

No. 719,773.

PATENTED FEB. 3, 1903.

O. F. FEIX.
HIDE FLESHING MACHINE.
APPLICATION FILED MAR. 25, 1902.

NO MODEL.

2 SHEETS—SHEET 1

Fig. 1.

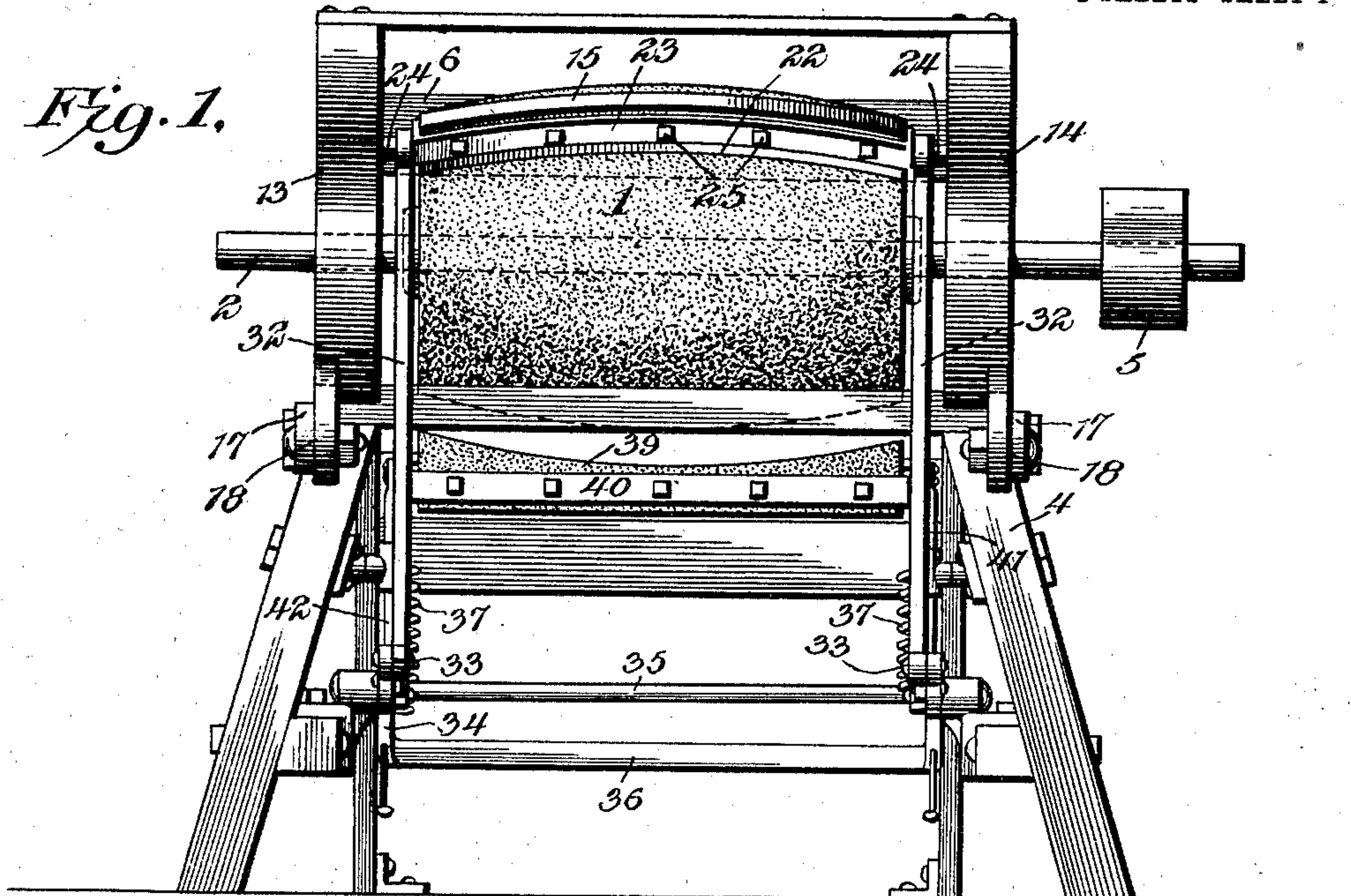
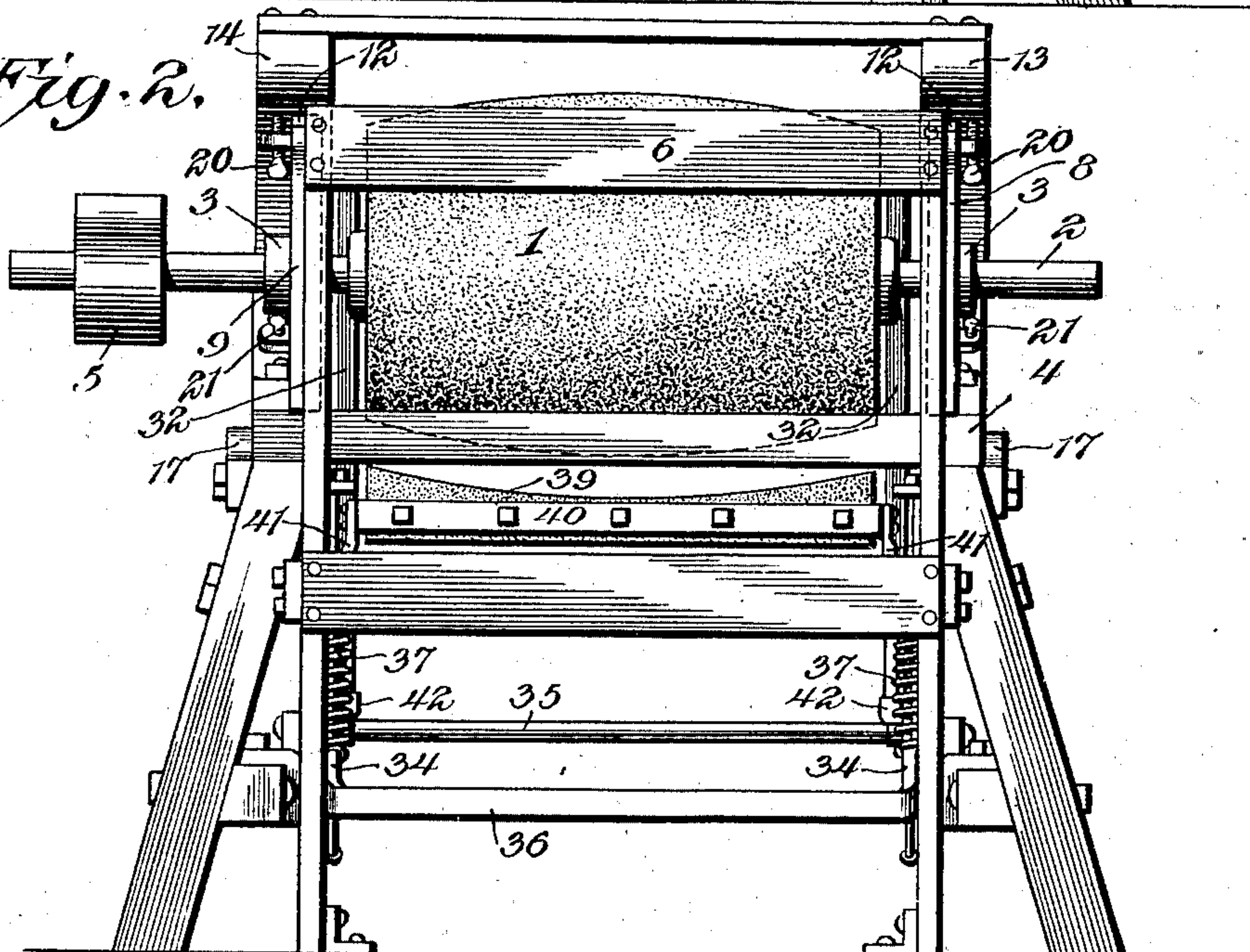


Fig. 2.



Otto F. Feix, Inventor,

Witnesses

Howard W. Orr.
Louis G. Julihn

By

E. G. Siggers

Attorney

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2 SHEETS—SHEET 2.

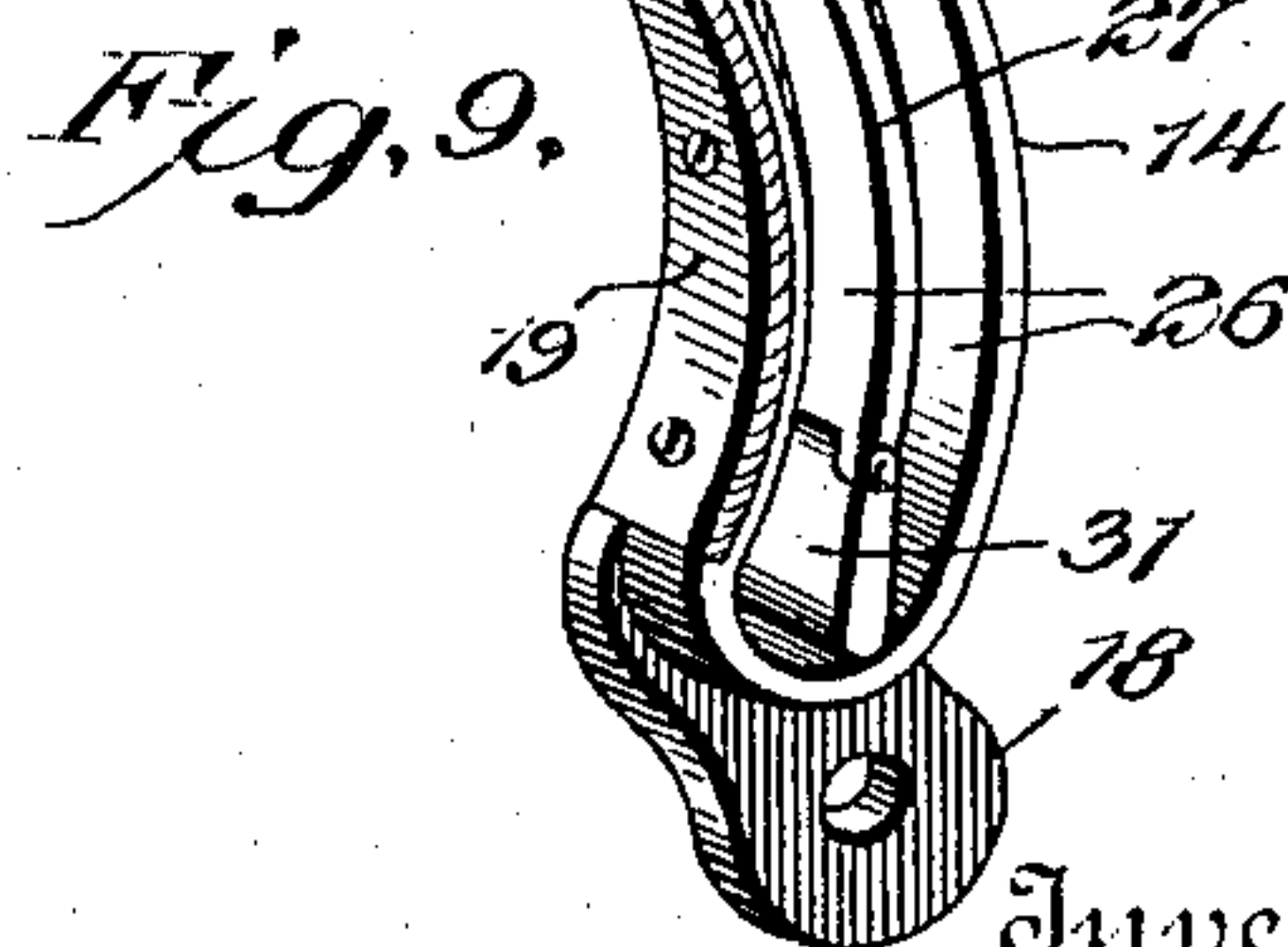
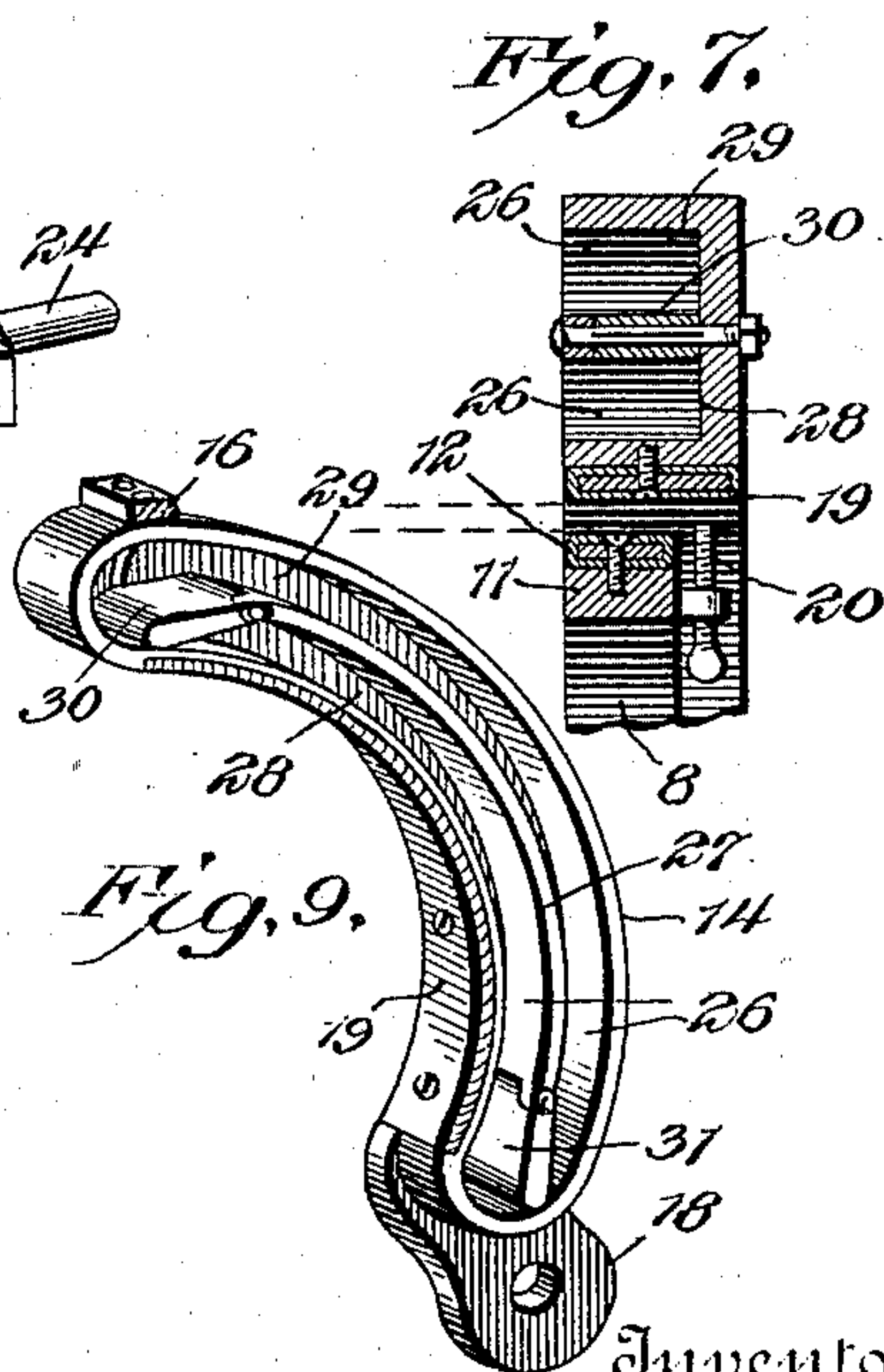
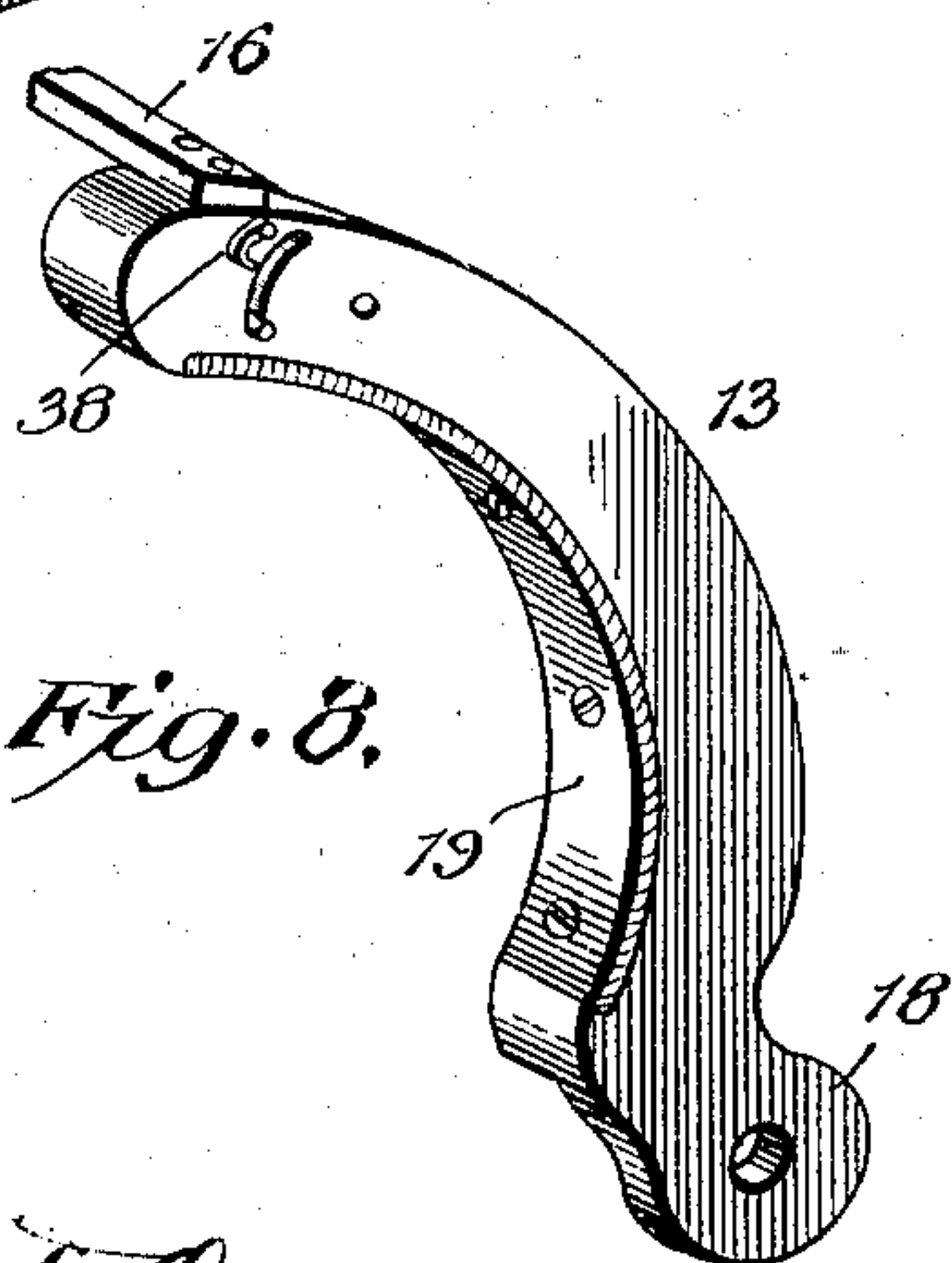
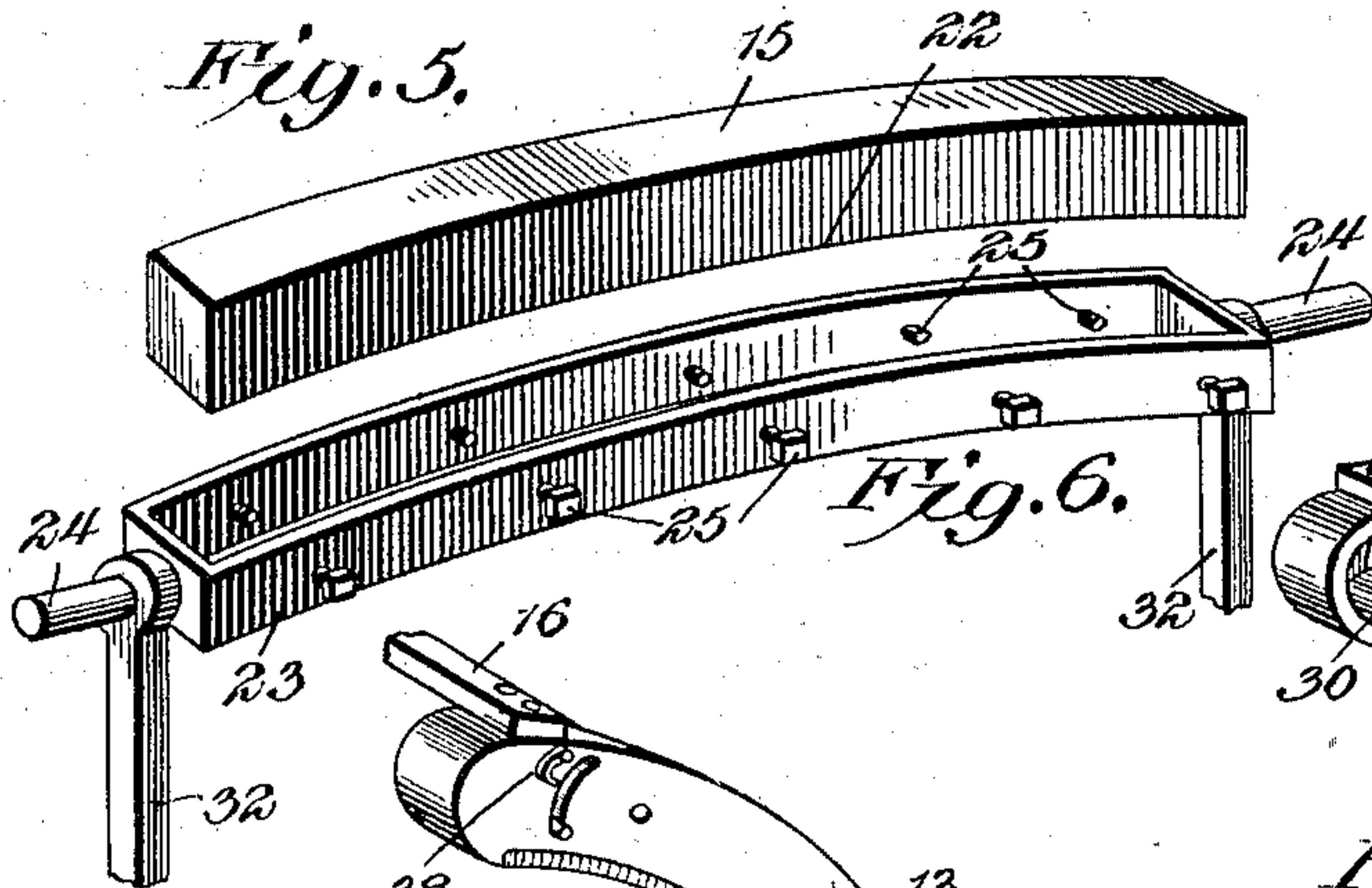
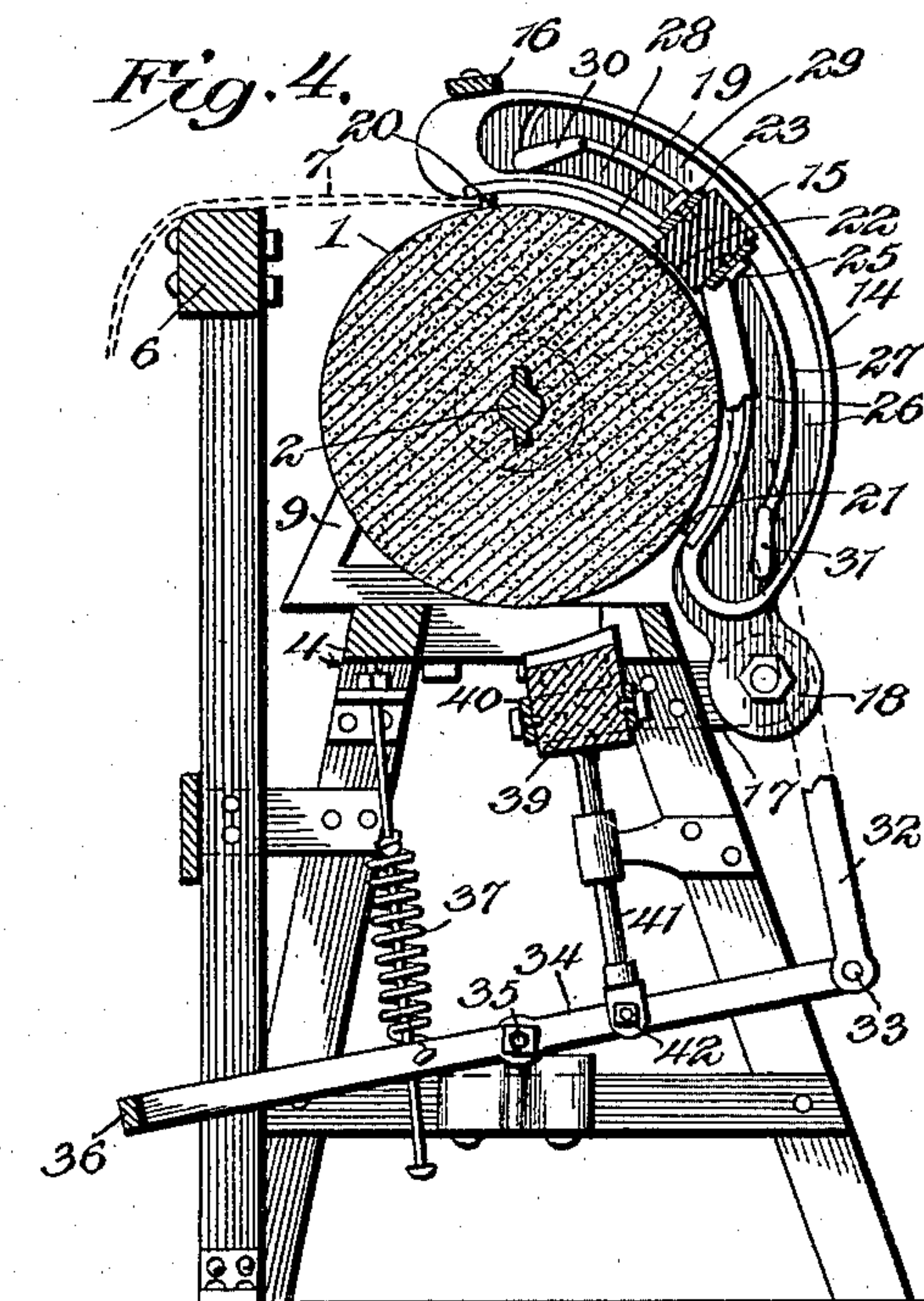
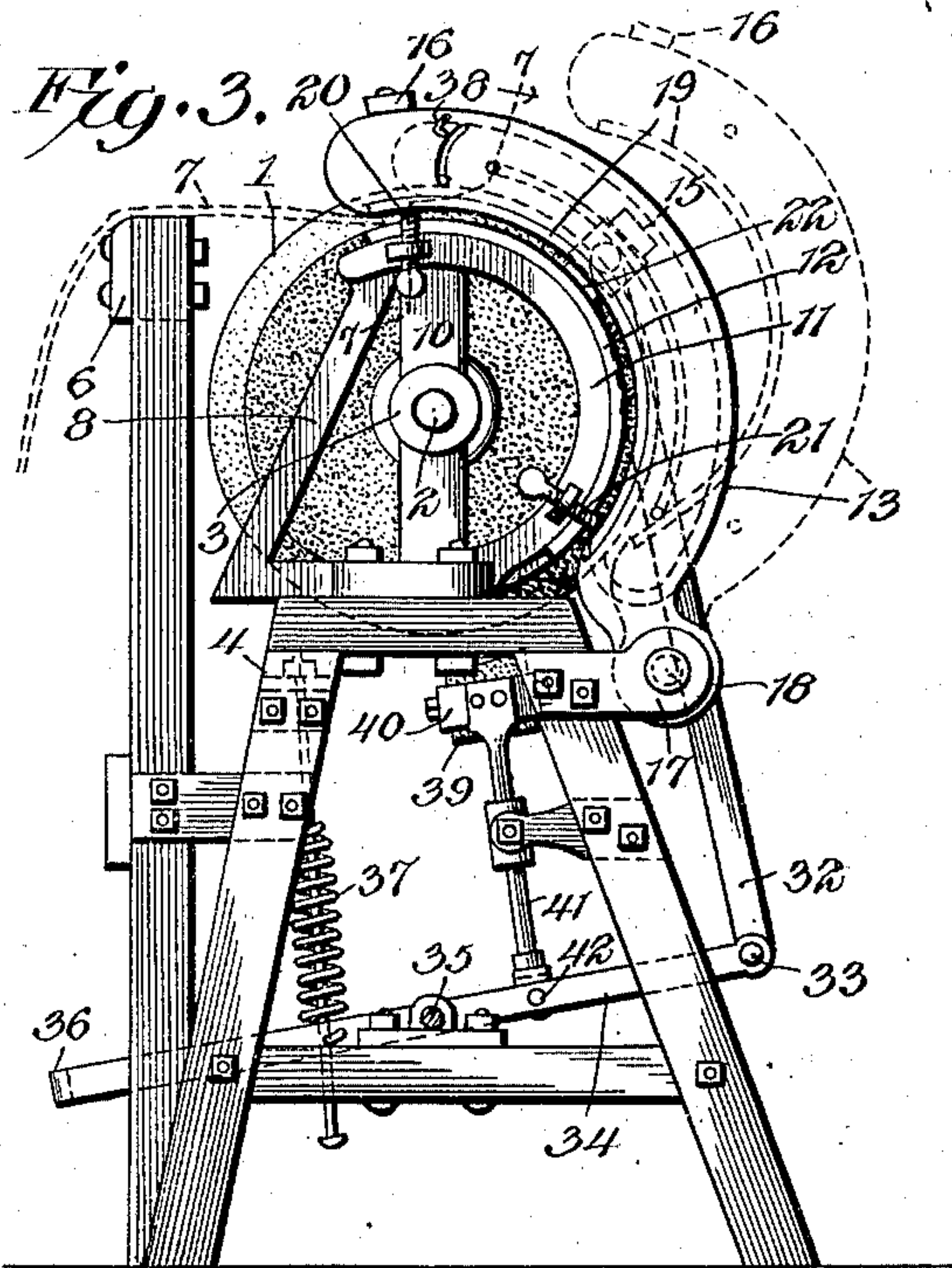


Fig. 9. A perspective view of a curved component, similar to Fig. 5, but showing a different part or adjustment. It is a curved bar with several holes along its length. The component is labeled with numbers: 15, 22, 23, 24, 25, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42.

Witnesses
Howard H. Orr.
Louis G. Julihn

By

Otto F. Feix, Inventor,
E. G. Siggart, Attorney

UNITED STATES PATENT OFFICE.

OTTO FELIX FEIX, OF GLOVERSVILLE, NEW YORK.

HIDE-FLESHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 719,773, dated February 3, 1903.

Application filed March 25, 1902. Serial No. 99,982. (No model.)

To all whom it may concern:

Be it known that I, OTTO FELIX FEIX, a citizen of the United States, residing at Gloversville, in the county of Fulton and State of New York, have invented a new and useful Hide-Fleshing Machine, of which the following is a specification.

This invention relates to a novel hide-fleshing machine.

10 The fleshing of hides—that is to say, the removal of the fleshy particles from their inner sides—is usually accomplished by pressing the hide in a wet condition against the surface of a rapidly-revolving emery-wheel.

15 In order to prevent the burning or other injury of the hide, it is pressed against the surface of the wheel by utilizing the yielding pressure of the hand of the operator. This fleshing operation is exceedingly tedious, laborious, and expensive, however, because the palm of the hand covers an area of only three or four inches, and this area is all that is subjected to the fleshing operation at any given time.

25 The object of my invention is to produce a machine which will subject a very much larger area of the hide, to practically the same treatment obtained by manual fleshing, the pressure being of a yielding nature and the stroke of the pressing element being in all respects similar to the hand-stroke of the skilled operator.

35 A further object of the invention is to provide for either a double or a single stroke—that is to say, a stroke with the pressing element in pressing contact with the hide during its movement in both directions or in one direction only, accordingly as the hide is heavy or light.

40 A further object is to provide great nicety of adjustment to secure just that compression which is best adapted to the successful treatment of the particular hide operated upon.

45 Still further objects of the invention are to provide means for sharpening, truing, and cleaning the emery-wheel during its operation and simple and effective mechanism for holding the hide in its taut or stretched condition while being operated upon.

50 Various other objects subordinate to those enumerated will hereinafter more fully ap-

pear as the necessity for their accomplishment is developed in the succeeding description of the preferred form of my invention, 55 which for the purposes of this application I have illustrated in the accompanying drawings and succinctly claimed hereinafter.

In said drawings, Figure 1 is a rear elevation of my fleshing-machine complete. Fig. 60 2 is a front elevation thereof. Fig. 3 is an end view of the machine with the presser-frame thrown back in dotted lines. Fig. 4 is a transverse sectional view. Fig. 5 is a detail view of the presser proper. Fig. 6 is a 65 similar view of the presser-holder. Fig. 7 is a detail sectional view on the line 7 7 of Fig. 3. Fig. 8 is a detail perspective view of one of the end members of the presser-frame, and Fig. 9 is a similar view looking from the op- 70 posite side.

Like numerals of reference are employed to designate corresponding parts throughout the views.

The emery-wheel 1 is mounted upon a horizontal shaft 2, journaled in suitable bearings 3 at the opposite ends of a stand 4. The wheel preferably, though not necessarily, has a transversely convex periphery and is rotated at the desired rate of speed by the application 80 of power from any suitable source to the shaft 2 through the medium of a power-pulley 5 and belting. (Not illustrated.) In front of the wheel is disposed, as best shown in Fig. 2, a vertical guard or feed-board 6, over the upper edge 85 of which the hide 7 is led and carried over and around one side of the wheel 1 with the fleshy side in contact with said wheel. Ordinarily the operator places his hand upon the hide with just sufficient pressure and draws it 90 down around a segment of the wheel with a quick stroke, this operation being repeated until the entire surface of the hide has been freed of all fleshy particles by the operation of the emery-wheel. My invention is designed 95 to provide a mechanical device to be used in lieu of the hand, but in substantially the same manner, and subjecting a comparatively large surface of the hide to treatment at one time. The apparatus comprehends the employment 100 of a pair of stretching-frames 8 and 9, supported beyond the opposite ends of the emery-wheel—as, for instance, by being bolted to the stand 4 and secured to the bearing support-

ing uprights 10, in which the bearings 3 are formed. These stretching-frames each comprise in addition to the supporting parts thereof an arcuate member 11, substantially concentric with the wheel and provided upon its outer edge with a rubber or other flexible strip 12. The hide is imposed against this yielding surface of the stretching-frames and is held firmly thereon by the end members 13 and 14 of what I shall term a "presser-frame." This presser-frame besides serving to hold the hide in place constitutes a support and guide for a movable presser 15, designed in a manner to be described to press the hide upon the emery-wheel with a yielding pressure and to have a stroke similar to the hand-stroke of an operator skilled in this character of work. The presser-frame comprises the two end members 13 and 14 of arcuate form, as shown, and connected by a connecting-bar 16, which unites the parts in a rigid frame hinged at its lower edge upon brackets 17, carried by the stand 4. The hinged connection (indicated at 18) is offset beyond the lower end of the presser-frame, so that when the latter is tilted back to the position indicated in dotted lines in Fig. 3 the hide will be released to permit of its being drawn forward for the purpose of presenting a new surface to the wheel and to permit of the insertion of a new hide when necessary. The inner edges of the frame members 13 and 14, or those portions of said edges disposed opposite the stretching-frame, are provided with rubber or other flexible strips 19, similar to the strips 12, so that the hide when clamped in place will be held between yielding surfaces to prevent possible injury to the pelt. The position of the presser-frame relative to the wheel in the normal or operative relation of the parts is regulated by adjusting devices, preferably in the form of adjusting or gage screws 20 and 21, carried by the stretching-frames and disposed to act as gages for the presser-frame. By the adjustment of these gage-screws the normal position of the presser-frame is determined, and as the presser is guided by the frame the adjustment of these screws will also gage the pressure to be exerted upon the hide by the presser.

We now come to a consideration of the construction and operation of the presser and the manner in which it is guided in the presser-frame and operated to execute either a single or double stroke, according to the nature of the hide under treatment. The presser proper is preferably composed of solid pieces of rubber, although other yielding material might be substituted therefor, and has its active surface 22 properly shaped to conform to the surface of the wheel. The presser is mounted within a presser-holder 23, having the form of an open-sided box provided with trunnions 24 and with set-screws 25, screwed through the walls of the box or holder 23 and engaging the rubber presser to adjustably retain the latter in the holder. It will be ob-

vious that by reason of this adjustable retention of the presser the pressure thereof upon the hide may be regulated by its individual adjustment as well as by the adjustment of the gage-screws 20 and 21. The trunnions 24 of the presser-holder 23 extend into arcuate guideways 26, formed in the inner or opposed side faces of the members 13 and 14 of the presser-frame. These arcuate guideways are each divided by a medial longitudinal partition 27, defining inner and outer guide-grooves 28 and 29 and terminating short of the opposite ends of the way. At the opposite ends of each partition are pivoted guide-blocks 30 and 31, having their free ends normally urged toward the inner and outer walls, respectively, of the end members 13 and 14. The trunnions 24 of the presser-holder are received within the guide-grooves at the opposite ends of the presser-frame and are connected to the upper ends of links or pitmen 32, pivoted at their lower ends, as indicated at 33, to a treadle 34, mounted upon the shaft 35, extending lengthwise of the stand adjacent to the bottom thereof. At the front end of the treadle 34 is located a foot-bar 36, upon which the foot of the operator is placed for the purpose of operating the treadle to effect the reciprocatory movement of the presser in an arcuate path, the retraction of the treadle being effected by means of retracting-springs 37, mounted in the usual manner, as shown in Fig. 1. When the foot-bar is depressed, the swinging of the treadle will cause the presser to move in an arcuate path with the yielding surface of the presser proper in contact with the hide. As the presser reaches one limit of its movement the trunnions 24 will lift and pass under the guide-blocks 30, which blocks, after the trunnions have passed beyond their free ends, will drop back to their initial positions and will guide the trunnions into the outer grooves 29, so that the retraction of the presser—that is to say, its movement to its initial position—will be effected with the yielding pressing-surface held out of contact with the hide. In like manner the blocks 31 will guide the presser into the inner grooves, and the stroke will be repeated as often as is necessary to the proper fleshing of the hide under treatment. If, however, it should be desired to impart a double stroke to the presser—that is to say, if in the treatment of a heavy hide it is desirable to have the presser bear upon the hide during both movements—it is simply necessary to move the guide-blocks 30 out of their normal positions, so that the trunnions will not pass over and under these blocks in the manner heretofore described. The retention of the blocks 30 in their inoperative positions to permit of a double stroke of the presser is effected by means of pivoted detents 38, mounted upon the outer sides of the members 13 and 14 and arranged to be swung under projecting portions of the guide-blocks, as shown in Fig. 8. Obviously when the presser is utilized for a

double stroke it moves back and forth with the trunnions 24 traveling in the grooves 26 only, the movement of the presser in one direction being effected by foot or other power and in the opposite direction under the impulse of the retracting-spring. It is evident, however, that the presser might be positively driven in both directions by the application of suitable power, and that it is immaterial which way the presser moves during a single stroke, as it is obvious that the emery-wheel may be rotated in either direction, and that therefore the described movement of the presser may be reversed without changing the effect of the treatment, so far as the effect upon the hide is concerned.

For the purpose of keeping the emery-wheel true and in order to clean the same and restore the surface I provide what may be termed a "truing device," comprising a truing-stone 39, shaped to conform to the opposed surface of the emery-wheel and mounted within a suitable holder 40. The holder 40 is mounted at the upper ends of a pair of standards 41, having their lower ends pivoted to the treadle 34, as indicated at 42. The relative proportions of the parts are such that whenever the presser is moved to the upper end of its stroke the stone 39 will be brought into momentary contact with the emery-wheel by the swinging of the treadle.

Briefly the operation of the machine is as follows: The hide to be treated is passed over the upper edge of the guard and feed-board 6 and is passed back over the emery-wheel. The presser-frame, which during the application of the hide has been located in the position shown in dotted lines in Fig. 3, will now be swung toward the emery-wheel to clamp the hide securely against the stretching-frames, located beyond the opposite ends of the wheel. The treadle is now operated, and the presser, bearing yieldingly upon the hide and extending from end to end of the wheel, is caused to move over the surface of the hide for a considerable distance and presses a comparatively large area of the hide against the emery-wheel in much the same manner as the hand of a skilled operator presses a very small portion of the hide against the wheel to effect the detachment of the fleshy particles. When the machine is operated with a single stroke—as, for instance, in treating light hides—the presser is guided into the outer groove 29 and during its retractile movement exerts no pressure whatever upon the hide. When, however, a heavy hide is treated, the guide-blocks 30 are held back in the manner heretofore described and the presser will be held in contact with the hide during both its forward and backward movement. When that portion of the hide defined within the limits of the stroke of the presser has been properly fleshed, the presser-frame is swung back to the dotted position indicated in Fig. 3, the hide is drawn forward to present another portion thereof between

the wheel and presser, and the described operation is repeated.

From the foregoing it will appear that I have produced a simple, durable, and effective hide-fleshing machine for quickly and inexpensively fleshing hides without the usual expenditure of manual labor and effecting a mode of treatment practically identical with that received by the hide when fleshed by a skilled operator; but while the present embodiment of the invention appears at this time to be preferable I do not wish to be understood as limiting myself to the structural details defined, as, on the contrary, I reserve the right to effect such changes, modifications, and variations of the illustrated structure as may be properly embraced within the scope of the protection prayed.

What I claim is—

1. In a hide-fleshing machine, the combination with a movable fleshing member, of a relatively yielding presser disposed in cooperative relation therewith and movable over the surface of said member to press a hide into effective contact therewith.
2. In a hide-fleshing machine, the combination with a fleshing-wheel, of a presser disposed to press a hide against the surface of the wheel, and means for imparting movement to the presser in a path concentric with the wheel.
3. In a hide-fleshing attachment, the combination with a fleshing-wheel, of a yielding presser disposed to press a hide against the wheel, and means for moving the presser over the hide to press different portions thereof into contact with the wheel.
4. In a hide-fleshing machine, the combination with a fleshing-wheel, and means for engaging the hide to hold the same taut and in contact with the wheel, of a presser disposed to bear against the hide, and means for imparting a stroke to the presser to cause the same to press the hide at different points.
5. In a hide-fleshing machine, the combination with a fleshing-wheel, of a presser disposed to press the hide against the wheel, means for moving the presser in opposite directions in a path concentric with the wheel, and means for holding the presser out of effective contact with the hide during its movement in one direction.
6. In a hide-fleshing machine, the combination with a fleshing-wheel, of a presser arranged to press the hide against the wheel, means for moving the presser in opposite directions, and an adjustable device for causing the presser to be retained in contact with the hide during its movement in both directions, or during its movement in one direction only, as desired.
7. In a hide-fleshing machine, the combination with a fleshing-wheel, of an arcuate presser-frame, a presser mounted for movement in the frame and arranged to press a hide against the wheel, and means for operating the presser.

8. In a hide-fleshing machine, the combination with a fleshing-wheel, of an arcuate presser-frame provided with guide-grooves, a presser provided with trunnions engaging the grooves, and means for operating the presser.

9. In a hide-fleshing machine, the combination with a fleshing-wheel, of an arcuate presser-frame comprising end members each provided with laterally-spaced grooves, a presser provided with trunnions extended into the guide-grooves of the presser-frame, means for guiding the trunnions through different guide-grooves as the presser is moved in different directions, and means for operating the presser.

10. In a hide-fleshing machine, the combination with a fleshing-wheel, of an arcuate presser-frame comprising end members having guideways in their inner faces, a longitudinally-disposed partition dividing said guideways into laterally-spaced grooves, a movable guide-block mounted at one end of each partition, means for adjusting the positions of the guide-blocks, a presser having trunnions disposed to move within the guide-grooves of the presser-frame, and means for operating the presser.

11. In a hide-fleshing machine, the combination with a fleshing-wheel, of an arcuate presser-frame comprising end members having guideways formed in their opposed faces, longitudinally-disposed partitions dividing said guideways into laterally-spaced guide-grooves, guide-blocks located at opposite ends of said partitions, means for retaining the guide-blocks in different positions, a presser provided with trunnions movable within the guide-grooves and means for operating the presser.

12. In a hide-fleshing machine, the combination with a fleshing-wheel, of stretching-frames disposed beyond the opposite ends thereof, a presser-frame disposed to clamp the hide against the stretching-frames, and a movable presser guided in its movements by the presser-frame and disposed to press the hide into effective contact with the fleshing-wheel.

13. In a hide-fleshing machine, the combination with a fleshing-wheel, of stretching-frames located at the opposite ends thereof, a hinged presser-frame extended around one side of the wheel and disposed to clamp a hide upon the stretching-frames, a yielding presser movably carried by the presser-frame, and means for causing the presser to travel around a portion of the wheel for the purpose of pressing the hide into contact therewith.

14. In a hide-fleshing machine, the combination with a fleshing-wheel, and an arcuate presser-frame hinged at its lower end and movable toward and from the wheel, of a presser movably mounted in the presser-frame and designed to move around one side of the wheel to press the hide in contact therewith, and means for operating the presser.

15. In a hide-fleshing attachment, the com-

bination with a fleshing-wheel, of a movable presser-frame, a gage device for positioning the presser-frame with respect to the wheel, and a presser movable within the presser-frame.

16. In a hide-fleshing attachment, the combination with a fleshing-wheel, of a movable presser-frame, a gage device for adjustably positioning the presser-frame with respect to the wheel, a presser movable within the presser-frame to press different portions of the hide against the wheel, and also adjustable toward and from the wheel, and means for securing the presser in its individually-adjusted positions.

17. In a hide-fleshing machine, the combination with a fleshing-wheel, of stretching-frames located at the opposite ends thereof and provided with yielding facings, a presser-frame comprising end members having yielding strips opposed to the facings of the stretching-frames, a presser movable within the presser-frame and designed to press the hide into effective contact with the fleshing-wheel, and means for operating the presser.

18. In a hide-fleshing machine, the combination with a fleshing-wheel, and means for holding a hide stationary opposite the wheel, of an elastic presser disposed to press the hide against the wheel and movable over the surface of said hide.

19. In a hide-fleshing machine, the combination with a fleshing-wheel and a pressing-frame, of a presser-holder movably mounted in the frame, operating means connected to the holder, and a yielding presser mounted within the holder.

20. In a hide-fleshing machine, the combination with a fleshing-wheel and a swinging presser-frame, of a presser movable within the presser-frame and partly around the wheel, a treadle operatively connected to the presser, and means for retracting the treadle.

21. In a hide-fleshing machine, the combination with a fleshing-wheel, of a guard-board and a presser-frame disposed at opposite sides of the wheel, a movable presser mounted within the presser-frame and disposed to press a hide against the wheel, and means for operating the presser.

22. In a hide-fleshing machine, the combination with a movable fleshing member, of a presser movable over the surface of the member to press a hide in effective contact therewith, said presser being movable in opposite directions, and means for automatically relieving the pressure upon the hide during the movement of the presser in one direction.

23. In a hide-fleshing machine, the combination with a fleshing-wheel, of a presser disposed to press a hide against the wheel, means for moving the presser in opposite directions in a path concentric with the wheel, and means for automatically moving the presser out of effective contact with the hide at the limit of its movement in one direction and for retaining the presser in such ineffective po-

sition during its movement in the opposite direction.

24. In a hide-fleshing machine, the combination with a fleshing-wheel, of a presser arranged to press a hide against the wheel, means for moving the presser in opposite directions over the surface of the hide, and a device for automatically retaining the presser out of contact with the hide during its movement in one direction, said device being adjustable to permit the presser to remain in effective contact with the hide during its movement in both directions.

25. In a hide-fleshing machine, the combination with a fleshing-wheel, and a presser-frame, of a presser-holder movable in the frame in a path concentric with the fleshing-wheel, means for operating the holder, and a presser mounted in the holder and arranged to yield locally to accommodate inequalities in the hide.

26. In a hide-fleshing machine, the combination with a fleshing-wheel, of a presser movable in a path concentric with the wheel to press a hide thereon, a truing device disposed for intermittent contact with the wheel, and operating means common to the presser and truing device, said operating means being arranged to present the truing device to the wheel when the presser reaches one limit of its movement.

27. In a hide-fleshing machine, the combination with a fleshing-wheel, of a presser movable in a path concentric with the wheel to press a hide thereon, a truing device disposed for intermittent contact with the wheel, and a treadle common to the presser and truing device, said treadle being arranged to present the truing device to the wheel when the presser reaches one limit of its movement.

28. In a hide-fleshing machine, the combination with a fleshing member, of a movable presser-frame disposed to hold a hide in po-

sition opposite the fleshing member, and a presser mounted in the presser-frame and having bodily movement over the surface of the hide.

29. In a hide-fleshing machine, the combination with a fleshing member, of a movable presser-frame disposed to hold a hide stationary in position opposite the fleshing member, and an inherently-yielding presser mounted in the presser-frame and having bodily movement over the surface of the hide.

30. In a hide-fleshing machine, the combination with a fleshing-wheel, and means for holding a hide stationary opposite the wheel, of an inherently-yielding presser movable over the surface of the hide to press different portions thereof into contact with the wheel.

31. In a hide-fleshing machine, the combination with a fleshing-wheel, and a presser-frame disposed to hold a hide taut opposite the wheel, of a presser movable over the surface of the hide to press different portions thereof into contact with the wheel, and guiding means for retaining the presser in effective contact with the hide during its movement in one direction and for retaining said presser out of contact with the hide during its movement in the opposite direction.

32. In a hide-fleshing machine, the combination with a fleshing-wheel, and means for rotating the same continuously in one direction, of means for holding a hide taut opposite the wheel, and a presser movable in opposite directions in a path concentric with the wheel.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

OTTO FELIX FEIX.

Witnesses:

NICHOLAS M. BANKER,
EZRA A. SUTLIFF.