

No. 610,433.

Patented Sept. 6, 1898.

C. H. CURTIS.
AUTOMATIC BUFFING MACHINE.

(Application filed May 18, 1898.)

(No Model.)

2 Sheets—Sheet 1.

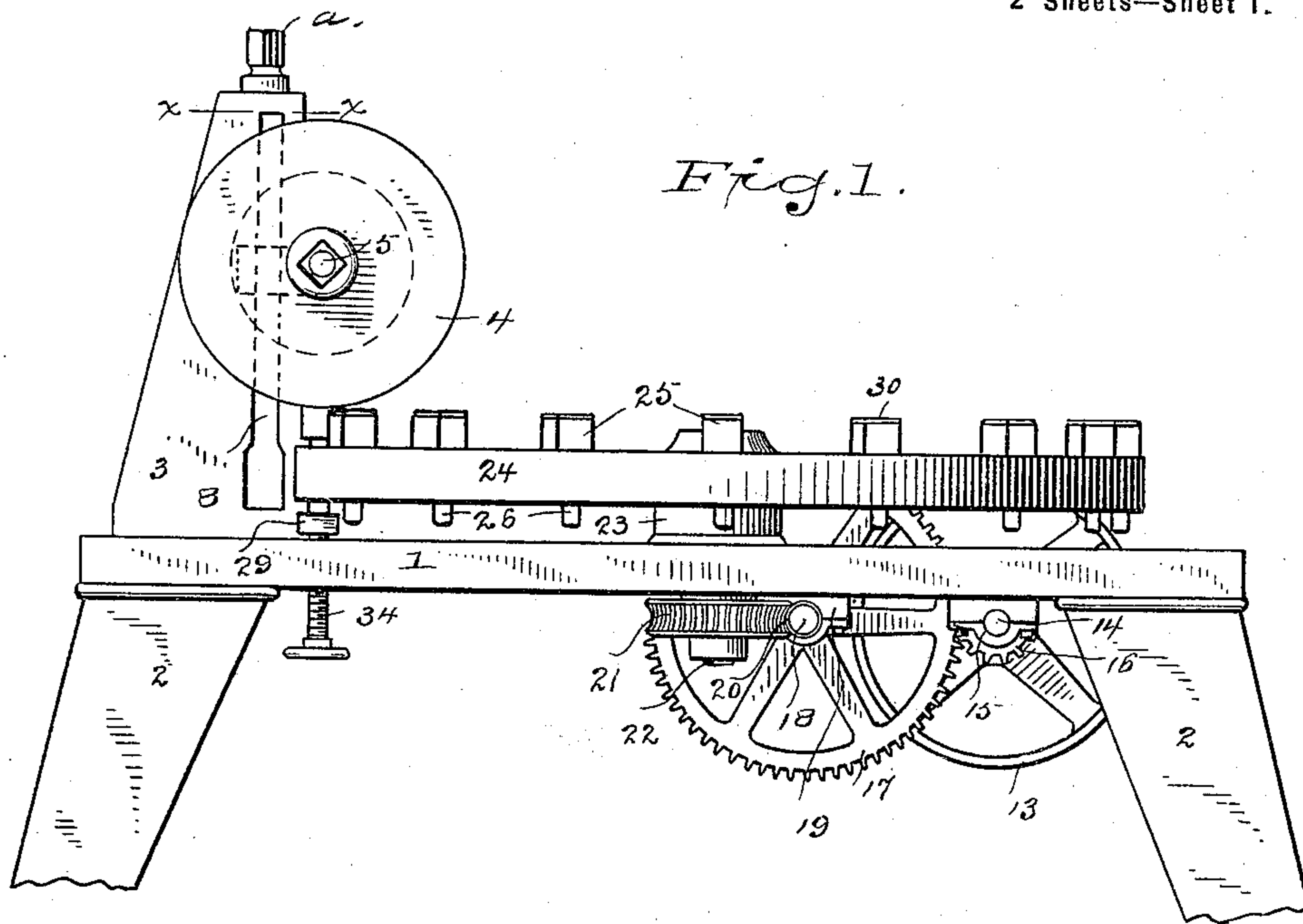
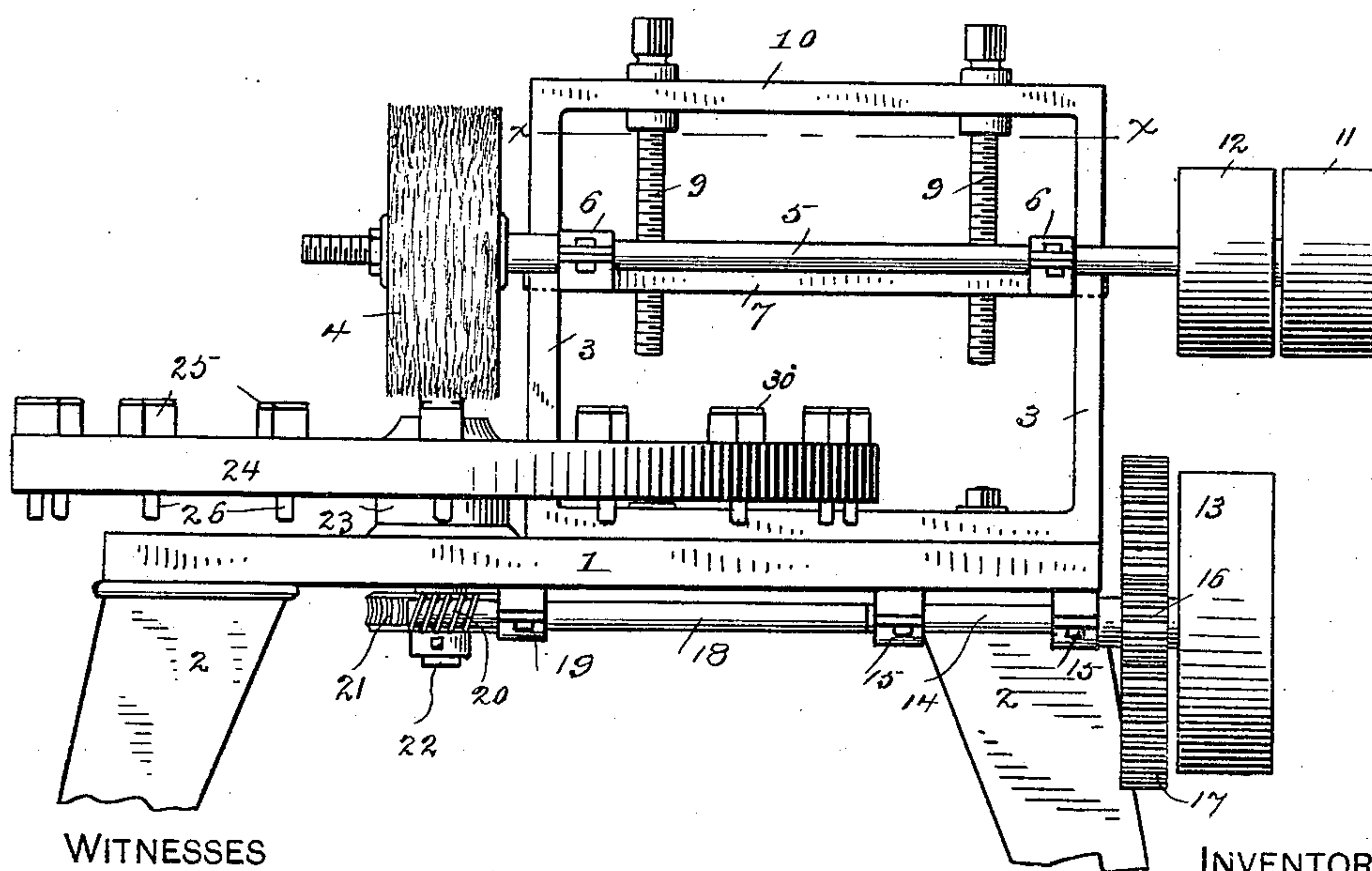


Fig. 2.



WITNESSES

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Fig. 3.

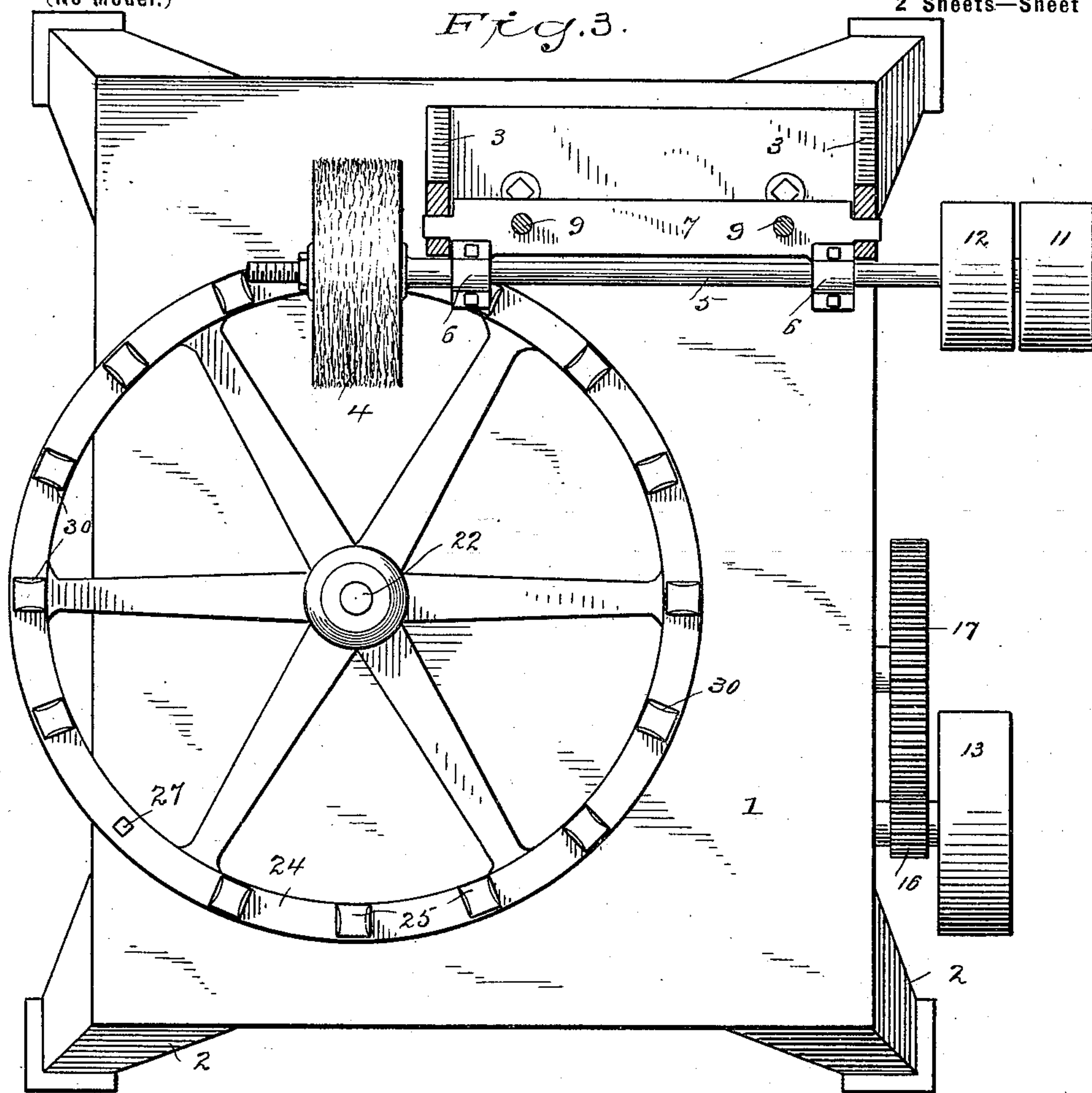
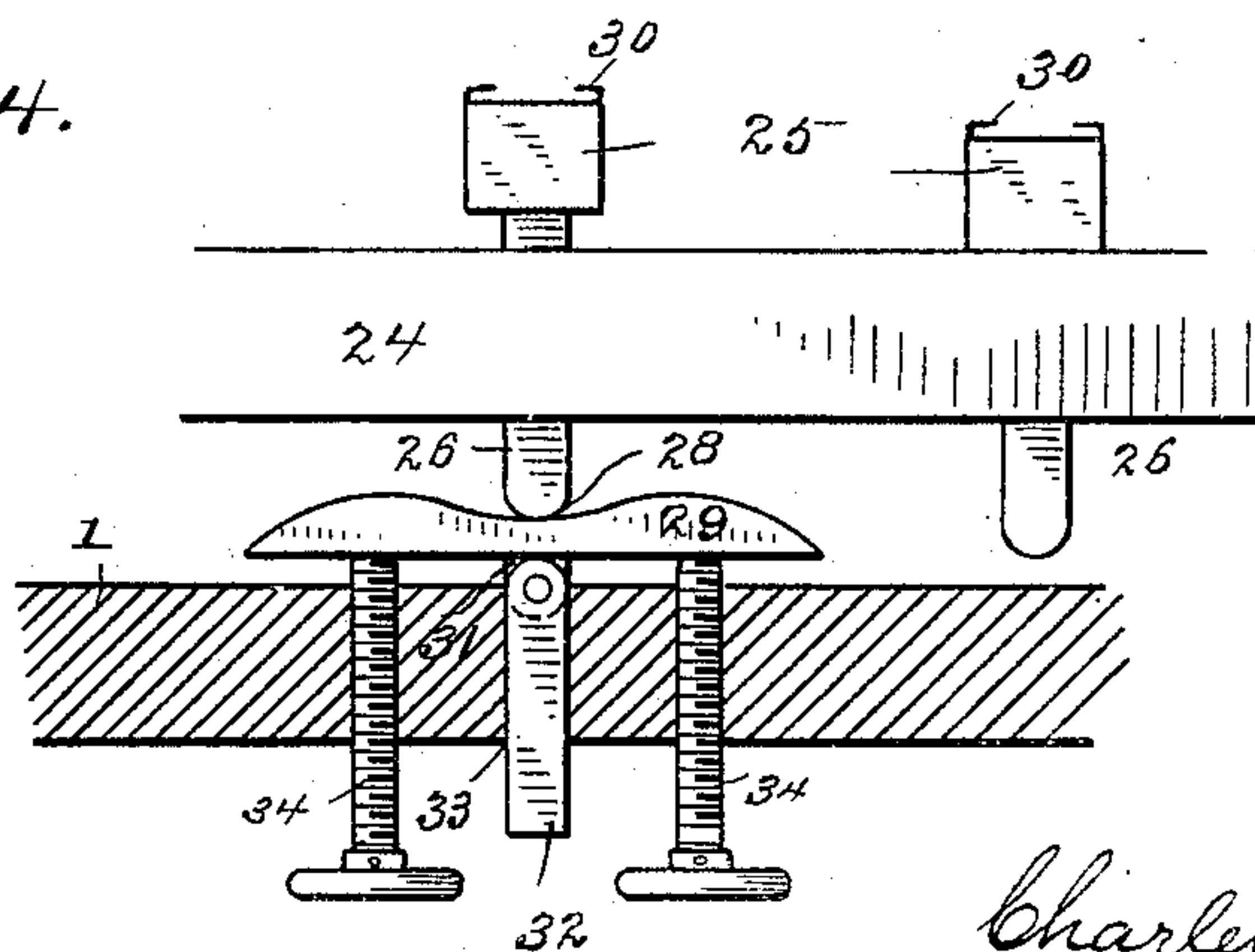


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES H. CURTIS, OF DERBY, CONNECTICUT, ASSIGNOR TO THE
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AUTOMATIC BUFFING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 610,433, dated September 6, 1898.

Application filed May 18, 1898. Serial No. 681,036. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. CURTIS, a citizen of the United States, residing at Derby, county of New Haven, State of Connecticut, have invented a new and useful Automatic Buffing-Machine, of which the following is a specification.

My invention has for its object to provide an automatic buffing-machine which shall be adapted to buff all sizes and styles of articles within the capacity of the machine, which will do its work in the finest manner possible, and which shall require the services of but a single attendant in feeding the machine and removing the finished articles.

With these ends in view I have devised the simple and novel buffing-machine of which the following description, in connection with the accompanying drawings, is a specification, numbers being used to designate the several parts.

Figure 1 is a side elevation; Fig. 2, a front elevation; Fig. 3, a plan view, the standards being in section on the line xx in Figs. 1 and 2; and Fig. 4 is a detail view, on an enlarged scale, of mechanism for raising each holder in turn into a position in which the article carried thereby may be acted upon by the buffing-wheel.

1 denotes the bed, 2 legs by which it is supported, and 3 standards extending upward from the bed, said parts comprising the framework of the machine. I wish it distinctly understood, however, that the special construction of the framework of the machine is not of the essence of my invention, but that the details may be varied to suit the requirements of any special use for which the machine may be intended or the taste of the builder.

4 denotes the buffing-wheel, which may be of any ordinary or preferred construction—for example, a “rag-wheel,” so called. The buffing-wheel is carried by a shaft 5, journaled in bearings 6 upon a vertically-adjustable carrier 7. The ends of the carrier engage slots 8 in the standards, and the carrier, and with it the shaft and buffing-wheel, is adapted to be moved toward or from the feed-wheel, presently to be described, as may be required in use, by means of screws 9, carried

by a cross-piece 10, extending from one standard to the other. The screws are free to be turned in the cross-piece, but are held against vertical movement therein, so that rotation of the screws will raise or lower the cross-piece and the buffing-wheel. Power is applied to the machine by means of a belt (not shown) passing over a pulley 11 on shaft 5. 12 denotes another pulley on shaft 5, from which a belt (not shown) extends to a pulley 13 on a shaft 14, journaled in boxes 15, in the present instance under the bed.

16 denotes a pinion on shaft 14, which meshes with a gear-wheel 17 on a shaft 18, journaled in boxes 19, in the present instance under the bed. At the inner end of shaft 18 is a worm 20, which meshes with a worm-wheel 21 on a vertical shaft 22, journaled in a hub 23 on the bed.

24 denotes a feed-wheel carried by shaft 22, which rotates in a plane at right angles to the plane of the buffing-wheel.

The articles to be buffed are carried by holders 25, each holder being carried by a plunger 26, adapted to engage any one of a series of correspondingly-shaped openings 27 in the feed-wheel, in which it is adapted to slide freely. The lower end of each plunger is rounded, as at 28, (see Fig. 4,) to adapt it to engage and be raised by a rounded shoe 29, which lies below the feed-wheel and in the vertical plane of the buffing-wheel. Each holder is provided with a clip or clips 30 to hold the article to be buffed, and as each holder in turn comes under the buffing-wheel it is raised into position, so that the article carried thereby will be acted upon by the buffing-wheel. The instant, however, that the plunger has passed the shoe it drops down to its normal position, as clearly shown in Fig. 4. The shape of the shoe is of course not of the essence of my invention and may be varied to suit the requirements of special articles that are to be buffed. I have shown both ends of the shoe as so shaped as to provide an easy incline for the plunger to ride up and to ride down and have shown the center as slightly depressed. These, however, are mere details of construction and may be varied to suit the special use to which the machine is applied. By making the shoe

highest on opposite sides of the center I provide that the holder and the article that is being buffed shall be raised at the instant it passes under the edges of the buffing-wheel, 5 so as to receive the full action of the edges of the buffing-wheel as well as of the center. The shoe is provided on its under side with an ear 31, which is pivoted to a plunger 32, which is adapted to engage a correspondingly- 10 shaped opening 33 in the bed, in which it slides freely. The ends of the shoe may be raised or lowered to give any required adjustment thereto by means of set-screws 34 in the bed, as clearly shown in Fig. 4. It will be 15 seen that by providing simple and convenient adjustments for both the buffing-wheel and the shoe and by making the holders removable, so that other sets of holders may be substituted, if required, I insure an almost 20 unlimited range of usefulness for the machine in buffing articles of varying shapes and sizes.

Having thus described my invention, I claim—

25 1. The combination with the buffing-wheel, of a feed-wheel, holders on the feed-wheel for articles to be buffed and means for raising each holder at the instant it passes under the buffing-wheel, said holders being also remov- 30 ably supported by the feed-wheel and adapted to be lifted therefrom or replaced during the rotation of said wheel.

35 2. The combination with a buffing-wheel, of a feed-wheel, holders by which the articles to be buffed are carried and which are provided with plungers extending through openings in the feed-wheel and a shoe adapted to be engaged directly by the lower end of each plunger at the instant the corresponding holder

passes under the buffing-wheel so that an article upon the holder is placed in position to be acted upon by the buffing-wheel. 40

3. The combination with a buffing-wheel, of a feed-wheel having openings, holders provided with plungers which engage said openings and are guided thereby and an adjustable shoe lying in position to engage the plungers successively as the holders pass under the buffing-wheel. 45

4. In a machine of the character described 50 the combination with a buffing-wheel, of a feed-wheel, removable holders on the feed-wheel by which the articles to be buffed are carried, each holder having a plunger extending through the feed-wheel, a shoe lying in 55 position to be engaged by said plunger successively as the holders pass under the buffing-wheel, said shoe being provided with an ear which is pivoted to a plunger passing loosely through the bed and set-screws 34 by 60 which either end of the shoe may be raised or lowered.

5. The combination with the buffing-wheel, of a feed-wheel lying at right angles thereto, holders in the feed-wheel each of which is 65 provided with a clip to hold an article to be buffed, and an adjustable shoe by which the holders are raised in turn as they pass under the buffing-wheel, said holders being remov- 70 ably supported by the feed-wheel and adapted to be lifted therefrom or replaced during the rotation of said wheel.

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

CHARLES H. CURTIS.

Witnesses:

ALICE L. FOWLER,
JOHN A. COE, Jr.