

No. 618,581.

Patented Jan. 31, 1899.

E. B. PARKHURST.
LEATHER DRESSING APPARATUS.

(Application filed Sept. 21, 1898.)

(No Model.)

2 Sheets—Sheet 1.

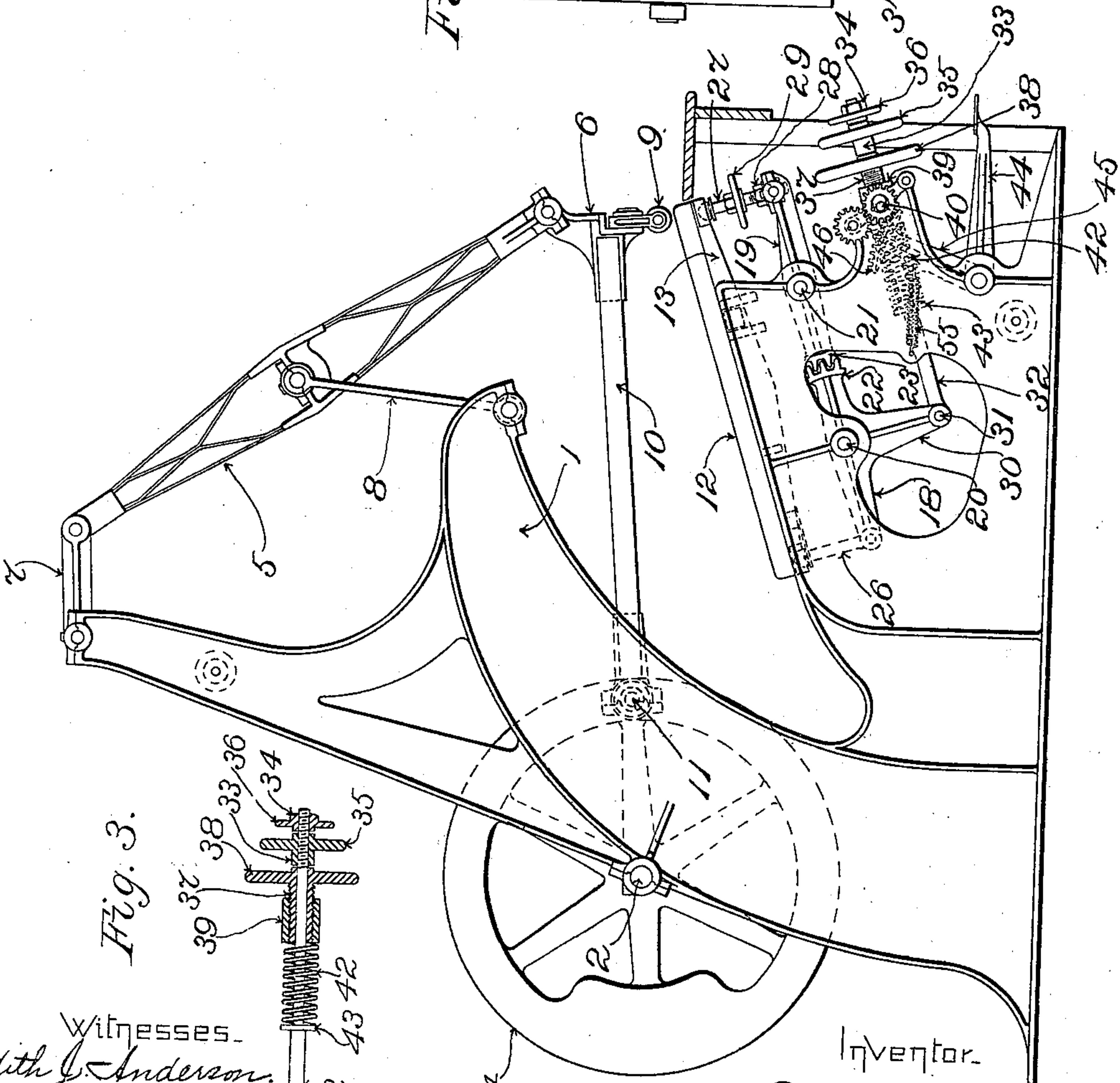
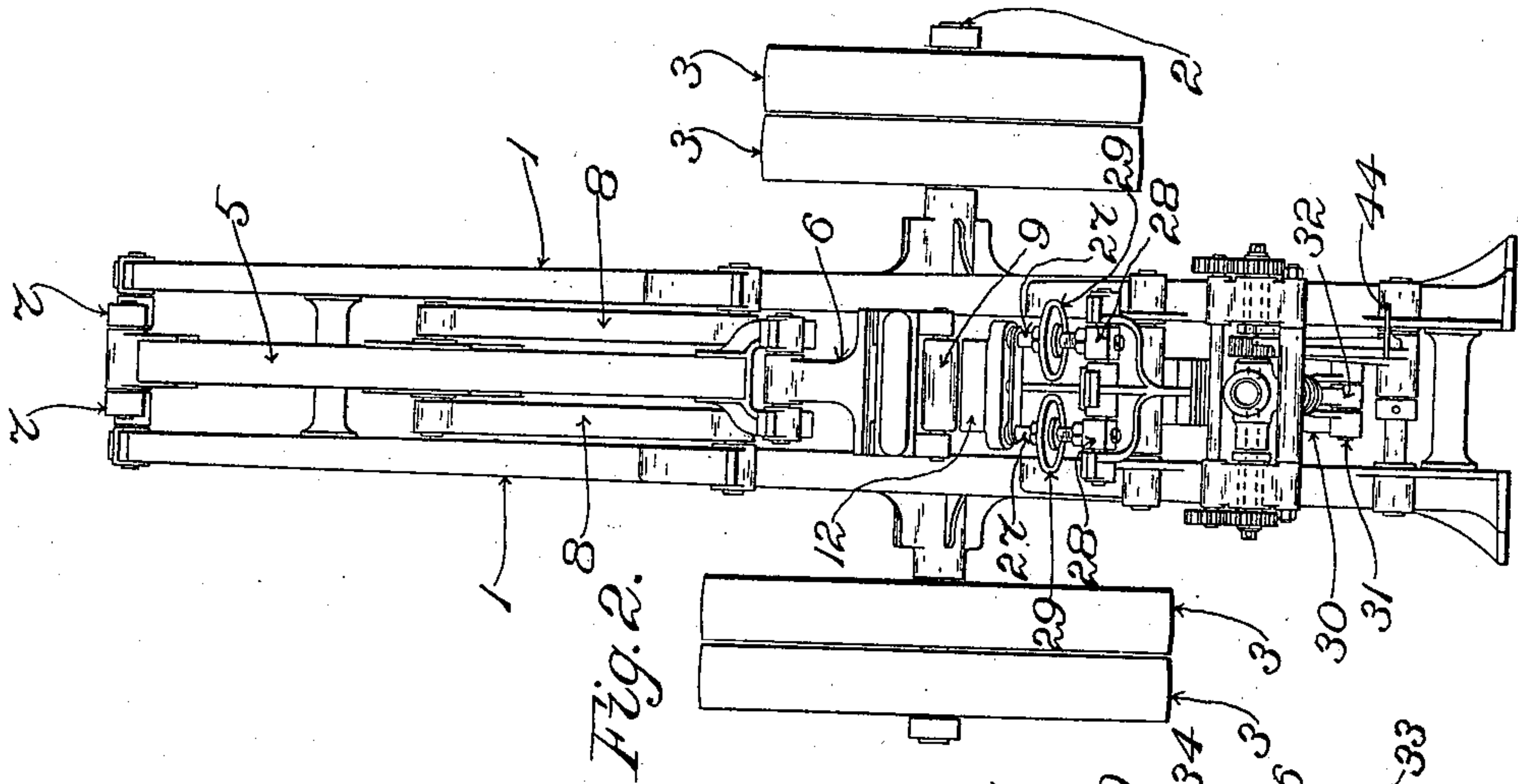
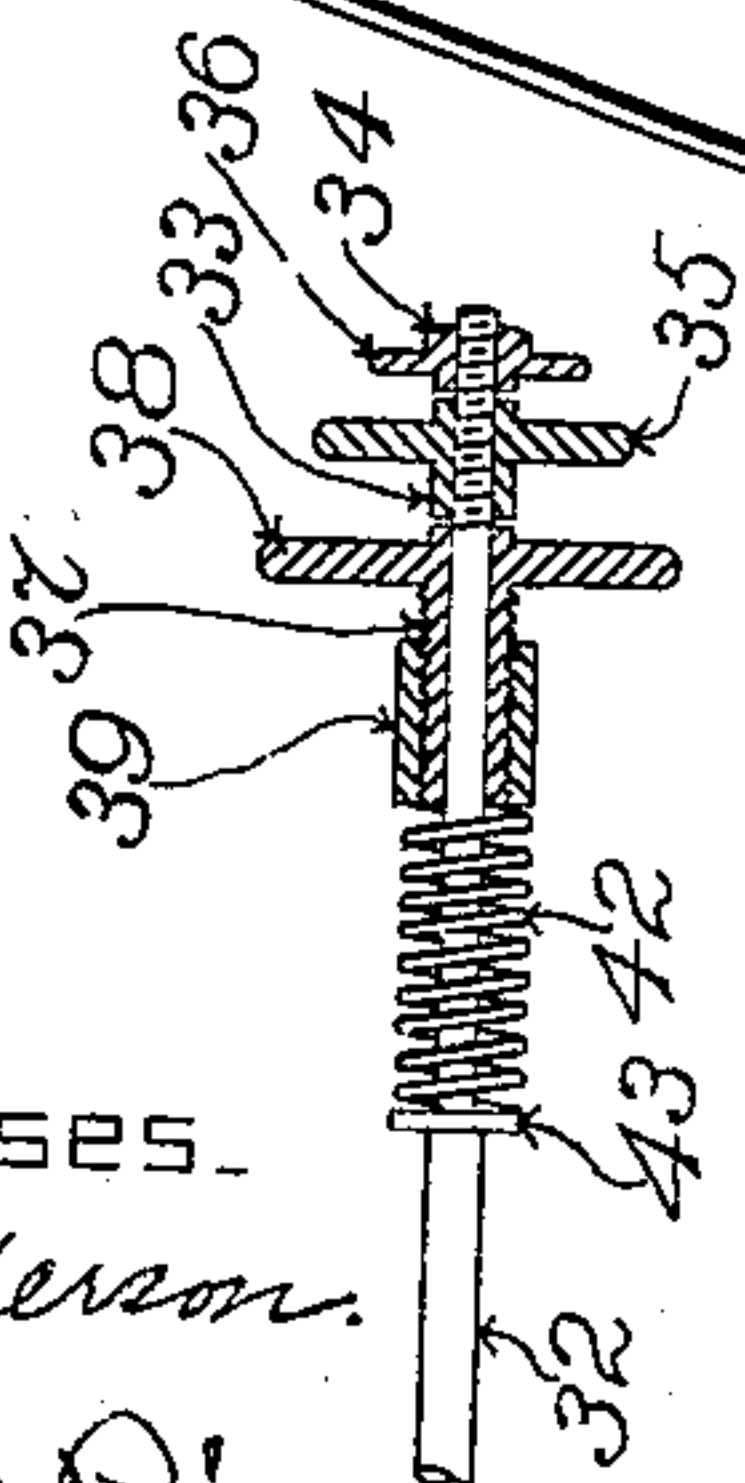


Fig. 3.



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UNITED STATES PATENT OFFICE.

EDWARD B. PARKHURST, OF WOBURN, MASSACHUSETTS, ASSIGNOR TO
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LEATHER-DRESSING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 618,581, dated January 31, 1899.

Application filed September 21, 1898. Serial No. 891,504. (No model.)

To all whom it may concern:

Be it known that I, EDWARD B. PARKHURST, a citizen of the United States, residing at Woburn, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Leather - Dressing Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The invention consists in novel means for moving at will the bed of a leather-dressing machine out of its working position in proximity to the path of movement of the tool and restoring it again into such working position
15 when desired, as necessary at times in the practical use of leather-dressing machines.

More specifically, the invention consists in the combination, with the bed and a foot-treadle or equivalent part to which movement
20 may be imparted by the operator when required, of intermediate devices by means of which one movement of the foot-treadle or equivalent part is made operative to occasion the movement of the bed away from its work-
25 ing position and the next movement thereof causes or permits the bed to resume its working position.

The aim of the invention is, broadly speaking, to provide a simple treadle mechanism or
30 the like requiring no especial attention on the part of the attendant upon the machine and whereby on simple depression of the treadle the bed shall be moved out of its working position at one movement of the treadle downward and restored to such position at the next
35 succeeding similar movement.

The invention will now be described with reference to the accompanying drawings, in which latter I have illustrated the best embodiment thereof that I have yet contrived, after which the distinguishing characteristics of the invention will be particularly pointed out in the claims at the close of this specification.

45 Figure 1 of the drawings is a view representing in side elevation a leather-dressing machine having the said embodiment of the invention applied thereto. Fig. 2 is a view in elevation, looking from the right-hand side
50 in Fig. 1. Fig. 3 is a sectional detail view. Fig. 4 is a view in elevation of the eccentric

bearings and other parts immediately adjacent thereto. Fig. 5 is a view in side elevation showing the foot-treadle and parts connected therewith for operating the eccentric
55 bearings. Fig. 6 shows views of one of the eccentric bearings in elevation.

The illustrated machine is in the main of old and known construction.

In the drawings the side frames of the machine are designated 1 1. The various working parts of the machine are mounted upon the said side frames and chiefly are located between the latter.

2 designates a power-driven shaft, band-
65 pulleys thereon being designated 3 3, and a crank wheel or wheels thereon being designated 4.

5 designates the swinging arm or pendulum, which sometimes is employed in machines of
70 this class and with the lower part of which the tool-carrier 6 is connected pivotally, as usual, the said swinging arm or pendulum 5 being connected with the frames 1 1 by means of arms or links 7 7 and 8 8, respectively, all
75 as usual.

9 designates the tool, which may be of any desired character or construction, according to the nature of the work that is required to be performed by the aid of the machine, and
80 10 designates the arm, which extends from the tool-carrier 6 to the crank-pin 11, which is mounted on the crank wheel or wheels 4.

12 designates the bed, and 13 the bed-frame. As in the United States Letters Patent No. 85
604,903, granted to me May 31, 1898, I have herein represented the bed and bed-frame as supported upon the oppositely-projecting arms of two levers 18 and 19, which are respectively pivoted to the frames 1 1 at 20 21
90 and which have their contiguous ends engaged with each other by being formed or provided with sectors 22 23, which intermesh, the free ends of the said oppositely-projecting arms of the said levers being connected
95 by the rods 26 and 27 to the bed-frame of the table. As in the said patent, the two forward rods 27 27 are shown screw-threaded and fitted to tapped holes in blocks 28 28, that are pivoted to the forward extremity of the lever
100 19, the said rods being provided with hand-wheels 29 29 for convenience in making ad-

justment. As in the said patent, also, the lever 18 is furnished with a third arm 30, having pivoted thereto at 31 the forwardly-extending rod 32, the latter having its forward end screw-threaded and having mounted thereon the nut 33 and check-nut 34, which respectively are provided with hand-wheels 35 and 36. These parts last mentioned are omitted from Fig. 2 in order to secure greater clearness of illustration in the said figure. The rod 32 passes through the sleeve 37, which latter is screw-threaded externally and provided with a hand-wheel 38. The said sleeve is fitted to the threaded hole which is tapped through the collar 39, the said collar being furnished with one or more journals 40 40, (two being shown herein,) on which it is free to rock in order to accommodate the collar 39 to the varying angle that is assumed by the rod 32 in unison with the swing of the arm 30 of lever 18 as the bed rises and falls.

42 designates a spiral spring encircling the rod 32 and confined between an abutment 43 thereon and the rear end of the sleeve 37. As will be apparent, adjustment of the sleeve 37, effected by rotating the same through power applied to the hand-wheel 38, will operate to vary the height of the bed 12 without varying the tension of the spring 42. Adjustment of the tension of the spring 42 is effected by loosening check-nut 34 and turning nut 33 to the required extent to effect such adjustment.

44 designates a foot-lever, which I provide for the purpose of enabling the bed 12 to be instantly lowered from its working position in proximity to the path of movement of the tool 9 and as quickly restored to such working position without any shift or change being necessary to be made by hand of the adjusting devices which have been described.

Intermediate the foot-lever 44 and the bed 12 I introduce in accordance with my invention devices which are connected with the bed-supporting mechanism or devices and which operate substantially, as will now be explained, so as to render one depression of the foot-lever 44 operative to effect the instant lowering of the bed 12 from its working position and also render the next ensuing depression of the said foot-lever operative to effect the immediate restoration of the bed to such working position without any shift or change of the various adjusting devices which are employed in connection with the bed. A leading characteristic of the present embodiment of the invention is the employment of one or more eccentrics in connection with the movable supports of the bed, such eccentric or eccentrics being combined with the said foot-lever or equivalent part by means of intermediate devices by means of which a partial movement of rotation is transmitted to the eccentric or eccentrics at each depression of the foot-lever or corresponding movement of the equivalent part. Herein the eccentrics take the form of eccentric bearings 48

48 for the journals 40 40 of the collar 39. I show the foot-lever 44 provided with an arm 45, carrying a gear-segment 46, meshing with a spur-gear 47, that is mounted to turn freely on the exterior of one of the said eccentric bearings 48 48 for the journals 40 40 of the sleeve 39. The spur-gear 47 has connected pivotally therewith a pawl 49, that is acted upon by a spring 50, also applied to such spur-gear with a tendency to hold the engaging end of the said pawl 49 in contact with the edge of a two-toothed ratchet 51, which is provided on one of the said bearings 48. Each time the foot-lever 44 is depressed the gear-segment 46 communicates to the spur-gear 47 a movement of partial rotation, and the latter, through the engagement of its pawl 49 with the ratchet 51, occasions a half-rotation of the bearing 48, by which such ratchet is carried. The two eccentric bearings 48 48 are connected to turn in unison through suitable gearing, the latter being constituted herein by a spur-pinion 52 on each of such bearings, spur-pinions 53 53, which are in mesh with the said spur-pinions 52 52, respectively, and a short shaft 54, on which the said spur-pinions 53 53 are fast. It being understood that the cylindrical hole which is made through each of such bearings for the reception of the corresponding journal 40 is eccentrically located with respect to the cylindrical exterior of the bearing, it will be perceived that when the bearings 48 48 are rotated through a half-revolution the action is to shift the journals 40 40 and collar 39 bodily to an extent corresponding with the degree of eccentricity. Since the collar 39 and connected sleeve 37 are confined on rod 32 between nut 33 and spring 42, the latter taking against abutment 43, it follows that the said movement of collar 39 occasions a corresponding movement of rod 32. The horizontal component of this movement of rod 32 acts to turn the levers 18 and 19, and thereby move the bed 12 vertically. By one half-revolution of the eccentric bearings, occasioned by one depression of foot-lever 44, the bed 12 is depressed instantly out of its working position. The next half-revolution of said bearings, caused by the next depression of the said foot-lever, raises the said bed instantly into its working position. A spring 55 raises the foot-lever 44 after the same has been depressed, and the reverse movement of said foot-lever and its gear-segment 45, which is thereby occasioned, returns the spur-pinion 47 to its starting position, thereby carrying the pawl 49 back into place to engage with the other tooth of the ratchet 51. The parts are arranged substantially as shown, so that in each of the two opposite positions of the eccentric bearings the said bearings shall be on their centers with respect to the line of the thrust that is transmitted through the rod 32. Hence after each shift of the movable bearings and consequent change in the position of the bed 12 the parts will remain locked definitely in the

position thereby given to them until by the succeeding depression of the foot-lever another half-revolution is given to the eccentric bearings.

5 While I have herein presented the table-shifting devices as operated from a foot-lever, herein designated 44, I do not in all cases restrict myself to a lever which is operated by the foot of the operative, inasmuch as it will
10 be obvious that the same results may be attained by an equivalent device—as, for example, a lever that is operated by the hand of an attendant upon the machine—without involving a departure from the principle of
15 the invention.

I claim as my invention—

1. In a machine of the class described, the combination with an operating-tool, and the bed, of the foot-lever, and bed-shifting devices operated by the said foot-lever and acting at successive depressions of the latter to move the bed out of working position and return it thereto, alternately, substantially as described.

25 2. In a machine of the class described, the combination with an operating-tool, and the bed, of an eccentric in operative connection with the bed, a foot-lever, and devices for partially rotating the eccentric at each depression
30 of the foot-lever, whereby at successive depressions of the foot-lever the bed is moved alternately out of working position and back into such position, substantially as described.

3. In a machine of the class described, the
35 combination with an operating-tool, the bed, movable supports for the bed, and a rod connected with the said supports, of a collar

connected with such rod and provided with a journal, an eccentric bearing receiving such journal, a foot-lever, and means intermediate
40 the foot-lever and eccentric bearing to communicate a half-rotation to such bearing at each depression of the foot-lever, substantially as described.

4. In a machine of the class described, the
45 combination with the operating-tool, the bed, movable supports for the bed, a rod, as 32, connected with said supports, and a spring and adjusting devices applied to said rod, substantially as described, of a collar applied
50 to said rod and having one or more journals each provided with an eccentric bearing, a foot-lever, and devices to partially rotate said bearings at each depression of the foot-lever, substantially as described.

5. In a machine of the class described, the
55 combination with the operating-tool, the bed, movable supports for the bed, a rod, as 32, connected with said supports, and a spring and adjusting devices applied to the rod, substantially as described, of the collar also applied to the said rod and having the opposite
60 journals, the eccentric bearings receiving the said journals, a foot-lever, and devices to communicate a half-revolution to said bearings in unison at each depression of the foot-lever, substantially as described.

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

EDWARD B. PARKHURST.

Witnesses:

WM. A. MACLEOD,
CHAS. F. RANDALL.