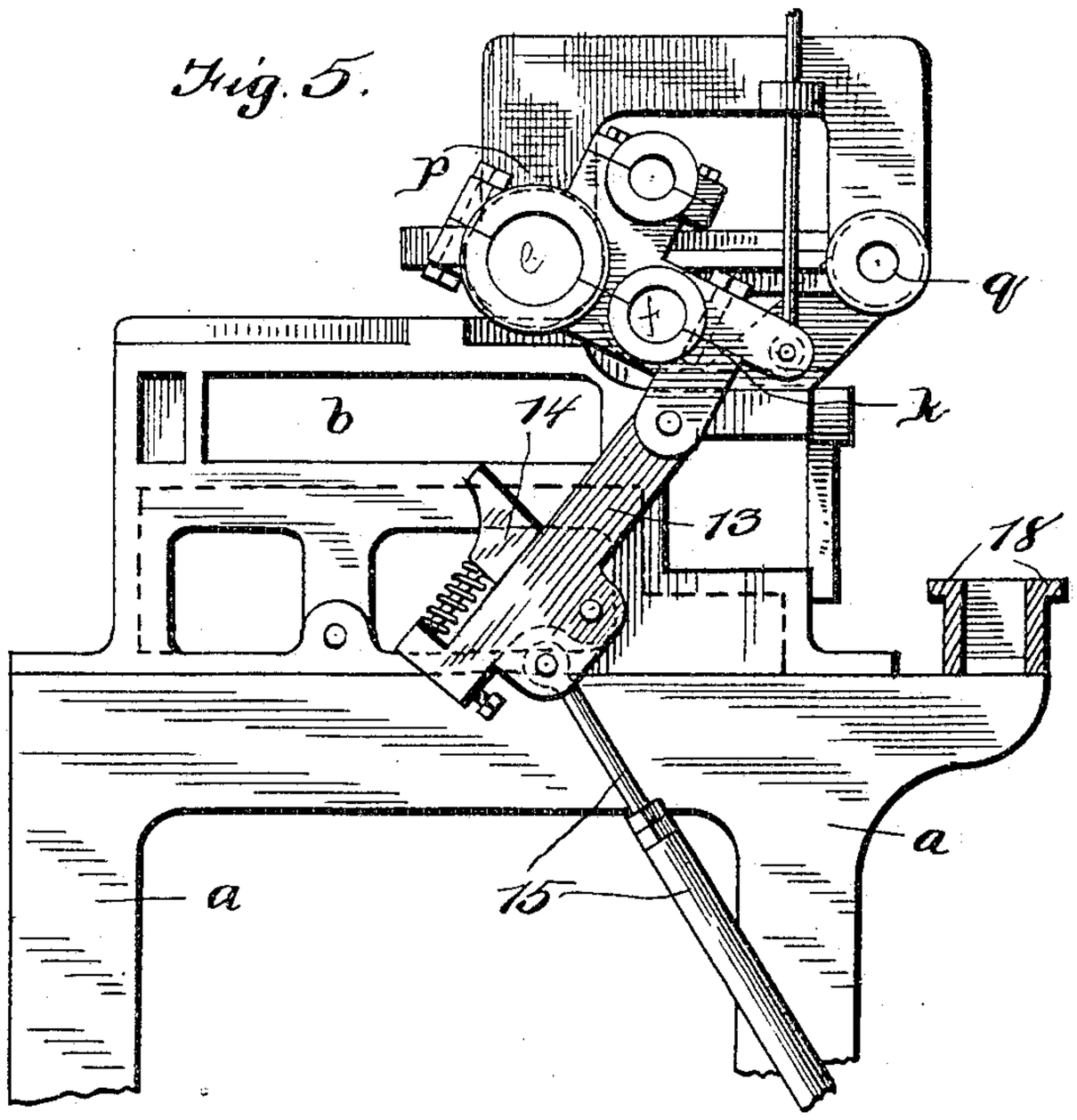


Fig. 8.

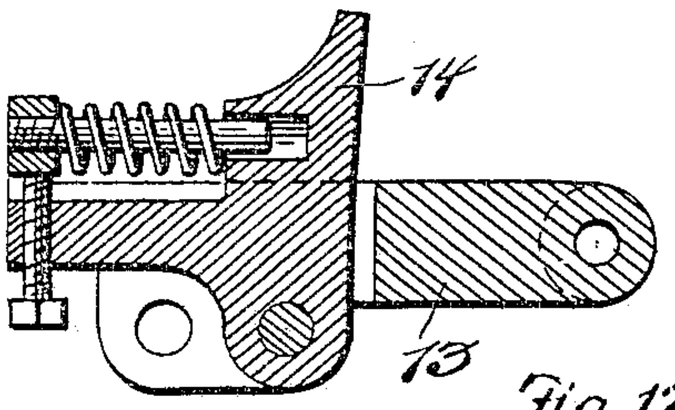


Fig. 12.

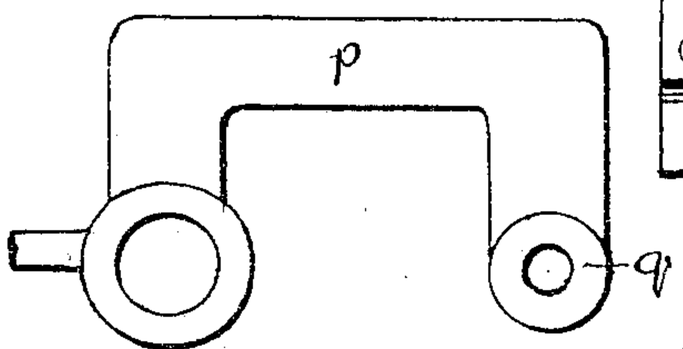
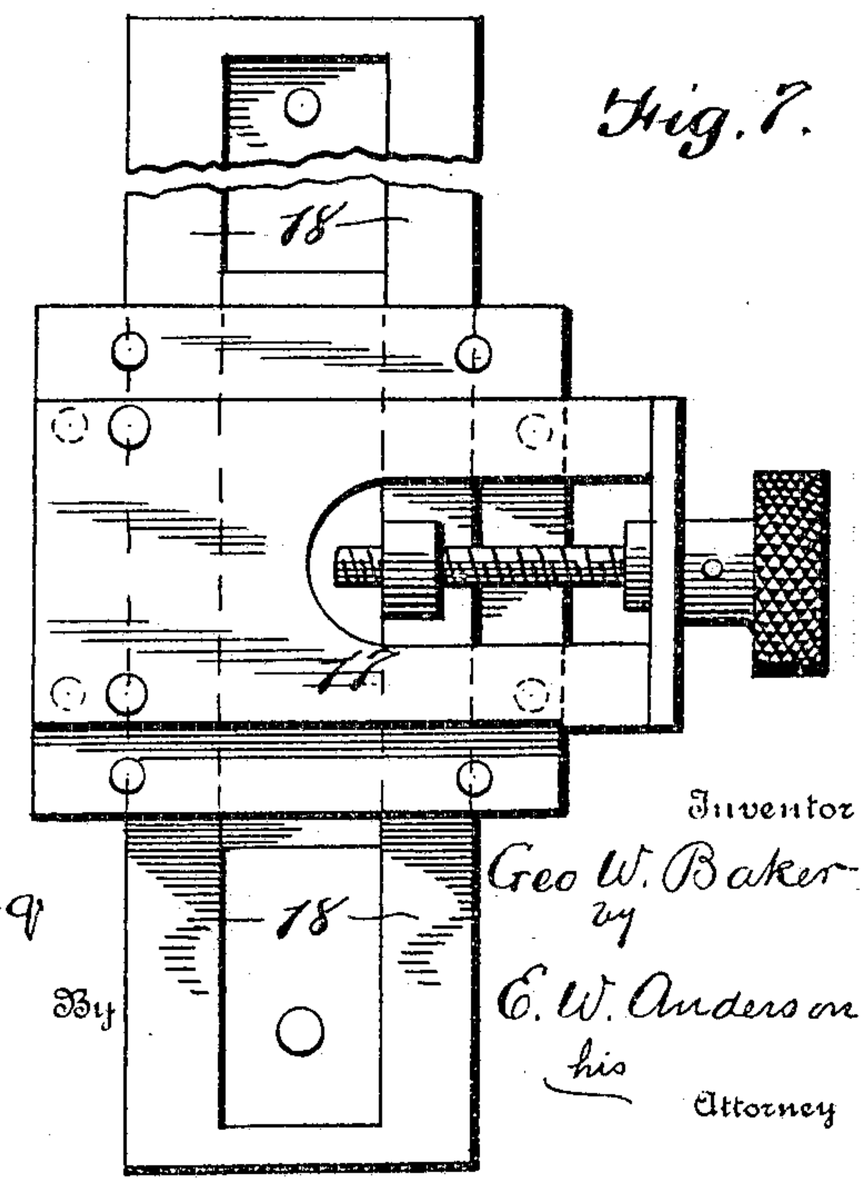


Fig. 7.



Witnesses

R. A. Boswell.

George M. Anderson

Inventor

Geo W. Baker

by

E. W. Anderson

his

Attorney

No. 787,259. Patented April 11, 1905.

UNITED STATES PATENT OFFICE.

GEORGE W. BAKER, OF WILMINGTON, DELAWARE.

HIDE OR LEATHER WORKING MACHINE.

SPECIFICATION forming part of Letters Patent No 787,259, dated April 11, 1905.

Application filed January 28, 1904. Serial No. 190,930.

To all whom it may concern:

Be it known that I, GEORGE W. BAKER, a citizen of the United States, and a resident of Wilmington, in the county of Newcastle and State of Delaware, have made a certain new and useful Invention in Hide or Leather Working Machines; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of the invention. Fig. 2 is an end elevation of the same. Fig. 3 is an elevation from the opposite end of the machine. Fig. 4 is a cross-section of the upper portion of the machine looking toward pulley 12. Fig. 5 is an end view of the upper part of the machine with one end frame and the rolls, &c., removed to show the interior framework for supporting the rolls, &c. Fig. 6 is a detail view of a section of the knife-roller. Fig. 7 is a detail view illustrating the means for adjusting the carriage 17. Fig. 8 is a detail view of the parts 13 and 14. Fig. 9 is a detail view of the gears 6, 7, and 8. Fig. 10 is a detail view of the gears 10 and 11. Fig. 11 is a detail sectional view on the line 11 11, Fig. 10. Fig. 12 is a detail view of one of the arms *p*.

The invention relates mainly to roller-machines for fleshing hides and skins; and it consists in the novel construction and combinations of parts, as hereinafter set forth.

In the accompanying drawings, the letter *a* designates the end standards of the frame, which is strengthened by suitable longitudinal bracing-bars. In the upper portions of the frame-standards are horizontal slots *b* and bearings for shafts. To the lower portion of the standards are pivoted the journals of the treadle *c*.

d indicates the bed-roll, the journals of which play in the horizontal slots *b*.

e and *f* are the feed-rolls.

g is the long rotary cutter having spiral flange-knives working from the middle toward the ends.

The treadle is provided with an adjustable weight *w*.

The feed-roll *e* has its bearings in the pivoted arms *p* of the beam and is extended for the gear *h*. These arms are pivoted to the frame at *q*. The feed-roll *f* has its bearings in the movable ends of the links *k*, which are pivoted on the shaft of the feed-roll *e*. The shaft of the feed-roll *f* is extended for gearing, whereby it is connected up to run in unison with feed-roll *e*. These feed-rolls are slightly grooved or fluted. The bearings for the feed-roll *e* are located just over the inner portions of the horizontal slot-bearings *b*, so that when the bed-roll is brought up to working position it will be centered vertically under the feed-roll *e* and the feed-roll *f* will be brought down to working position at the upper rear curvature of the feed-roll. Springs *s* on threaded guide-rods secured to the main frame at their lower ends and passing through holes in the arms *p* are designed to provide yielding action for the feed-roll *e*.

The bearing-blocks *u* of the rotary cutter are adjustable in seats of the frame.

Finely-adjustable stops *t* are provided in the frame to limit the movement of the bed-roll *d* toward the cutter. In rear of the bed-roll are provided yielding bearings *v*, which have threaded rods provided with springs and with nuts for adjustment and are connected to the slotted lever-arms *u*, which are pivoted to the lower portion of the frame. The upper ends of these levers are slotted, as shown at 2, to receive the wrist-pins of the bent levers 3, which are pivoted to the frame and connected to the treadle by the rods 4. When the treadle is depressed by the foot, the outer arms of the bent lever descend, throwing the bed-roll forward or toward the cutter. In this position the inner arms of the bent lever are horizontal, so that the bed-roll is held firmly in position, its yielding action being then governed by the springs of its bearings. When the treadle rises to normal position under the action of the weight, the bed-roll is brought back to the front of the slots of the frame.

The drive-pulley shaft is designed to extend the length of the frame and carries a pinion

which gears with the large toothed wheel 5 on the shaft of the feed-roll *e*. The shaft of this toothed wheel carries the gear-wheel 6 of the feed-roll *e*, said gear-wheel engaging an idler 7, which engages a gear-wheel 8 of the feed-roll *f*. The shaft of the bed-roll is provided with a gear-wheel 10 of large pitch. The teeth of this wheel are long and wide apart at their ends to receive easily the teeth of the engaging gear-wheel 11, which is loose on the shaft of the feed-roll *e*. This gear-wheel 11 is weighted and provided with a clutch projection to engage a clutch projection, as a collar, secured to the shaft of said roll *e* in order that when the bed-roll is moved up for work the gear-wheel 11, which has a tumbling motion, will readily engage the gear-wheel 10 of the bed-roll, because of its swinging character, and the working engagement of these gear-wheels will be effected without undue shock. The cutter is driven by a pulley at 12 and runs at a much more rapid rate than the feeding-rolls.

In order to bind the feed-roll *f* to the bed-roll to hold the stock securely, a catch or hook device is employed, this being arranged to come into action at the proper time. To this end the oblique arms 13 are pivoted to the links *k*, and to said arms are pivoted the spring grip-hooks 14. These arms are connected to the treadle between its fulcrum and the weight by means of adjustable connections 15. The grip-hooks are presented upward obliquely under the rotary collars 16 of the shaft of the bed-roll when the latter is in working position, being moved to place under said collars of the bed-roll as the rear of the treadle rises when the front thereof is depressed by the foot. When, however, the treadle falls to normal position, the connections 15 draw downward obliquely and swing the arms 13 downward out of the path of the collars of the shaft of the bed-roll, so that the latter can move back to position for receiving the hide.

The machine is provided with a sharpening device consisting of a carriage 17, adapted to slide along the rear of the cutter on a trackway 18, said carriage being provided with an emery brick suited to the knives.

In the operation of this machine the hide is placed over the bed-roll, so that about two-thirds of it will hang over at the back. Then the treadle is pressed down until it is stopped by the long screws at the back of the bed-roll shaft, when the gearing will engage and the bed-roll will turn, so that the hide will move toward the operator under the operation of the feed-rolls, while the rotary cutter removes the fleshy part. Then the foot being raised the treadle rises, and the bed-roll will return to the front. The hide is now reversed and the operation repeated. If the work is not clean enough, turn the long stop-screws a little in such wise as to bring the bed-roll nearer the cutter. If the work is too clean, turn the stop-screws slightly in the opposite direction.

The bed-roll is of small diameter, and the rubber is designed to be vulcanized to the shaft, so that it will have sufficient durability. The feed-rolls are applied one vertically over the bed-roll and the other in between the first feed-roll and the cutter, so as to bring the line of contact with the hide as near to the cutting device as possible. The two rolls increase materially the resistance to the pulling action of the knife, and the arrangement is designed to be very effective when fleshing hides with the hair off, especially when the binding device is in action. The stock can be held by means of these devices without slipping. The axis of the cutter is arranged below the level of the bed-axis, so that the knives serve to spread the hide before they commence their work of removing the flesh. The heavy bed-roll being provided on its journals with flanged antifriction-rollers which engage the horizontal guide-slots is thus supported at all times in an effective manner, so that it is free to move in any direction and can be balanced so as to come to the front with ease under the action of the counterweight on the treadle. The yielding bearings of the bed-roll in connection with the slotted arms *u* serve to allow for a change of angle of the bed-roll while working, thereby providing means for automatically varying the distance from the cutter for work which is of uneven thickness. The bed-roll is provided at one end of its shaft with a ratchet 20, and a pawl 21 in connection therewith is pivoted to one of the bearings *v*. The object of these devices is to prevent the bed-roll from turning while being moved forward in the horizontal guideways with the hide upon it. The antifriction-rollers in the ways allow the bed-roll to move with ease notwithstanding the ratchet connection. Spring connections 22 are provided at the rear of the feed-roll frame or arms in order to adjust the weight of the lower feed-roll to the work as may be required. Skins with the hair on do not require much compression in the feeding, while smooth skins will slip if not fed with considerable pressure.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. In a hide-working machine, the horizontally-slotted frame, the reciprocating bed-roll, its antifriction-rollers, yielding bearings and ratchet and pawl, substantially as specified.

2. In a hide-working machine, the combination with the horizontally-slotted frame, the reciprocating bed-roll, and antifriction-rollers, of the yielding bearings, the slotted lever-arms, the counterweighted treadle, the bent levers and the treadle connection, substantially as specified.

3. In a hide-working machine, the frame having horizontal slots, pivoted frame-arms, two feed-rolls, bearings for one feed-roll in said frame-arms vertically over the inner end portions of the horizontal slots, links pivoted on shaft of the first feed-roll having bearings for the second feed-roll, substantially as specified.

4. In a hide-working machine, the horizontally-slotted frame, of the movable bed-roll, pivoted frame-arms, two feed-rolls, bearings for one feed-roll in said frame-arms, pivoted links, bearings for the second feed-roll in said links, the treadle, the cutter and the grip-hook devices for the bed-roll and second feed-roll, substantially as specified.

5. In a hide-working machine, the combination with the bed-roll, the first feed-roll, the second feed-roll radially centered on the axis of the first feed-roll at the grip-hook devices for the bed-roll and second feed-roll, substantially as specified.

6. In a hide-working machine, the combination with a cutter and a reciprocating bed-roll, of means to move said bed-roll toward said cutter, a first feed-roll centered vertically over the inner or working position of the bed-roll, a second feed-roll between the cutter and first feed-roll, a grip-hook device for the bed-roll and second feed-roll, a treadle, and means connected thereto for moving the bed-roll and grip-hook device into and out of working position, substantially as specified.

7. In a hide-working machine, the combination with a reciprocating bed-roll and feed-roll, of pivoted link-bearings, a second feed-roll and a treadle of oblique arms connected to said link-bearings, yielding grip-hooks, and adjustable connections of the latter to the treadle, substantially as specified.

8. In a hide-working machine, the combination with the horizotally-slotted frame, and the reciprocating bed-roll, of the arms pivoted to said frame, the yielding bearings of the bed-roll, antifriction-rolls of the bed-roll engaging the horizontal slots of the frame, and the adjustable stops, substantially as specified.

9. In a hide-working machine, the combination with the pivoted arms of the frame and its horizontal slotways, of the pivoted links, and the lower feed-roll, a reciprocating bed-roll journaled in said slotways and spring connections for adjusting one weight of the lower feed-roll, substantially as specified.

10. A hide-working machine, having in connection with a horizontally-slotted frame a reciprocating bed-roller journaled in the horizontal slots of said frame and rotary in one direction only, and in connection therewith, through yielding bearings, bent levers having bracing-arms, substantially as specified.

11. In a hide-working machine, a horizontally-reciprocating bed-roll held in working position by levers having bracing-arms extending in front in the horizontal direction, and by grip devices in connection with the movable rolls in rear, substantially as specified.

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

GEORGE W. BAKER.

Witnesses:

HERBERT C. EMERY,

GEORGE M. ANDERSON.