

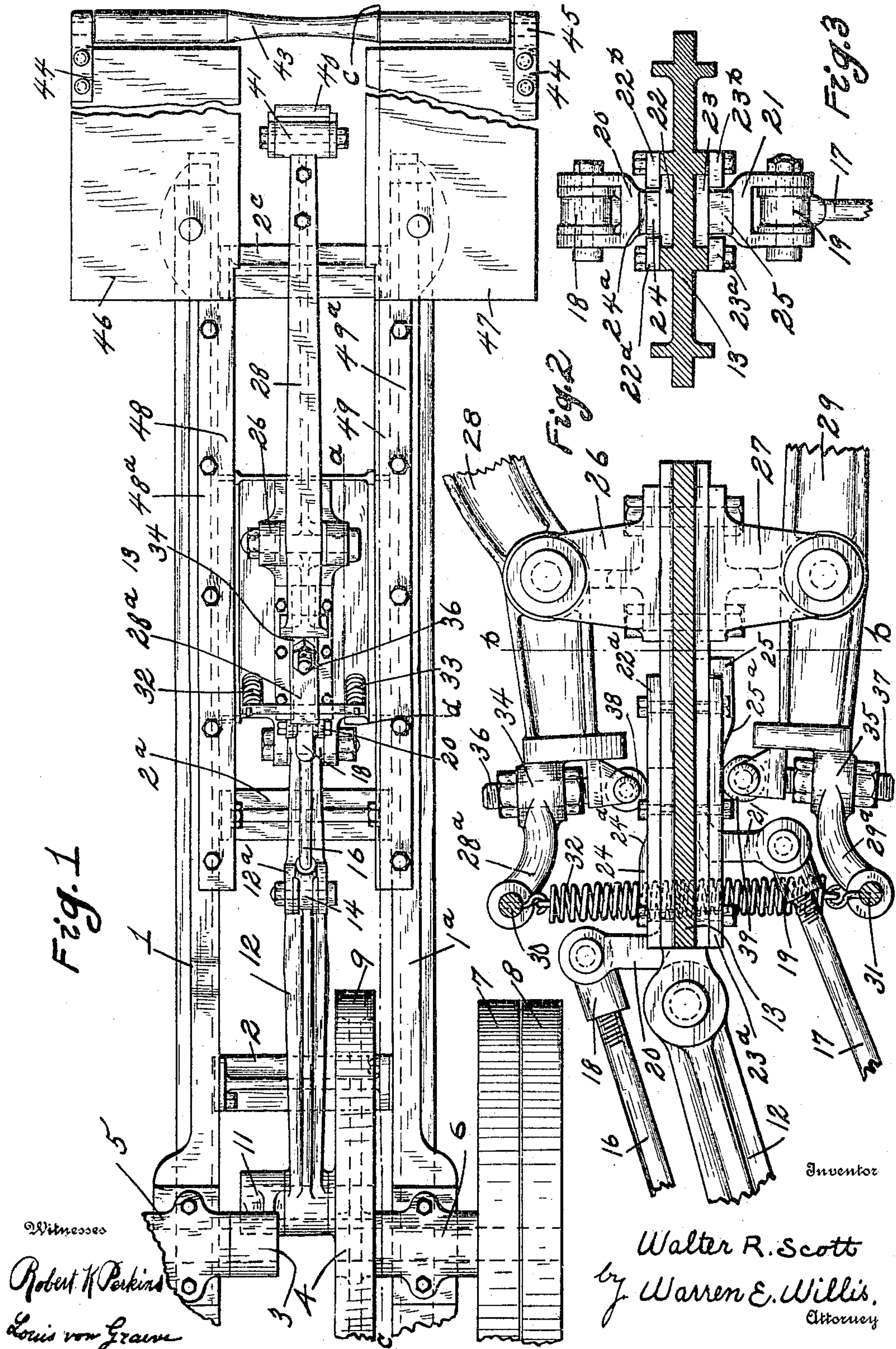
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PATENTED MAY 1, 1906.

W. R. SCOTT.
STAKING MACHINE.

APPLICATION FILED MAY 1, 1905.

2 SHEETS—SHEET 1.

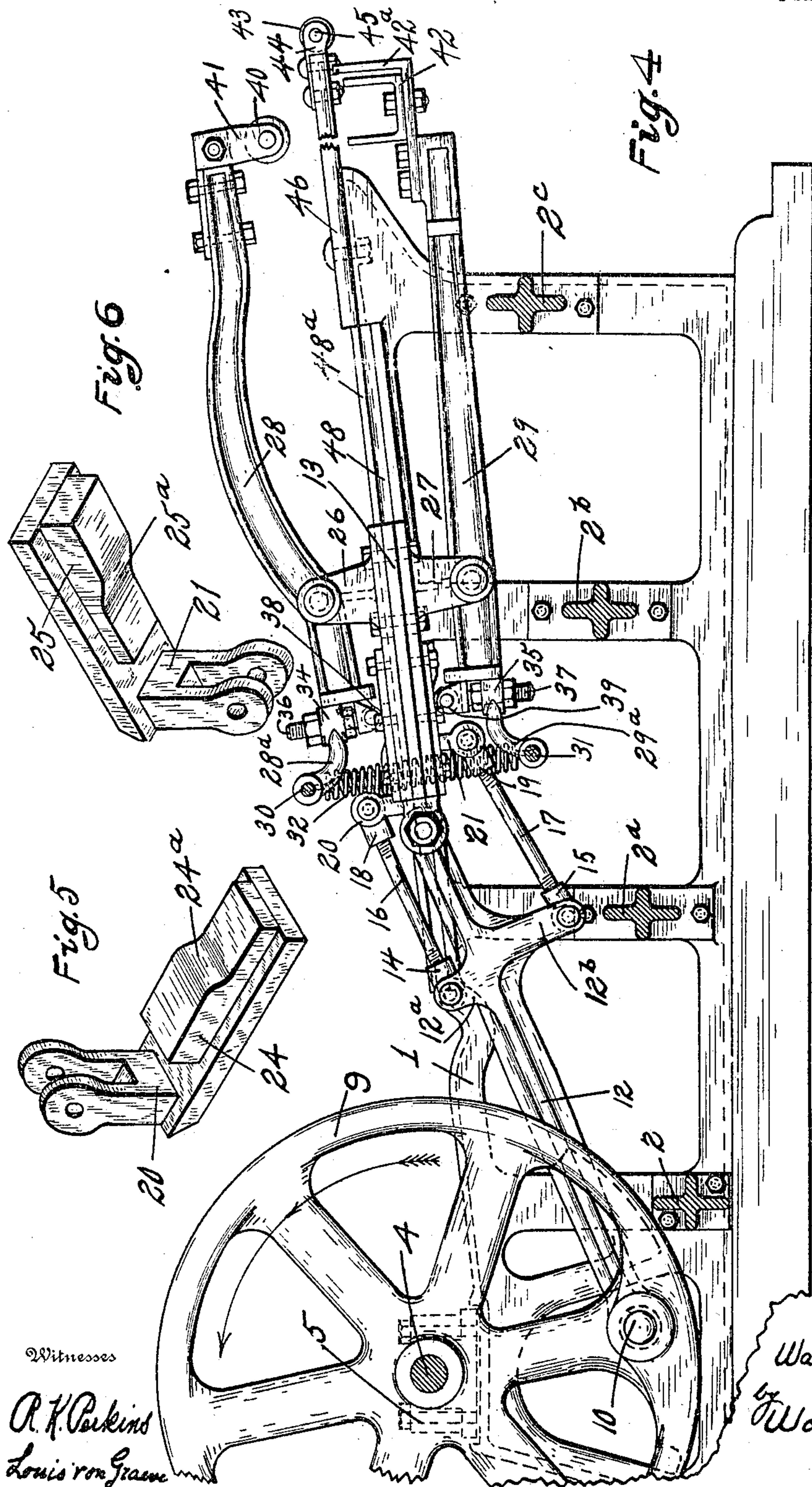


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UNITED STATES PATENT OFFICE.

WALTER R. SCOTT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR
OF ONE-HALF TO THOMAS TURNER, OF PHILADELPHIA, PENN-
SYLVANIA.

STAKING-MACHINE.

No. 819,605.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed May 1, 1905. Serial No. 258,175.

To all whom it may concern:

Be it known that I, WALTER R. SCOTT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Staking-Machines, of which the following is a specification.

This invention relates to improvements in leather-working machines, and to that particular class used in scraping, stretching, and finishing hides, skins, and leather known as "staking" and "perching" machines. Its objects are, first, to provide a machine for this purpose which is of a novel and unusually simple construction containing fewer parts than is common to machines of this character and these parts so constructed as to be economically manufactured; second, to afford provisions in the machine whereby it is capable of being rapidly and accurately adjusted to operate on various thicknesses of hides and to act upon them with any desired pressure; third, to provide a machine capable of performing its operations on the highest grade of material expeditiously and attain results superior to existing mechanisms of hand labor; fourth, to provide a mechanism capable of being operated with less fatigue than ordinary; fifth, to provide such a mechanism so designed and arranged as to permit of adjustment for wear and in which all operating parts are readily accessible and removable without dismounting the entire structure; sixth, to provide means whereby the jaw closure may be effected at the extreme limit of their travel or at a variable distance short of the same. These and other minor objects are attained by the novel construction and combination of parts hereinafter fully described, and shown in the accompanying drawings, in which—

Figure 1 is a partial general plan view of a machine embodying my improvements. Fig. 2 is a longitudinal vertical section on line *a a* of Fig. 1, showing the slide and jaw-operating means drawn to an enlarged scale. Fig. 3 is a transverse vertical section taken on line *b b* of Fig. 2. Fig. 4 is a vertical section of the entire mechanism, taken on line *c c* of Fig. 1. Fig. 5 is a perspective view of the

upper jaw-closing wedge and carrier. Fig. 6 is a similar view of the lower wedge.

Similar characters refer to similar parts throughout the several views.

The machine is supported by the side frame 1 and 1^a, connected by the cross-braces 2, 2^a, 2^b, and 2^c. At the rear of the machine is journaled the crank-shaft 3 and driving-shaft 4 in the bearings 5 and 6. On the extending end of the driving-shaft 4 are centered the driving-pulleys 7 and 8, while within the frame is the fly-wheel 9, having a crank-pin 10 extending outwardly and connecting with the crank-arm 11. On the crank-pin 10 is pivotally attached the connecting-rod 12 at one end, while the other is similarly attached to the cross-head 13. The connecting-rod 12 has projections 12^a and 12^b, to which are pivotally attached the rod ends 14 and 15, having adjustably secured therein the rods 16 and 17, which in turn have at their opposite ends similar rod ends 18 and 19, pivotally connected with the wedge-carriers 20 and 21, which move in trackways 22 and 23, formed in the cross-head 13 and held in position by the gibs 22^a and 22^b and 23^a and 23^b. On the faces of the wedge-carriers are attached the wedges 24 and 25, having a raised or angular face 24^a and 25^a.

The cross-head 13 has brackets 26 and 27, in which are pivotally attached the staking-jaws 28 and 29, at the rear ends of which are the projections 28^a and 29^a, carrying the bars 30 and 31, to which are attached the springs 32 and 33, the function of the said springs being to keep the rolls in contact with the wedges. The rear ends of the jaws 28 and 29 are also provided with bosses 34 and 35, bored for the roll-carriers 36 and 37, which are adjustable therein and have at their inner ends the rolls 38 and 39, adapted to abut against the surface of the wedges 24 and 25. The upper jaw 28 is provided with the roller 40, carried by the bracket 41, while the lower jaw 29 carries the scrapers 42 and 42^a. The concave roller 43 is mounted to freely revolve within the brackets 44 and 45, attached to the staking-tables 46 and 47, which are in turn secured on the frames 1 and 1^a. The main slide 13 travels reciprocatingly in the guide-

ways 48 and 49, formed in the upper part of the frames 1 and 1^a, which are inclined downwardly from the front end. The said slides are held in position in the guideway by the

gibs 48^a and 49^a.
The performance of the machine is as follows: The crank-shaft being revolved causes the cross-head or carriage to make reciprocations carrying the attached parts. The angularity of the action of the connecting-rod in its forward stroke causes the rod 17 to advance the wedge 25 slightly earlier than the forward motion of the cross-head, causing the angular face 25^a to come into contact with the roller 39, and thus depresses the inner end of the jaw 29, causing the front or outer end to raise. A similar but opposite action is simultaneously taking place in the rod 16, wedge 24, roller 38, and jaw 28.

From the foregoing it will be seen that the advance stroke is made with the jaws open, at which time the skin is adjusted between the rolls and scrapers in readiness for the back or return stroke, which is the operating stroke. The jaws are caused to close by the action of the wedges against the rolls, which are adjustably secured to the jaws, as shown. The points at which the jaws are caused to close relative to their lateral reciprocating motion depends upon the timing of the contact of the inclined wedge-faces.

If it be desired to bring the roller and scrapers into contact with the skins at the instant of reverse travel of the jaws, the lower rod is lengthened, while the upper rod is correspondingly shortened, the resultant effect being to bring the upper and lower wedges closer together laterally, so that on the start the back stroke causes the inclined faces to impinge upon the rolls, bringing the jaws together and staking the skin from its very edge.

If it is preferred to have the action of the machine to take place at less than the full stroke, the lower rod is shortened and the upper rod lengthened, moving the wedges apart, so that their effect upon the jaw-closing rolls is later with respect to the action of the cross-head.

The use of a table inclining downwardly from the operator is preferred as being easier to work upon and also regarded as tending to produce better results than a horizontal table.

Attention is called to the elimination of all cams, eccentrics, and a plurality of connecting means between the driving-shaft and carriage as usually employed.

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

1. In a staking-machine, the combination with a suitable supporting-frame, a shaft journaled thereon, means for conveying rotary motion to the shaft, a crank-disk affixed

on the shaft, a single connecting-rod attached thereto, a slideway formed in the frame, a slide operatively combined thereto and attached to the connecting-rod in such manner as to receive reciprocating rectilinear motion therefrom; of staking-jaws pivotally attached to the said slide, means for normally opening the said jaws, independently adjustable, inclined faced wedges so combined with the jaws and slide as to close the jaws while receding, and distinct means of connection between the said connecting-rod and wedges, all substantially as shown and described.

2. In a leather-staking machine, the combination with a frame, a reciprocating slide movable in guideways thereon, upper and lower staking-jaws pivotally connected to the slide, springs attached to the jaws adapted to open the same, and means for producing reciprocating motion to the said parts; of independently-operating wedges for closing the said jaws, means for adjusting the wedges distinct from each other, rollers so combined with the said jaws as to take the thrust of the wedges and of means for adjustment to the rollers, all substantially as shown and described.

3. In a leather-staking machine, the combination with a frame, a slide movable on the frame, means for reciprocating the slide, upper and lower staking-jaws pivotally attached to the slide and suitable scrapers at their operative ends; of rollers attached to the respective jaws, means for adjusting the rollers relatively to each other, angular-faced blocks contacting with the rollers, movable in the slide, adjustable rods connecting the blocks and said reciprocating means and springs attached to the jaws opposing the angular blocks, all substantially as shown and described.

4. In a staking-machine, the combination of a suitable frame, a crank-shaft mounted therein, a cross-head slidable on the frame, a pitman between the crank-shaft and the cross-head, staking-jaws pivotally attached to the cross-head and means for opening the said staking-jaws; of movable wedges 24 and 25 combined with the said cross-head and said jaws, adjustable rolls 38 and 39 interposed between the jaws and wedges and of connecting-rods 16 and 17 between the said pitman and wedges, all substantially as shown and described.

5. In a staking-machine, the pitman 12, having the projections 12^a and 12^b, connecting-rods 16 and 17 attached to the said projections, carriers 20 and 21 attached at the opposite ends of said connecting-rods, wedges 24 and 25 secured to the carriers, the cross-head 13, brackets 26 and 27 carrying the staking-jaws, and rolls attached thereto adapted to abut against and be separated by the said wedges, all as and for the purpose specified.

6. In a staking-machine, the combination with a suitable supporting-framework, a shaft journaled thereon, means for conveying rotary motion to the shaft, a crank-disk on the shaft, a connecting-rod attached thereto, a slideway formed in the framework, a slide operatively connected thereto and attached to the said connecting-rod so as to receive reciprocating, rectilinear motion therefrom; of staking-jaws pivotally attached to the said slide, means for normally opening the jaws, inclined faced wedges so combined with the jaws as to be operative thereto, means for independently adjusting each wedge, and means to compensate for wear on said wedges and operative parts, all substantially as shown and described.

7. In a leather-staking machine, the combination with a frame, a slide movable on the frame, means for producing reciprocating motion in the slide, upper and lower staking-jaws pivotally attached to the slide having suitable scrapers at their operative ends; of rollers attached to the respective jaws, means for adjusting the rollers relatively to each other, angular-faced blocks coacting with the rollers movable in the slide, adjustable rods connecting the blocks and said reciprocating

means and springs attached to the jaws opposing the angular blocks, a single connecting member between the rotative and reciprocating members and means so combined with the said members as to effect a variable closure of the staking-jaws, all substantially as shown and described.

8. In a staking-machine, the combination with a suitable supporting-framework, a shaft journaled thereon, means for conveying rotary motion to the shaft, a crank-disk centered on the shaft, a connecting-rod attached thereto, a slideway formed in the frame, a slide operatively connected thereto and attached to the said connecting-rod adapted to receive reciprocating rectilinear motion therefrom, of staking-jaws pivotally attached to the said slide, inclined faced wedges each adjustably combined with the jaws, and means for independently adjusting the said jaws, all substantially as shown and described.

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

WALTER R. SCOTT.

Witnesses:

ROBERT K. PERKINS,
LOUIS VON GRAEVE.