

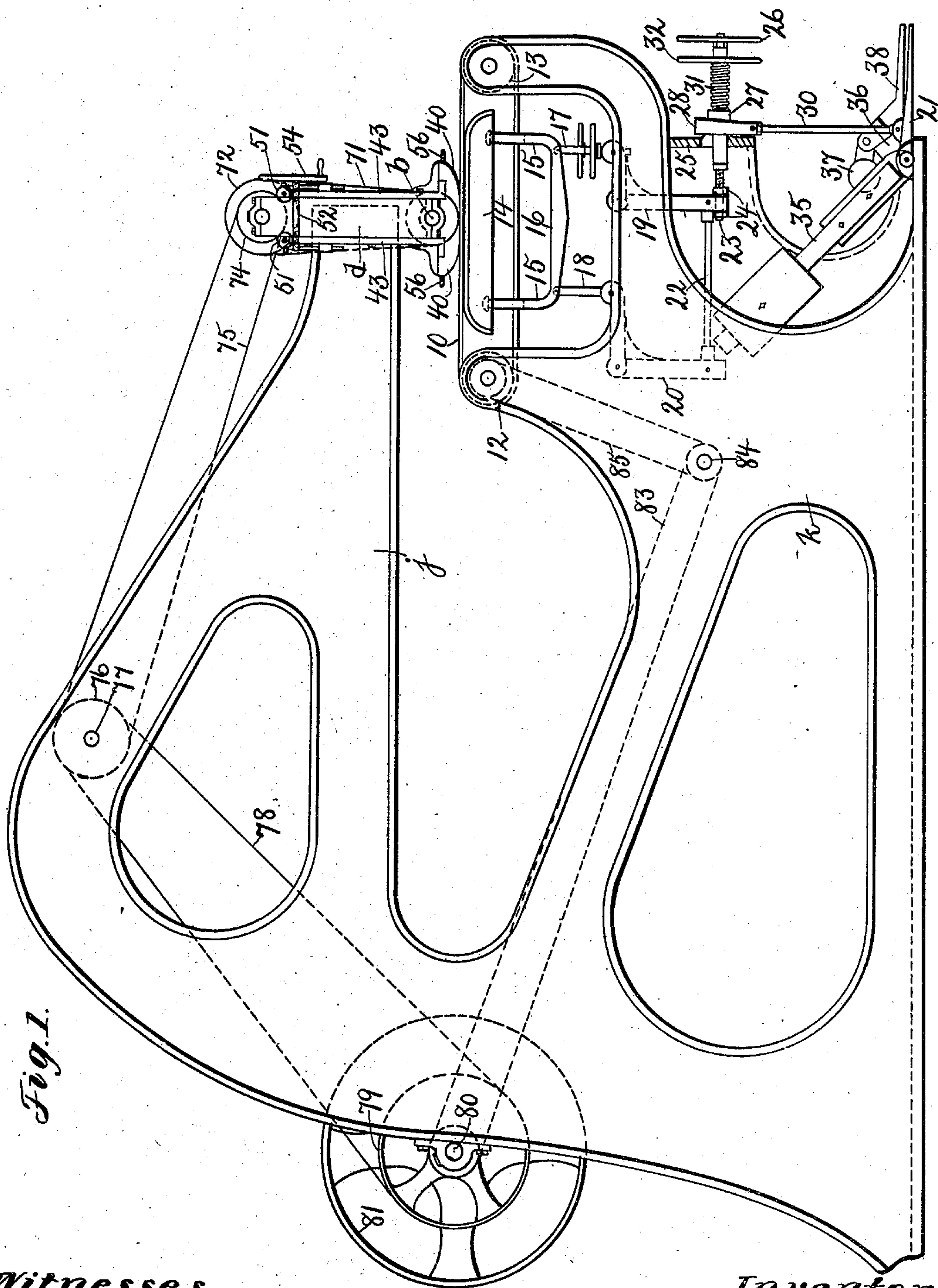
No. 894,502.

PATENTED JULY 28, 1908.

H. A. HOLDER.
LEATHER BUFFING MACHINE.

APPLICATION FILED NOV. 14, 1903.

3 SHEETS—SHEET 1.



Witnesses.
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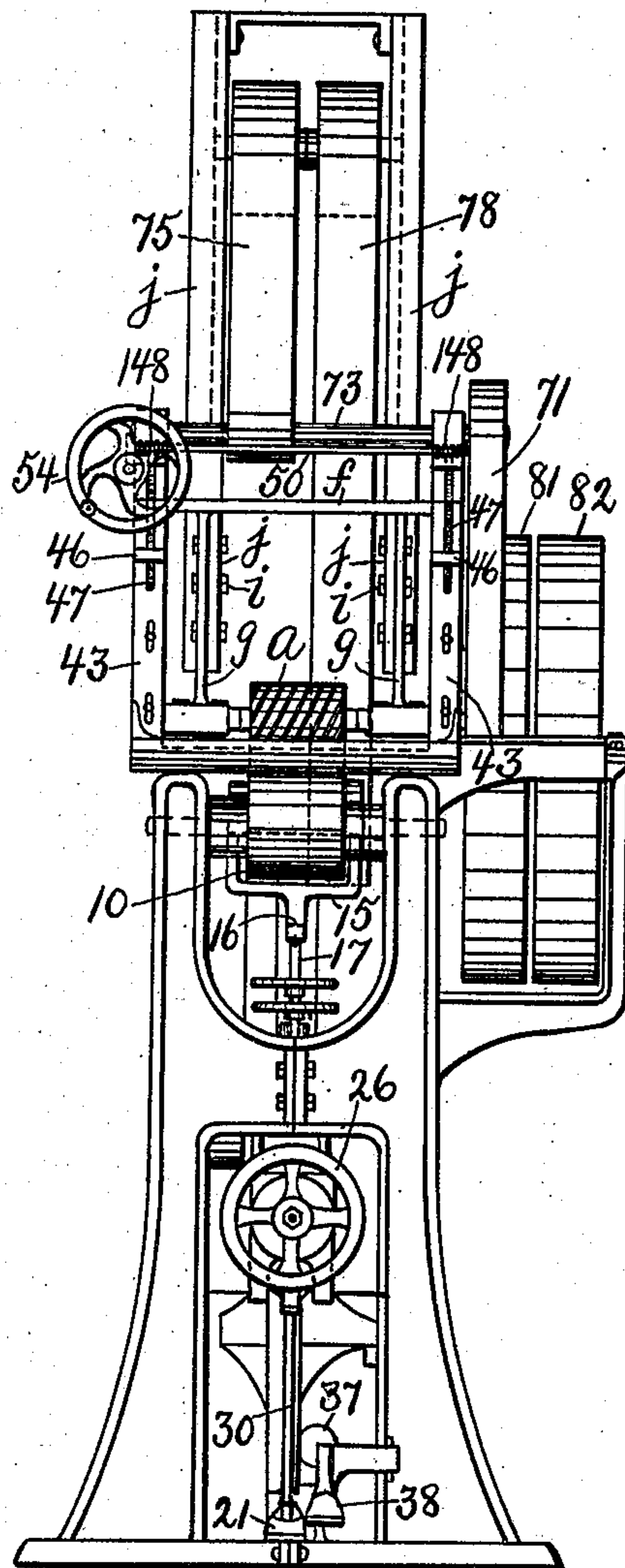


Fig. 2.

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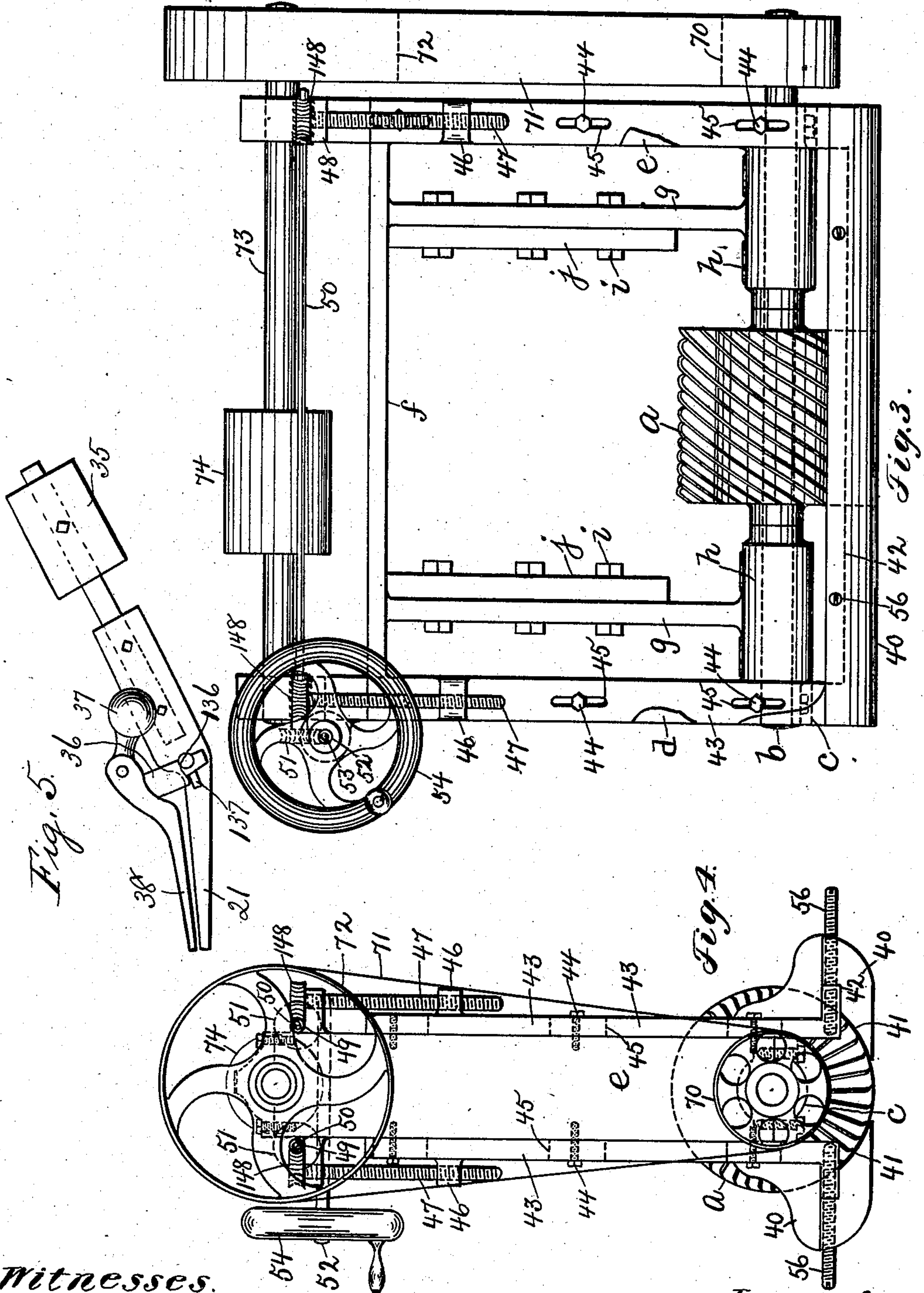
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3 SHEETS—SHEET 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY A. HOLDER, OF LYNN, MASSACHUSETTS.

LEATHER-BUFFING MACHINE.

No. 894,502.

Specification of Letters Patent.

Patented July 28, 1908.

Application filed November 14, 1903. Serial No. 181,137.

To all whom it may concern:

Be it known that I, HENRY A. HOLDER, a citizen of the United States, residing in Lynn, in the county of Essex and State of Massachusetts, have invented an Improvement in Leather-Buffing Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to a machine for treating hides, skins and leather, and is especially adapted for use in buffing leather. For this purpose I employ a rotatable cutting cylinder, a bed to support the leather while being acted upon by the cutting cylinder, and means cooperating with the cutting cylinder for controlling the depth of cut made in the leather by said cylinder, said means for the best results being adjustable with relation to said cutting cylinder, as will be described.

Figure 1 is a side elevation of one form of machine embodying this invention. Fig. 2, a front elevation of the machine shown in Fig. 1. Fig. 3, a detail in side elevation and on an enlarged scale of the knife cylinder and one of its cooperating guards shown in Fig. 1. Fig. 4, an end elevation of the parts shown in Fig. 3, looking toward the left, and Fig. 5, a detail to be referred to.

Referring to the drawings, *a* represents a rotatable cutting cylinder or bladed roll of any suitable or usual construction, which has its shaft *b* journaled in boxes *c* secured to a stationary frame or head, which may be made as herein shown, and consists of side bars *d*, *e*, connected at their upper ends by a cross bar *f*, from which depend hanger bars *g* having integral with them bearing hubs or sleeves *h*. The knife supporting head is secured as by bolts or screws *i* to the front end of overhanging arms *j* of two side frames or uprights *k*, which are separated from each other a suitable or desired distance but are firmly secured together to form the framework of the machine. The knife cylinder *a* has cooperating with it a suitable bed or support for the material being treated, and in the present instance, the said bed is shown as an endless belt or apron 10 (see Fig. 1) passed about rolls 12, 13, journaled in the side frames of the machine, the said belt having cooperating with it a supplemental bed 14, which is capable of being raised and lowered at the will of the operator. As here-

in shown, the supplemental bed 14 is supported by arms 15 connected by a tie bar 16 joined by links 17, 18, to elbow levers 19, 20, pivotally connected with the side frames of the machine and operatively connected with a foot treadle 21. For this purpose, the levers 19, 20 are connected together by a tie rod 22, and the lever 19 has extended through it a threaded rod 23, which is secured to the lever 19 by the checknuts 24 and which is extended through a cross bar 25 of the framework of the machine and is provided with a hand wheel 26.

The rod 23 has fast on it a cam block 27, with which cooperates a wedge bar 28 connected with the treadle 21 by the link 30. The rod 23 is encircled by a helical spring 31 interposed between the block 27 and a hand wheel 32 by means of which the tension of the spring 31 may be regulated. The foot treadle 21 has connected with it a counter-weighted arm 35, and the said foot treadle is designed to be locked in its lowered position by a locking dog or arm 36, provided with a notch 136 (see Fig. 5), which is held in engagement with a lug or projection 137 on the foot treadle 21 by a weight 37 and which is disengaged from the foot treadle by a releasing treadle 38 to which the dog or arm 36 is secured. The bed operating mechanism just described is not herein claimed as it is substantially such as shown in U. S. Patent No. 599,928 dated March 1, 1898.

In buffing leather it is desirable to effect a cut of uniform depth in the grain side, so as to remove a layer of the same thickness, and one which is not of such depth as to injure the hide or skin. For this purpose, I have provided guards or stops located on opposite sides of the knife cylinder, and for the best results make said stops or guards adjustable vertically and laterally as will be described.

In the present instance, the guards or stops are shown as side pieces 40 having their inner faces 41 curved to conform to the circular form of the knife cylinder, and their under faces flat or straight, as represented in Fig. 4. The side pieces 40 of the guards or stops are and may be adjustably attached to arms 42 on upright bars 43, which are secured by bolts or screws 44 to the side pieces of the knife supporting frame or head, said bolts or screws being extended through elongated slots 45 in the upright bars 43. The upright bars 43 are provided with lugs or ears 46 having screw-threaded openings, through which

are extended threaded rods 47, which are supported in lugs or ears 48 on the side pieces *d, e*, of the knife supporting head. The threaded rods 47 are provided with worm gears 148, which mesh with worms 49 on shafts 50 supported by the side pieces *d, e* of the knife supporting head, and provided at their front end with worm gears 51, which mesh with worms 52 on a shaft 53 suitably supported by the knife supporting frame or head and provided with a hand wheel 54, by which the shaft 53 may be turned to effect vertical adjustment of the guards or stops 40.

The lateral adjustment of the guards or stops may be effected as herein shown by means of screws 56, extended through threaded openings in the guards or stops and into threaded sockets in the arms 42 of the upright bars 43. The flat under surfaces of the guards or stops 40 may and preferably will be made of substantial width to afford a broad bearing surface on opposite sides of the knife cylinder, for the hide or skin to be pressed against and thereby be held firmly on opposite sides of the knife cylinder, so that the latter can cut into the portion of the hide or skin in line with it, only to a predetermined depth, which is the same throughout the entire length of the hide or skin. The depth of the cut made by the knife cylinder, may be varied by adjusting the guards with relation to the knife cylinder or vice versa.

With the apparatus herein shown the guards may be simultaneously adjusted in a vertical direction and individually adjusted in a lateral or horizontal direction. I have herein shown one form of guards or stops and mechanism for adjusting the same with relation to the knife cylinder, but I do not desire to limit my invention in this respect.

In the machine herein shown as embodying this invention, the bed is movable toward and from the knife cylinder, which has a fixed position with relation to the bed, but I do not desire to limit my invention in this respect.

The knife cylinder *a* may be rotated in any suitable manner and as herein shown, the shaft *b* of said cylinder has fast on it a pulley 70 which is connected by a belt 71 with a pulley 72 on a shaft 73 supported in the side frames *d, e*, and provided with a pulley 74, which is connected by a belt 75 with a pulley 76 on a shaft 77 supported by the side

frames of the machine, the shaft 77 being connected by a belt 78 with a pulley 79 on a main shaft 80, provided with fast and loose pulleys 81, 82. The main shaft 80 is connected by a belt 83, with a shaft 84, which in turn is connected by a belt 85 with the shaft of the roller 12.

Claim.

1. In a machine of the character described, in combination, a rotatable knife cylinder and a bed to support the work, one of which parts is movable toward and from the other, guards or stops located on opposite sides of the knife cylinder and coöperating with said bed to firmly hold the work on said bed at opposite sides of the point where the cut is made, and means to simultaneously move said guards bodily with relation to said knife to vary the depth of cut made by said cylinder.

2. In a machine of the character described, in combination, a rotatable knife or cylinder and a bed to support the work, one of which parts is movable toward and from the other, guards or stops located on the opposite sides of said knife cylinder and against which the work is pressed while being acted upon by said knife cylinder, means for simultaneously adjusting said guards or stops in one direction, and means to effect adjustment of said guards or stops in a direction substantially at right angles to the first mentioned direction, substantially as described.

3. In a machine of the character described, in combination, a rotatable knife cylinder and a substantially flat bed to support the work, one of which parts is movable toward and from the other, guards or stops located on opposite sides of the knife cylinder and coöperating with said substantially flat bed to firmly hold the work on said bed at opposite sides of the point where the cut is made, means to move said guards bodily toward and from said bed, and means to move said guards substantially parallel with said bed, substantially as described.

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

HENRY A. HOLDER.

Witnesses:

JAS. H. CHURCHILL,
J. MURPHY.