

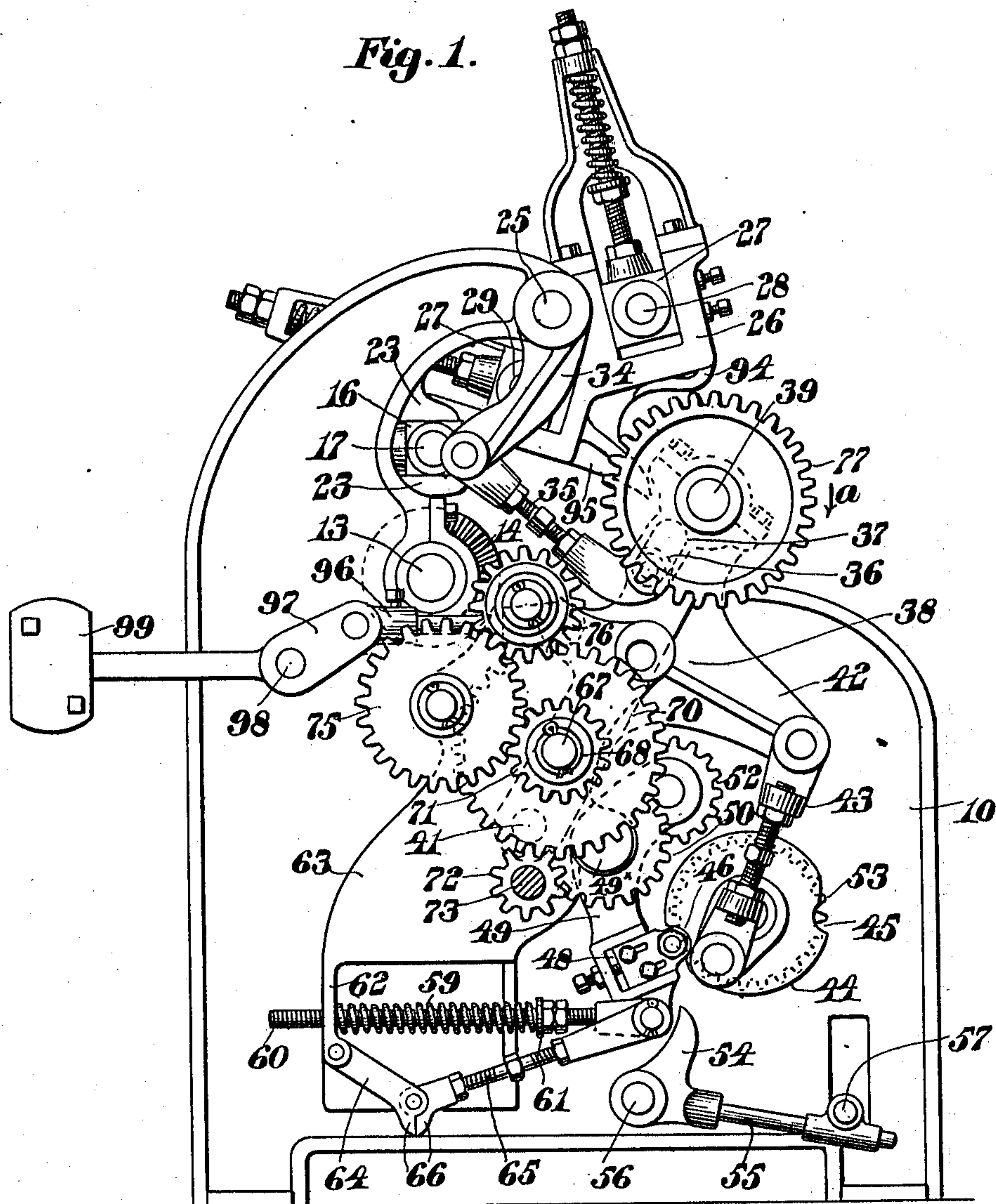
A. A. HUTCHINSON.
HIDE WORKING MACHINE.
APPLICATION FILED OCT. 26, 1909.

993,068.

Patented May 23, 1911.

6 SHEETS—SHEET 1.

Fig. 1.



Witnesses:

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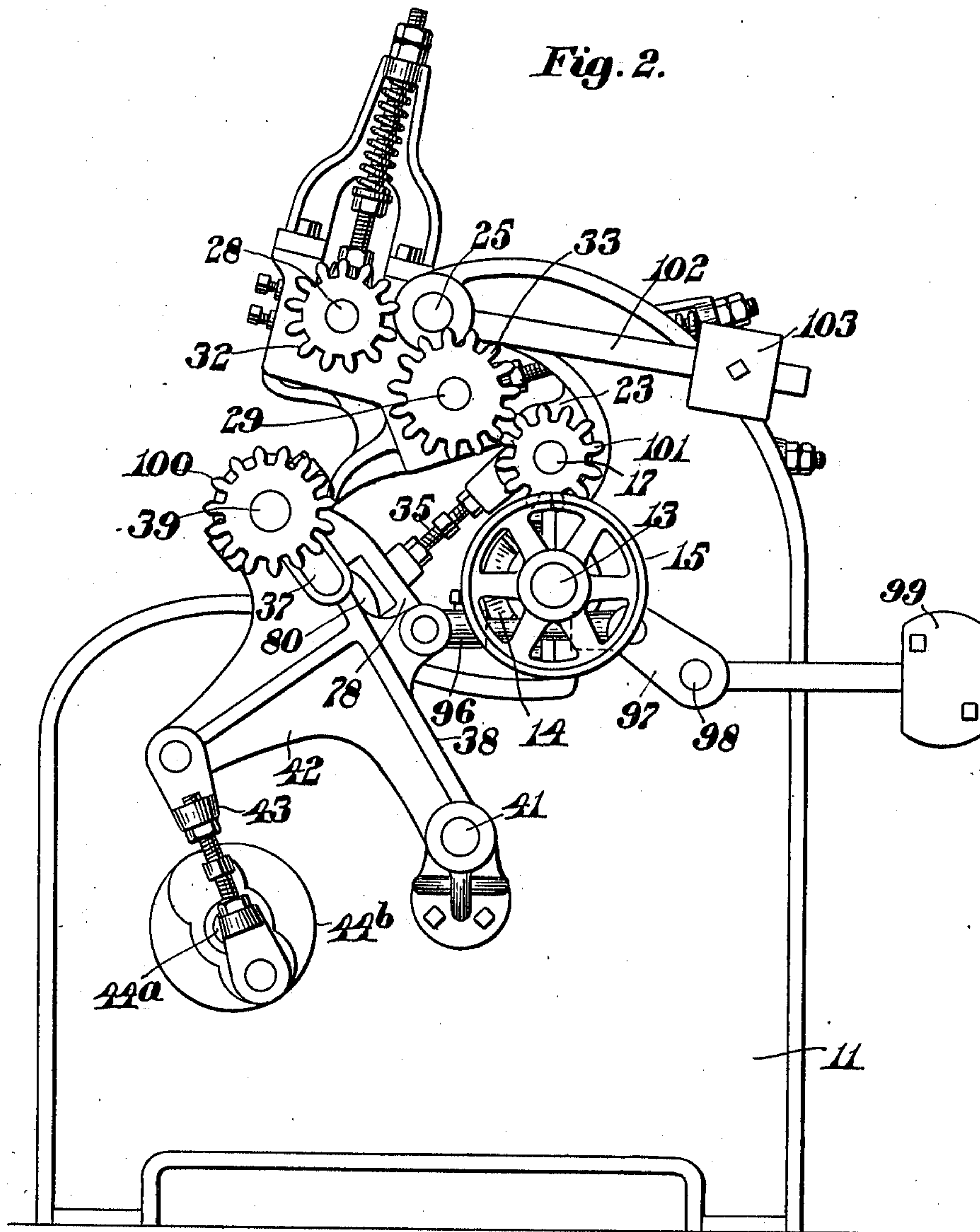
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by Walter C. Lombard,
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6 SHEETS—SHEET 2.



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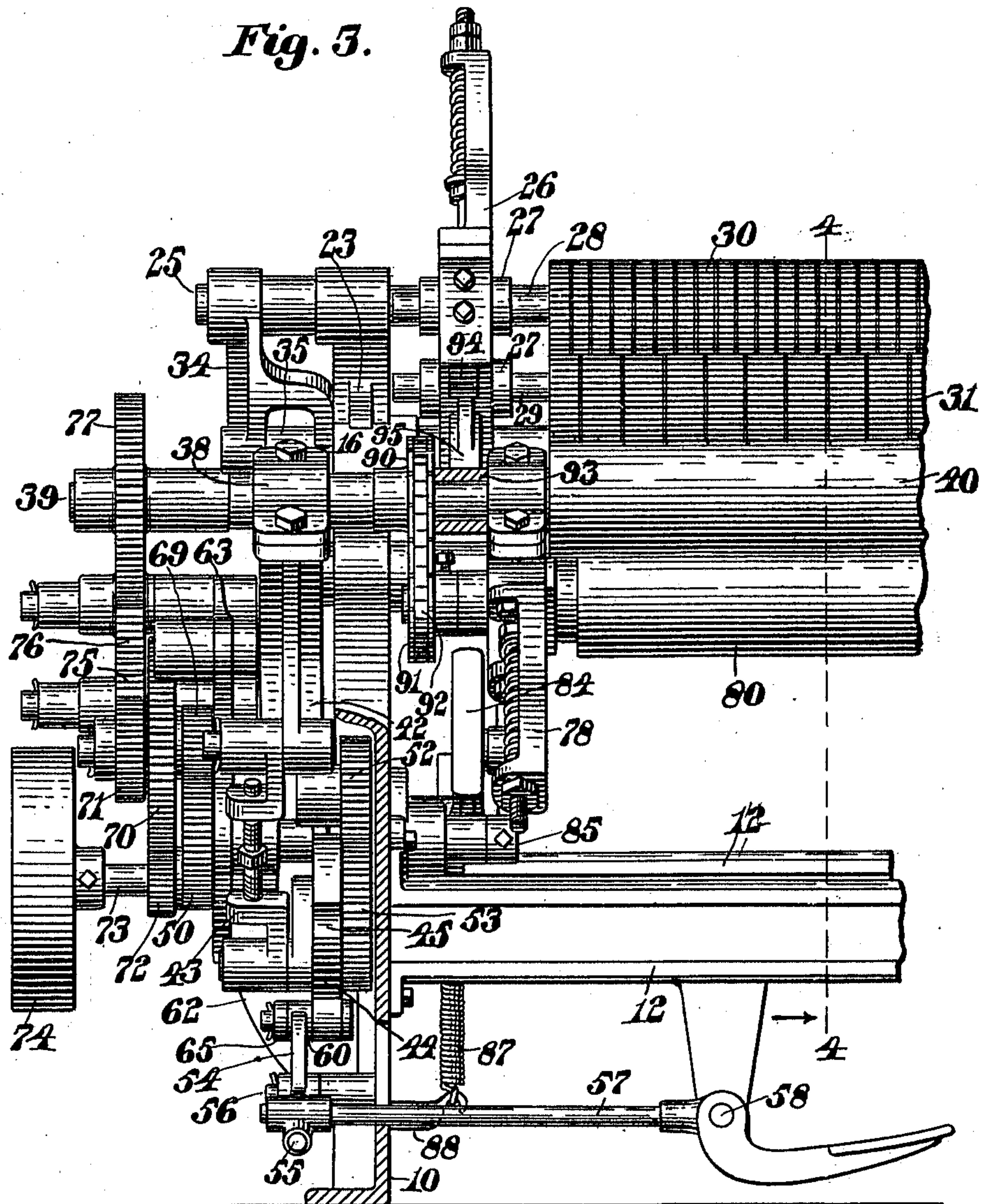
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6 SHEETS—SHEET 3.

Fig. 3.



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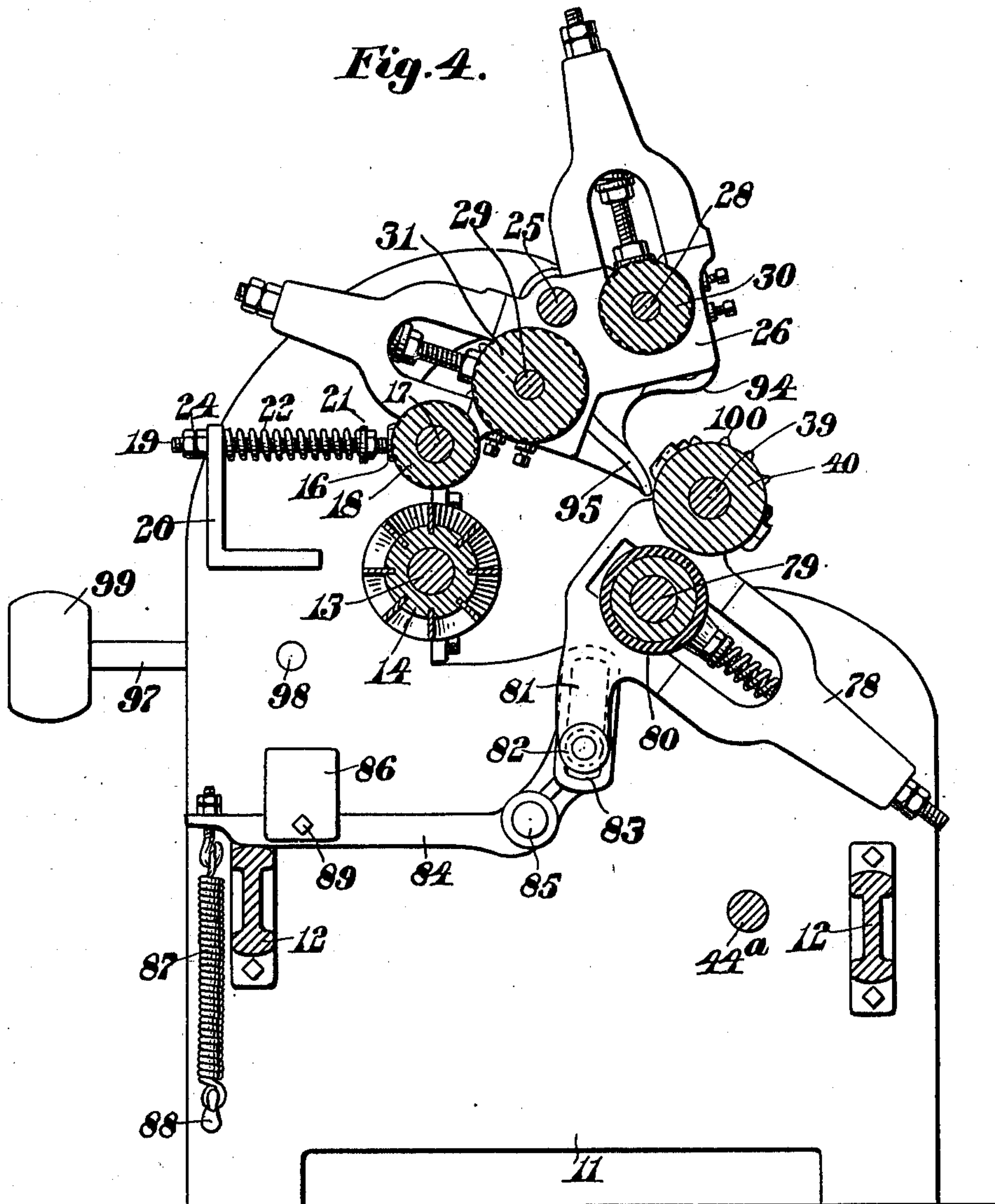
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6 SHEETS—SHEET 4.

Fig. 4.



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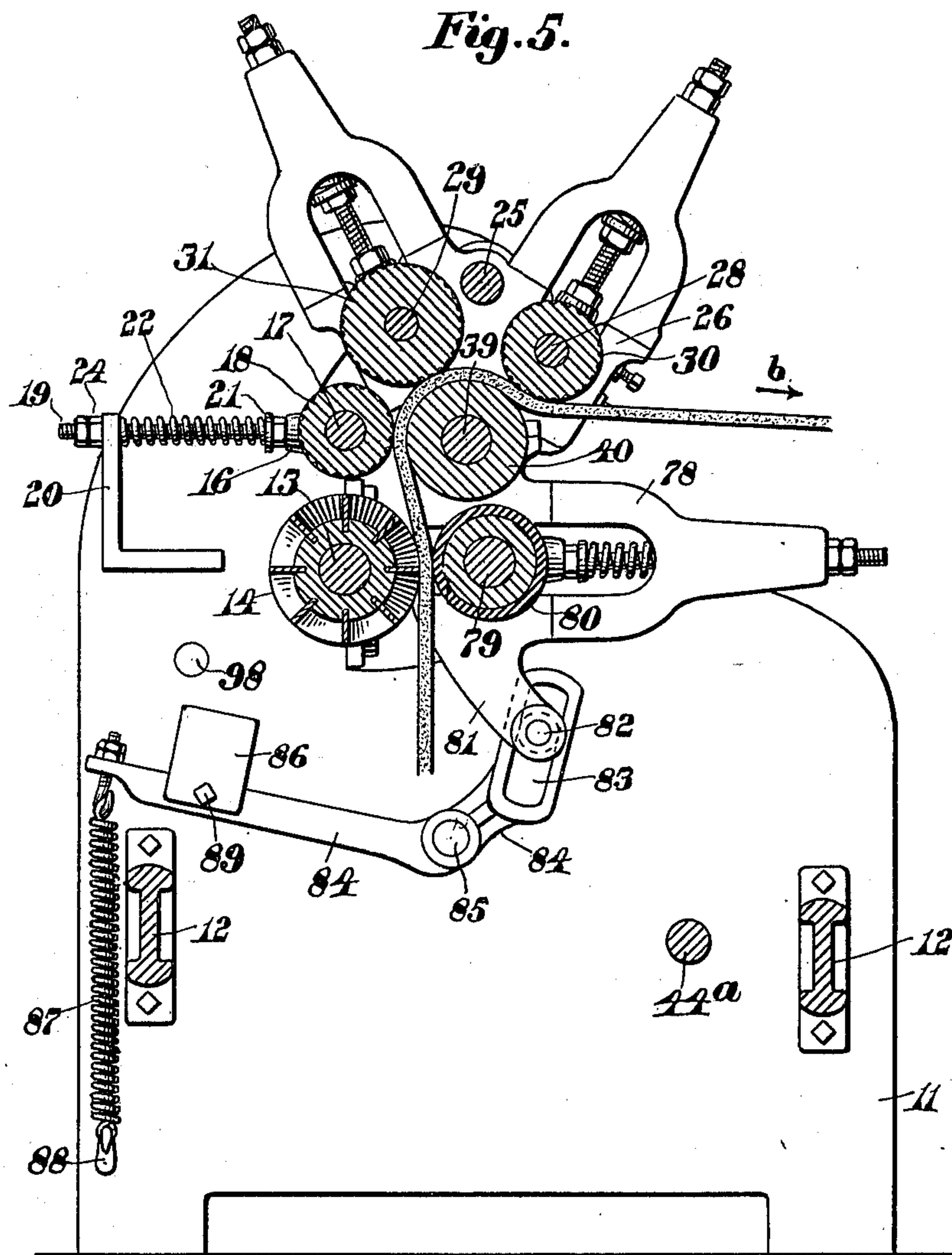
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A. A. HUTCHINSON.
HIDE WORKING MACHINE.
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6 SHEETS—SHEET 5.



Witnesses:
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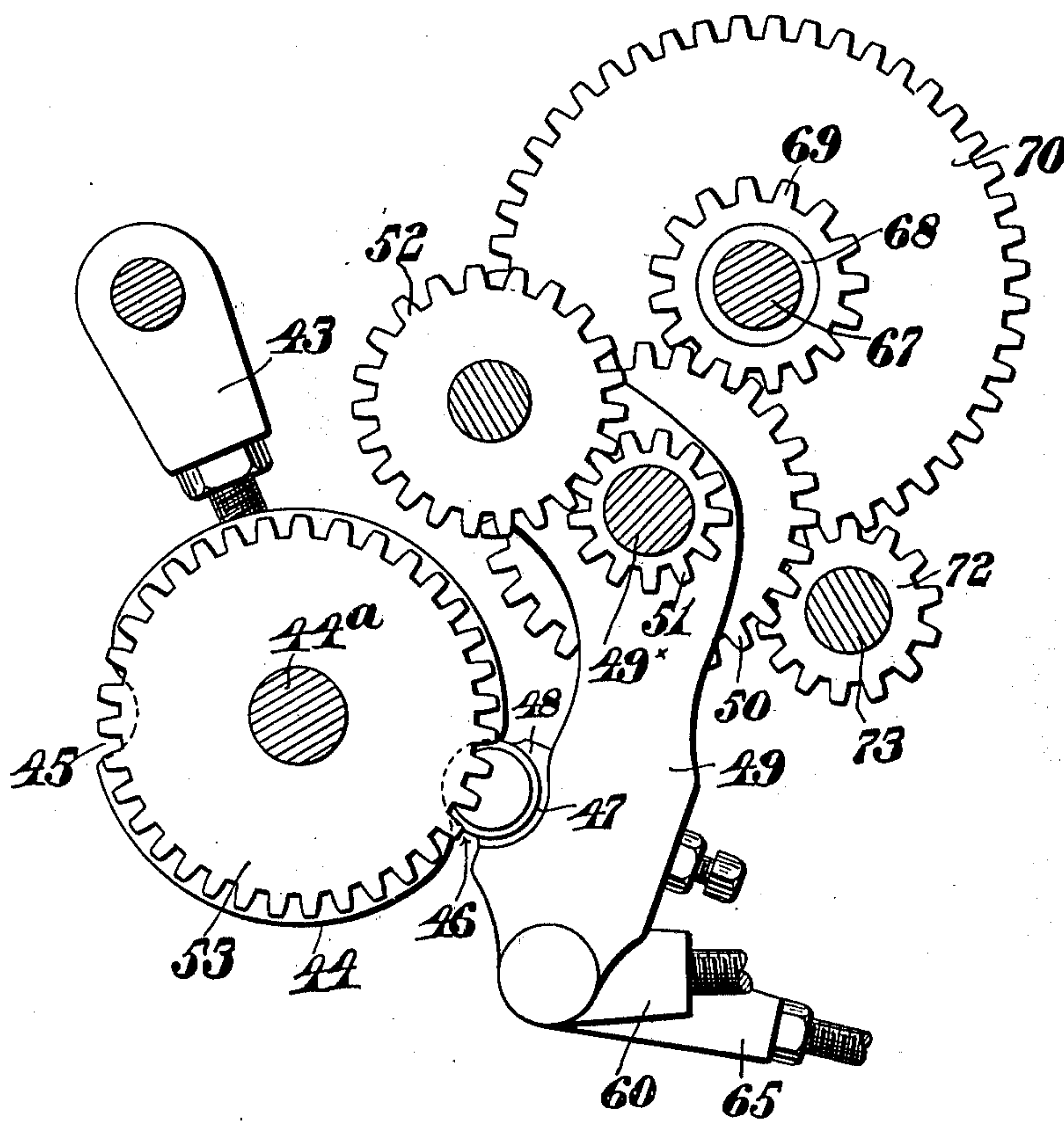
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6 SHEETS—SHEET 6.

Fig. 6.



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UNITED STATES PATENT OFFICE.

ALBERT A. HUTCHINSON, OF WINCHESTER, MASSACHUSETTS.

HIDE-WORKING MACHINE.

993,068.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed October 26, 1909. Serial No. 524,711.

To all whom it may concern:

Be it known that I, ALBERT A. HUTCHINSON, a citizen of the United States of America, and a resident of Winchester, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Hide-Working Machines, of which the following is a specification.

10 This invention relates to hide-working machines and has for its object the production of a machine in which a better grip may be secured upon the material being operated upon than in the machines usually
15 constructed.

Another object of the invention is to provide (in a machine of this class in which the work support is rocked toward and from the working cylinder) a locking mechanism to
20 lock the work-supporting frame in its extreme positions, this locking being at all times under the control of the operator.

The invention consists in certain novel features of construction and arrangement of
25 parts which will be readily understood by reference to the description of the drawings and to the claims hereafter given.

Of the drawings: Figure 1 represents a left end elevation of a machine embodying the features of this invention. Fig. 2 represents a right end elevation of the same. Fig. 3 represents a front elevation of the left end of the machine, a portion of the frame being broken in section. Fig. 4 represents a transverse vertical section, the cutting plane being on line 4—4 on Fig. 3, looking in the direction of the arrow. Fig. 5 represents a similar section to Fig. 4, showing the various feed and supporting rolls
40 and working cylinder in operative position, and Fig. 6 represents an enlarged section showing the gearing for operating the locking mechanism.

Similar characters designate like parts
45 throughout the several figures of the drawings.

In the drawings, 10 and 11 represent two end frames of the machine connected together in the usual manner by tie girts 12. Mounted in suitable bearings in the end frames 10 and 11 is a revoluble shaft 13 upon which, between said end frames 10 and 11, is secured so as to revolve therewith a working cylinder 14. The shaft 13 extends
50 beyond the outer face of the end frame 11 and has secured thereto a driving pulley 15

by which the shaft 13 and working cylinder 14 may be revolved at any desired speed. Above the working cylinder 14 and revolvably mounted in boxes 16 is a shaft 17 having secured thereto between the end frames 10 and 11 so as to revolve therewith a serrated roll 18.

Each of the boxes 16 has secured thereto a threaded member 19 extending through a
65 lug 20 formed upon an end frame 10 or 11 between which and an adjustable member 21 threaded to said member 19 is a spring 22 normally retaining the box 16 at the front end of the guideways 23 in which it
70 is mounted, nuts 24 threaded to the outer end of the member 19 and cooperating with the lug 20 serving to limit the movement of said boxes.

In the upper end of each of the end frames
75 10 and 11 is an oscillating shaft 25, to each end of which, between the end frames 10 and 11 is secured a frame 26 adapted to oscillate with said shaft 25. These pivoted frames 26 are provided with suitable sliding
80 bearings or boxes 27 in one pair of which is mounted a revoluble shaft 28 while in the other pair is mounted a revoluble shaft 29.

Secured to and revoluble with the shaft 28 is a serrated roll 30 while secured to and
85 revoluble with the shaft 29 is a serrated roll 31. The righthand end of the shaft 28 has secured thereto a gear 32 while the shaft 29 has secured thereto a similar gear 33 the teeth of these gears being pointed so that a
90 driving gear therefor may be readily thrown into mesh therewith, as is usual in machines of this class. The normal position of the rolls 30 and 31 is as indicated in Fig. 4 of the drawings, the roll 31 being somewhat in
95 front of and a little higher than the roll 18 while the roll 30 is in front of and higher than the roll 31.

To the righthand end of the oscillating shaft 25 is secured an arm 34, to the outer
100 end of which is pivotally secured an adjustable member or link 35, the free end of which is provided with a projection 36 positioned within a slot 37 in a rocker frame 38 having supported in bearings therein a
105 revoluble shaft 39 secured to and revoluble with which is a work-supporting roll 40. The rocker frame 38 is pivoted at 41 to the side frames 10 and 11 and formed thereon and extending toward the front of the machine is an arm 42 to which is pivoted an
110 adjustable link 43, the opposite end of

which is pivotally connected to the crank disk 44 provided with two notches 45 and 46. The crank disk 44 is secured to and revolves with a shaft 44^a mounted in bearings in the frames 10 and 11 and having secured to its opposite end a crank disk 44^b. Co-acting with the notches 45 and 46 is a projection 47 formed upon or secured to a plate 48 adjustably mounted in a pivoted lever 49, the pivot 49* of which has secured thereto a gear 50 and a pinion 51 meshing with an intermediate gear 52 revolubly mounted in the opposite end of said lever 49. The intermediate gear 52 is adapted to be revolved by the pinion 51 and when the projection 47 is moved from the notch 45 or 46 it is adapted to be moved into mesh with the gear 53 formed upon or secured to the inner face of the notched disk member 44 to cause this crank disk to be revolved and rock the rocker member 38.

Normally the projection 47 is in engagement with one of the notches 45 or 46 when the rocker member 38 is at one extreme of its movement, thus locking said rocker frame in position and preventing its movement until the projection 47 has been removed from the notch with which it is co-operating. This removal of the projection 47 from the notch 45 or 46 in the disk 44 is effected by means of the toe 54 formed upon the lever 55 pivoted at 56, the end of said lever being connected to the treadle member 57 pivoted at 58 to one of the tie girts 12 extending from one side frame 10 to the other side frame 11. It is obvious that when the treadle pad 58 is depressed the toe 54 will engage with the lower end of the lever 49 and cause it to be moved about its pivot so that the projection 47 will be removed from the disk notch with which it is co-operating and the intermediate gear 52 will be brought into mesh with the disk gear 53. As soon as this movement has been effected and the disk 44 is revolved the projection 47 will ride over the concentric portion of said disk member 44, this projection 47 being held in contact with said concentric portion of said disk by means of the spring 59 surrounding a threaded member 60 pivotally secured to the lower end of the lever 49 and interposed between an adjustable stop 61 and a rib 62 formed upon the bracket 63. Interposed between this rib 62 and the end of the lever 49 is a toggle mechanism consisting of the part 64 and the adjustable part 65, these two parts 64 and 65 being provided with toes 66 which contact to limit the forward movement of the projection 47 and prevent its sudden contact with the bottom of the notches 45 and 46.

Projecting from the brackets 63 is a stud 67 on which is mounted a sleeve 68 carrying a pinion 69, the gear 70, and the small gear 71. The gear 70 meshes with a pinion

72 secured to and revoluble with the main driving shaft 73 to the outer end of which is secured the pulley 74. The pinion 69 meshes with the gear 50 on the pivot 49* of the lever 49, said gear 50 through the pinion 51 driving the intermediate gear 52, as has been heretofore described. The gear 71 meshes with an intermediate gear 75 which in turn meshes with a gear 76, all of which are supported upon studs projecting from the bracket 63. The shaft 39 of the work-supporting roll has secured thereto a gear 77 which meshes with the gear 76, when the rocker frame 38 has been moved toward the rear of the machine with the work-supporting roll in operative position, thus causing the work-supporting roll to be rotated in the direction of the arrow "a" on Fig. 1. Supported on the shaft 39 are two side frames 78 in which is mounted a revoluble shaft 79 having secured thereto and revoluble therewith between the side frames 78 a rubber-covered roll 80 adapted when in working position, as indicated in Fig. 5, to coöperate with the working knife cylinder and retain the hide or other material being operated upon in contact therewith. Each frame 78 is provided with a downwardly extending arm 81 having a projection 82 thereon positioned within a slot 83 in one arm of a lever 84 pivoted at 85. The longer arm of said lever is provided with a weight 86 which normally retains the rubber-covered roll 80 in the position indicated in Fig. 4 of the drawings, slightly to the rear of the work-supporting roll 40.

It has been found in practice that the weight 86 cannot be depended upon alone but that it is necessary to interpose a spring 87 between the outer end of the long arm of the lever 84 and a fixed projection 88 upon the end frames 10 and 11. This spring 87 normally retains the long arm of the lever 84 in contact with the rear tie girt 12 of the framework of the machine. It is obvious that when the lever 84 is moved about its pivot 85 during the rearward locking movement of the rocker frame 38, the tension of the spring will increase, which is objectionable, and to overcome this increased tension is the object of the slot 83 which provides a means whereby the pivotal connection 82 between the lever 84 and the arm 81 may move toward and from the pivot 85 during the locking movement of the rocker member 38 so that any increased tension of the spring 87 is offset and its action upon the secondary frame 78 is equalized, whatever position the lever 84 may assume. In other words, the retention of the rubber roll 80 in its position relative to the work-supporting roll 40, in the normal position of the rocker frame 38, and in relation to the working knife cylinder 14 when the rocker frame 38 is in its operative position, is accomplished wholly

by means of the weight 86 which may be adjusted lengthwise of the long arm of the lever 84 by means of the set screw 89, the entire object of the spring 87 being to normally retain the lever 84 in position against its stop, the rear tie girt 12, and prevent said lever from objectionable jumping and moving about its pivot 85 during the operation of the machine. If the increased tension of the spring 87 was permitted to be conveyed to the rubber-covered roll 80 and act thereon an undesirable result would be obtained and hence the provision of the device such as the slot 83 and projection 82 positioned therein to offset this increased tension and equalize the action of the spring upon the rubber roll in its various positions during the rocking movement of the rocker frame 38.

The shaft 39 has secured thereto a sprocket wheel 90 while the shaft 79 has a similar sprocket wheel 91 secured thereto, a sprocket chain 92 connecting these two sprocket wheels and providing a means for rotating the rubber-covered roll 80 when the shaft 39 is revolved. Upon the shaft 39 between the sprocket wheel 90 and the secondary frame 78 is a sleeve 93 and formed upon each pivoted side frame 26 in the path of said sleeve 93 is a cam member 94 while a toe 95 also in the path of the sleeve or roller 93 extends below the path of movement thereof. When the rocker frame 38 is moved toward the rear of the machine it will operate, through the link 35, the radius arm 34 secured to the oscillating shaft 25 and cause the pivoted frames 26 carrying the serrated rolls 30 and 31 about the axis of said shaft 25, the serrated roll 31 moving to the rear and upwardly while the roll 30 is moving downwardly. As soon, however, as the sleeve or roller 93 comes into contact with the cam member 94 further movement of the rolls 30 and 31 about the axis of the shaft 25 will be prevented but the rocker frame 38 may continue its rearward movement, the projection 36 on the connecting link riding along the slot 37 in the rocker frame 38 during this final movement. This mechanism thus constructed allows the serrated rolls 30 and 31 to be out of the way of the material as it is thrown by the operator over the work-supporting roll 40 but as soon as this material has been positioned in the usual manner, as indicated in Fig. 5 of the drawings, a pressure brought to bear upon the foot pad 58 of the treadle 57 will cause the rocker member 38 to move toward the rear of the machine and during this movement to change the positions of the serrated rolls 30 and 31 so that a bight is secured in the material over the work-supporting roll 40, as indicated in Fig. 5 of the drawings. When in this position not only the rolls 30 and 31 are acting upon the material to move it outwardly in the direction of the arrow

"b" on Fig. 5, but the serrated roll 18 also has a grip thereon. It is obvious, therefore, that the material thus gripped by means of the three rolls 18, 30, and 31, all acting simultaneously thereon with a bight formed in the material over the work-supporting roll it is impossible for the material to slip or move sidewise.

The provision of the lever 84 actuated by means of the weight 86 and spring 87 affords a yielding means of retaining the material against the working knife cylinder 14 whereby the bellies and thicker portions of the hides being acted upon are held in contact with said knife cylinder by the same degree of pressure as the thinner portions of the material, thus securing better results than is usually obtainable. The rocker frame 38 is connected by means of a link 96 to a lever 97 pivoted at 98 and having at its outer end a weight 99 which assists in moving the rocker frame 38 into its operative position when the locking projection 47 is removed from its notch 46, all as is usual in machines of this class. The shafts 28, 29, and 79 are all mounted in boxes which are adapted to yield under pressure against the tension of springs in the usual manner. The shaft 39 has secured to its righthand end a gear 100 which meshes with the gears 32 and 33 on the shafts 28 and 29 when in operative position, thus rotating the serrated rolls 30 and 31. In a similar manner the shaft 17 has secured to its righthand end a gear which also meshes with the gear 100 when the rocker frame 38 is at the extreme of its inner movement, thus revolving the serrated roll 18 in the desired direction.

If desired, as is sometimes the case in operating on certain material, the gear 101 may be removed and the serrated roll 18 rotate simply from contact with the material. The righthand end of the oscillating shaft 25 has secured thereto an arm 102 carrying a weight 103 which, through the instrumentality of the arm 34 and link 35, tends to move the rocker frame 38 into its normal position, as indicated in Fig. 1 of the drawings.

As is evident from an inspection of the drawings, the rocker frame 38 is locked in its extreme forward and rearward positions and is retained in this position until released by the operator. This means of locking the rocker frame when in operative position and in position for placing the hides upon the work-supporting roll forms an important feature of the invention while the means for simultaneously unlocking the rocking mechanism and throwing into mesh therewith a means for positively rocking the rocker frames, secures advantages which are fully evident.

It is believed that the operation and many advantages of the invention will be fully apparent from the foregoing description.

Having thus described my invention, I claim:

1. The combination with a working cylinder, of a pivoted rocker frame; a work-supporting roll mounted therein; a rubber-covered roll also supported from said rocker frame and movable therewith; a pivoted frame above said working cylinder; two rolls mounted therein; means for moving said rocker frame toward said working cylinder; and means interposed between said pivoted frame and said rocker frame whereby said pivoted frame is moved about its pivot during a part of the movement of said rocker frame.

2. The combination with a working cylinder, of a pivoted rocker frame; a work-supporting roll mounted therein; a rubber-covered roll also supported from said rocker frame and movable therewith; a pivoted frame above said working cylinder; two serrated rolls mounted therein; means for moving said rocker frame toward said working cylinder; and means interposed between said pivoted frame and said rocker frame whereby said pivoted frame is moved about its pivot during a part of the movement of said rocker frame.

3. The combination with a working cylinder, of a pivoted rocker frame; a work-supporting roll mounted therein; a rubber-covered roll also supported from said rocker frame and movable therewith; a pivoted frame above said working cylinder; two rolls mounted therein; means for moving said rocker frame toward said working cylinder; means interposed between said pivoted frame and said rocker frame whereby said pivoted frame is moved about its pivot during a part of the movement of said rocker frame; and means whereby the movement of said pivoted frame is diminished relative to the movement of said rocker frame during the last part of the inward movement of said rocker frame.

4. The combination with a working cylinder, of a pivoted rocker frame provided with a slot in its outer end; a work-supporting roll mounted in said frame; a rubber-covered roll supported from said frame and movable therewith; an oscillating shaft above said working cylinder; side frames secured thereto; two rolls revolubly mounted in said side frames; and an arm secured to said oscillating shaft and provided with a projection positioned within said slot.

5. The combination with a working cylinder, of a pivoted rocker frame provided with a slot in its outer end; a work-supporting roll mounted in said frame; a rubber-covered roll supported from said frame and movable therewith; an oscillating shaft above said working cylinder; side frames secured thereto; two serrated rolls revolubly mounted in said side frames; and an arm

secured to said oscillating shaft and provided with a projection positioned within said slot.

6. The combination with a working cylinder, of a pivoted rocker frame provided with a slot in its outer end; a work-supporting roll mounted in said frame; a rubber-covered roll supported from said frame and movable therewith; an oscillating shaft above said working cylinder; side frames secured thereto; two rolls revolubly mounted in said side frames; an arm secured to said oscillating shaft and provided with a projection positioned within said slot; and a cam formed upon said side frames engaging the outer end of said rocker frame during its inward movement.

7. The combination with a working cylinder, of a pivoted rocker frame provided with a slot in its outer end; a work-supporting roll mounted in said frame; a rubber-covered roll supported from said frame and movable therewith; an oscillating shaft above said working cylinder; side frames secured thereto; two rolls revolubly mounted in said side frames; an arm secured to said oscillating shaft and provided with a projection positioned within said slot; a cam formed upon said side frames engaging the outer end of said rocker frame during its inward movement; and means for moving said rubber-covered roll about the axis of the work-supporting roll during the inward movement of said rocker frame.

8. The combination with a working cylinder, of a pivoted rocker frame; a work-supporting roll revolubly mounted therein; a secondary frame movable about the axis of said roll; a rubber-covered bed roll revolubly mounted in said secondary frame; a weighted pivoted lever adapted to be moved about its pivot by the inward movement of said rocker frame; a projecting member on said secondary frame; and a weighted pivoted lever provided with a slot in which said projecting member is positioned.

9. The combination with a working cylinder, of a pivoted rocker frame; a work-supporting roll revolubly mounted therein; a secondary frame movable about the axis of said roll; a rubber-covered bed roll revolubly mounted in said secondary frame; a weighted pivoted lever adapted to be moved about its pivot by the inward movement of said rocker frame; a projecting member on said secondary frame; a weighted pivoted lever provided with a slot in which said projecting member is positioned; and a spring interposed between said weighted lever and a stationary member.

10. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; a rubber covered roll supported from said frame beneath said work supporting

roll and movable therewith toward and from the working cylinder, a revoluble crank, and means connecting said crank and pivoted rocker frame.

5 11. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted in the upper end thereof; a rubber-covered roll
10 suspended from the shaft of said work-supporting roll and movable about the axis thereof; a revoluble crank; a link pivotally connected to said crank and pivoted rocker frame; and means for limiting the movement of said rubber-covered roll about the
15 axis of said work-supporting roll.

12. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted in the upper end thereof; a rubber-covered roll
20 suspended from the shaft of said work-supporting roll and movable about the axis thereof; a revoluble crank; a link pivotally connected to said crank and pivoted rocker frame; and a pivoted weighted lever for limiting the movement of said rubber-covered
25 roll about the axis of said work-supporting roll.

13. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted in the outer end thereof; a rubber-covered roll suspended from the shaft of said work-supporting roll and movable about the axis thereof; a revoluble crank; a link pivotally connected
30 to said crank and pivoted rocker frame; means for locking said crank when said rocker frame is in its extreme positions; and means for causing a movement of said rubber-covered roll about the axis of said work
35 supporting roll during the oscillation of said rocker frame.

14. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; a rubber-covered roll suspended from the shaft of said work-supporting roll and movable about the axis thereof; a revoluble crank; yielding means for actuating said rubber-covered roll about the axis of the
45 work-supporting roll during the oscillation of said rocker frame; a link pivotally connected to said crank and pivoted rocker frame; a notched disk revoluble with said crank; and means co-acting therewith for locking it when said rocker frame is in its extreme positions.
50

15. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; a rubber-covered roll suspended from said frame and movable therewith; a revoluble notched crank disk; a link the ends of which are pivotally connected to said crank disk and rocker frame; a gear secured to said disk; a
60 revoluble driving gear; and a pivoted member

carrying at one end an intermediate gear adapted to mesh with said disk gear and at the other end a projection adapted to engage the notches in said disk when the disk gear and intermediate gear are out of
70 mesh.

16. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; a rubber-covered roll suspended from said
75 frame and movable therewith; a revoluble notched crank disk; a link the ends of which are pivotally connected to said crank disk and rocker frame; a gear secured to said disk; a revoluble driving gear; a pivoted
80 member carrying at one end an intermediate gear adapted to mesh with said disk gear and at the other end a projection adapted to engage the notches in said disk when the disk gear and intermediate gear are out of
85 mesh; and a spring adapted to normally retain said intermediate gear and disk gear in disengaged position.

17. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; a rubber-covered roll suspended from said
90 frame and movable therewith; a revoluble notched crank disk; a link the ends of which are pivotally connected to said crank disk and rocker frame; a gear secured to said disk; a revoluble driving gear; a pivoted
95 member carrying at one end an intermediate gear adapted to mesh with said disk gear and at the other end a projection adapted to engage the notches in said disk when the disk gear and intermediate gear are out of
100 mesh; a spring adapted to normally retain said intermediate gear and disk gear in disengaged position; and a pivoted toe adapted
105 to move said member about its pivot against the tension of said spring to cause said gears to mesh and the projection on said member to be disengaged from a notch in said disk.

18. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; a rubber-covered roll suspended from said
110 frame and movable therewith; a revoluble notched crank disk; a link the ends of which are pivotally connected to said crank disk and rocker frame; a gear secured to said disk; a revoluble driving gear; a pivoted
115 member carrying at one end an intermediate gear adapted to mesh with said disk gear and at the other end a projection adapted to engage the notches in said disk when the disk gear and intermediate gear are out of
120 mesh; a spring adapted to normally retain said intermediate gear and disk gear in disengaged position; a pivoted toe adapted to move said member about its pivot against the tension of said spring to cause said gears
125 to mesh and the projection on said member to be disengaged from a notch in said disk;
130

and means secured to said pivoted member for limiting the forward movement of said disk engaging projection.

19. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; a rubber-covered roll supported from said frame and movable therewith; a revoluble notched crank disk; a link between said crank disk and rocker frame; a gear secured to said disk; a revoluble driving gear; a pivoted member carrying an intermediate gear adapted to mesh with said disk gear; a projection on said pivoted member adapted to engage the notches in said disk; a spring adapted to normally retain said intermediate gear and disk gear in disengaged position; a pivoted toe adapted to move said member about its pivot against the tension of said spring to cause said gears to mesh and the projection on said member to be disengaged from a notch in said disk; and toggle mechanism limiting the forward movement of said disk-engaging projection.

20. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; a rubber-covered roll supported from said frame and movable therewith; a revoluble notched crank disk; a link between said crank disk and rocker frame; a gear secured to said disk; a revoluble driving gear; a pivoted member carrying an intermediate gear adapted to mesh with said disk gear; a projection on said pivoted member adapted to engage the notches in said disk; a spring adapted to normally retain said intermediate gear and disk gear in disengaged position; a pivoted toe adapted to move said member about its pivot against the tension of said spring to cause said gears to mesh and the projection on said member to be disengaged from a notch in said disk; toggle mechanism limiting the forward movement of said disk-engaging projection; and means for adjusting the position of said projection relative to said pivoted gear-supporting member.

21. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; means for revolving said roll when in operative position; mechanism for rocking said frame including a crank and a gear revoluble therewith; a driving gear separated therefrom; an intermediate gear continuously in mesh therewith; and means for causing said intermediate gear to mesh temporarily with said rocking-mechanism gear.

22. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; means for revolving said roll when in operative position; mechanism for rocking said frame including a crank and a gear

revoluble therewith; a driving gear; an intermediate gear continuously in mesh therewith; means for causing said intermediate gear to mesh temporarily with said rocking-mechanism gear; and means for preventing the rotation of said rocking-mechanism gear when not in mesh with the intermediate gear.

23. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; crank mechanism for rocking said frame; a gear for operating said frame-rocking mechanism; a driving gear; an intermediate gear continuously in mesh therewith; means for locking said frame-rocking mechanism at each extreme of its movement; and means for simultaneously causing said intermediate gear and rocking-mechanism gear to mesh and cause the unlocking of said frame-rocking mechanism.

24. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; crank mechanism for rocking said frame; a gear for operating said frame-rocking mechanism; a driving gear; an intermediate gear continuously in mesh therewith; means for locking said frame-rocking mechanism at each extreme of its movement; and means controlled by the operator for simultaneously causing said intermediate gear and rocking-mechanism gear to mesh temporarily and cause the unlocking of said frame-rocking mechanism.

25. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; crank mechanism for rocking said frame including a notched disk; a gear secured thereto; a driving gear; an intermediate gear meshing therewith and adapted to be moved into position to mesh with said disk gear without unmeshing with said driving gear; a locking member normally co-acting with one of the notches of said disk; and means for simultaneously removing said locking member from said notch and moving said intermediate gear into mesh with said disk gear.

26. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; mechanism for rocking said frame including a notched disk; a gear secured thereto; a driving gear; an intermediate gear meshing therewith and adapted to be moved into position to mesh with said disk gear without unmeshing with said driving gear; a pivoted locking member normally co-acting with one of the notches of said disk; and means controlled by the operator for simultaneously removing said locking member from said notch and moving said intermediate gear into mesh with said disk gear.

27. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; mechanism for rocking said frame including a notched disk; a gear secured thereto; a driving gear; an intermediate gear meshing therewith and adapted to be moved into position to mesh with said disk gear without unmeshing with said driving gear; a locking member normally co-acting with one of the notches of said disk; means for simultaneously removing said locking member from said notch and moving said intermediate gear into mesh with said disk gear; and means for returning said locking member and intermediate gear to their normal positions.

28. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; mechanism for rocking said frame including a notched disk; a gear secured thereto; a driving gear; an intermediate gear meshing therewith and adapted to be moved into position to mesh with said disk gear without unmeshing with said driving gear; a locking member normally co-acting with one of the notches of said disk; means controlled by the operator for simultaneously removing said locking member from said notch and moving said intermediate gear into mesh with said disk gear; means for returning said locking member and intermediate gear to their normal positions; and mechanism for limiting the extent of said return movement.

29. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; mechanism for rocking said frame including a notched disk; a gear secured thereto; a driving gear; an intermediate gear meshing therewith and adapted to be moved into position to mesh with said disk gear without unmeshing with said driving gear; a locking member normally co-acting with one of the notches of said disk; means controlled by the operator for simultaneously removing said locking member from said notch and moving said intermediate gear into mesh with said disk gear; means for returning said locking member and intermediate gear to their normal positions; and toggle mechanism for limiting the extent of said return movement.

30. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; a pivoted frame; a pair of revoluble rolls mounted in said frame; a connector between said frames including means for producing lost motion during a portion of the move-

ment of said rocker member; and means for rocking said rocker member about its pivot.

31. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; a pivoted frame; a pair of revoluble rolls mounted in said frame; a connector between said frames including means for producing lost motion during a portion of the movement of said rocker member; means for rocking said rocker member about its pivot; and gears for operating said rolls normally out of mesh but adapted to mesh when in operative position.

32. The combination with a working cylinder, of a pivoted rocker frame; a revoluble work-supporting roll mounted therein; a pivoted frame; a pair of revoluble rolls mounted therein, the forward one of which is normally higher than the other and above the path of movement of said work-supporting roll; and means interposed between said frames for causing a movement of said pivoted frame during the movement of said rocker frame whereby said forward roll is moved downward after the work-supporting roll has passed beneath it to cause a bight over said work-supporting roll of the material being operated upon.

33. The combination with a working cylinder, of a pivoted rocker frame; a work-supporting roll mounted therein; a secondary frame movable about the axis of said work-supporting roll and provided with a lateral projection; a rubber-covered roll on said secondary frame; a pivoted lever provided with a slot in which said projection is positioned; a stop therefor; a weight on said lever; and a spring normally retaining said lever against said stop.

34. The combination with a working cylinder, of a pivoted rocker frame; a work-supporting roll mounted therein; a secondary frame movable about the axis of said work-supporting roll; a rubber-covered roll revolubly mounted therein; a pivoted weighted lever articulated thereto and adapted to position said rubber-covered roll relative to said work-supporting roll; a stop for said lever; a spring normally retaining said lever against said stop; means for rocking said rocker frame; and means interposed between said secondary frame and lever whereby the increased tension of said spring is offset as said lever is moved from said stop by the movement of said rocker frame.

Signed by me at 4 Post Office Sq., Boston, Mass., this 25th day of October, 1909.

ALBERT A. HUTCHINSON.

Witnesses:

WALTER E. LOMBARD,
NATHAN C. LOMBARD.