

No. 617,940.

Patented Jan. 17, 1899.

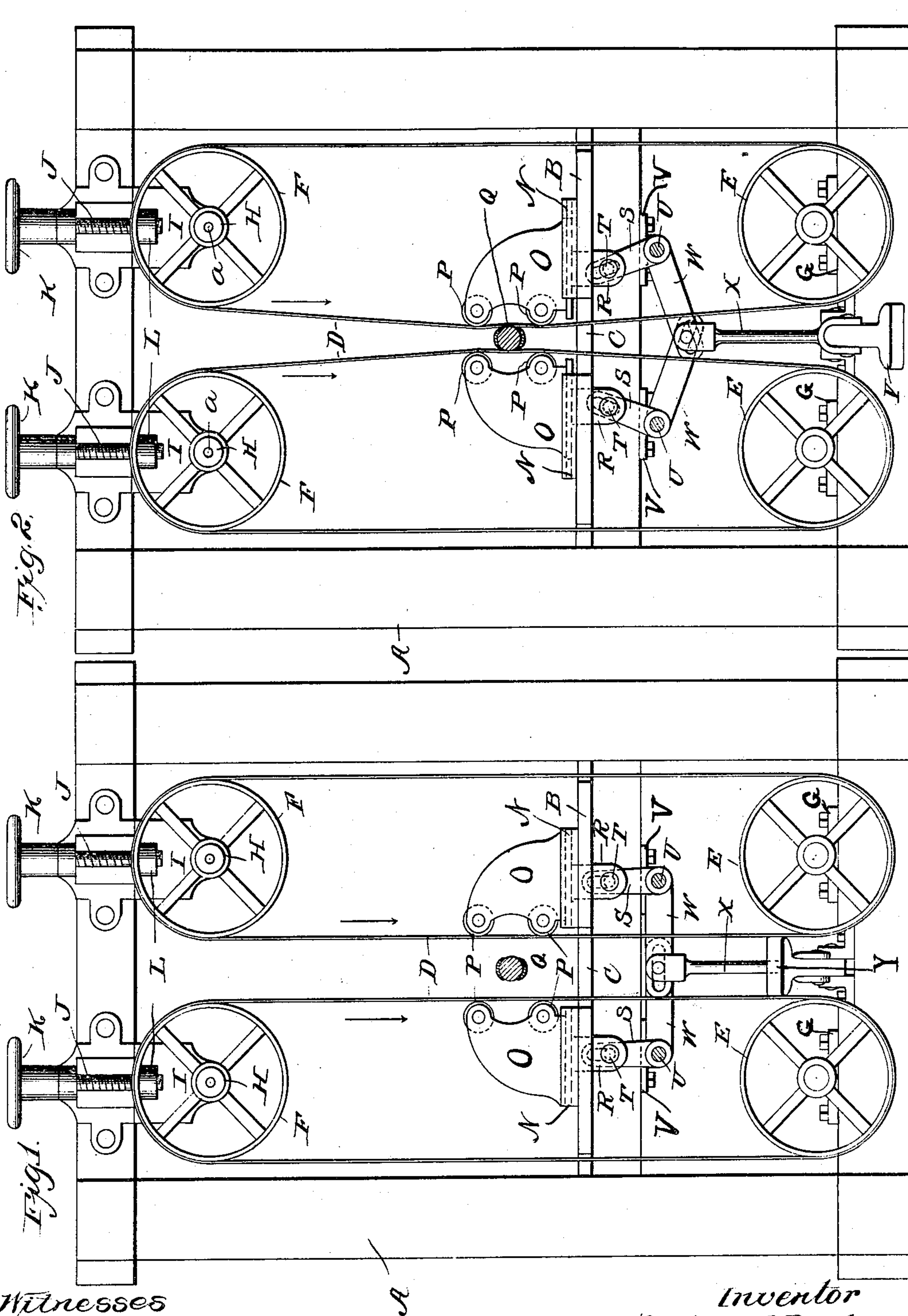
W. D. ROWLAND.

BUFFING AND POLISHING MACHINE FOR SHOVEL HANDLES.

(Application filed Oct. 20, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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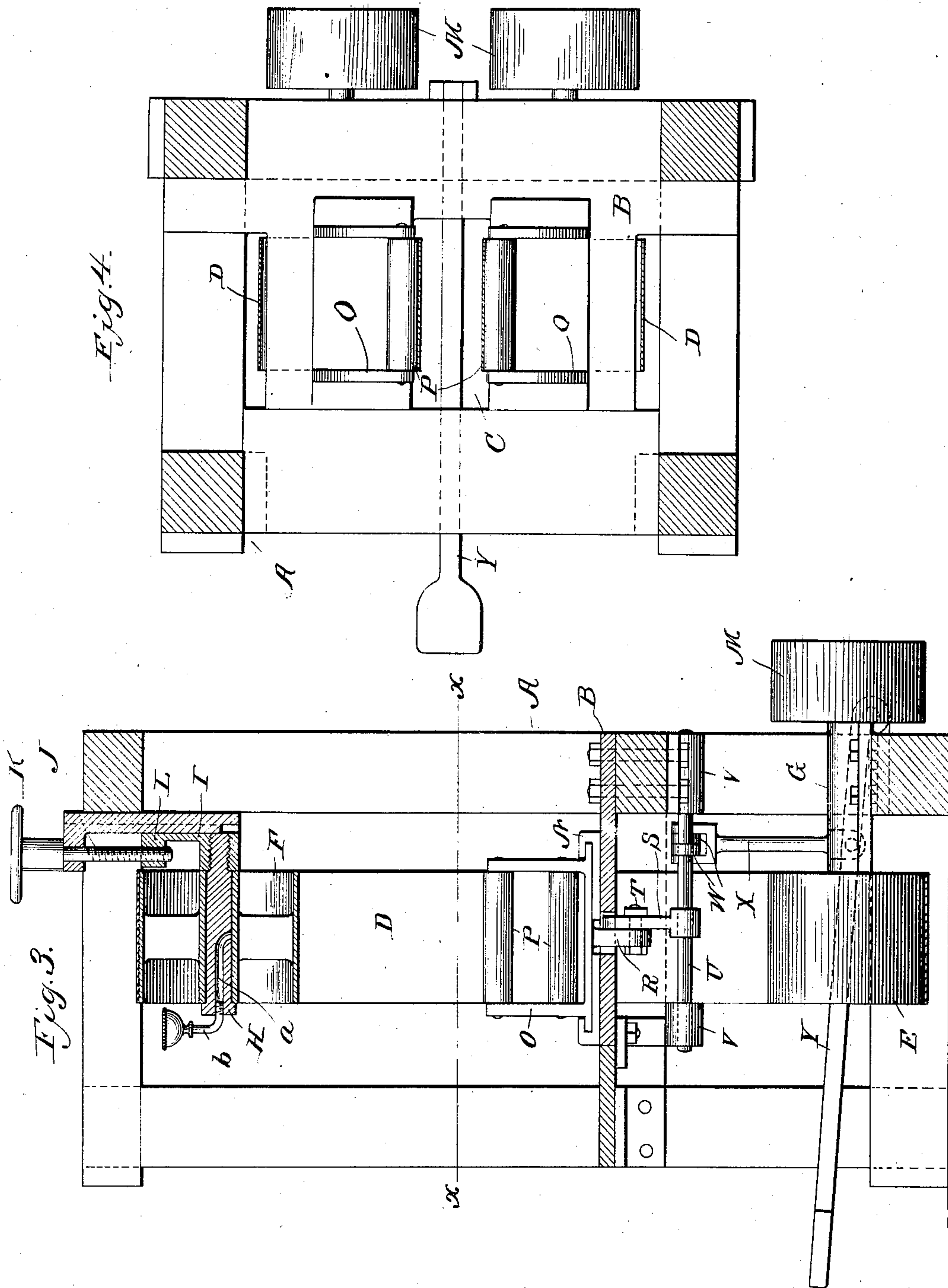
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# UNITED STATES PATENT OFFICE.

WILLIAM DAY ROWLAND, OF PHILADELPHIA, PENNSYLVANIA.

## BUFFING AND POLISHING MACHINE FOR SHOVEL-HANDLES.

SPECIFICATION forming part of Letters Patent No. 617,940, dated January 17, 1899.

Application filed October 20, 1898. Serial No. 694,124. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM DAY ROWLAND, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Buffing and Polishing Machines for Shovels and the Like, of which the following is a specification.

My invention relates to a new and useful improvement in buffing and polishing machines, and has for its object to provide an effective and convenient machine of this description whereby the handles, straps, or shanks of shovels, spades, scoops, pitchforks, and the like may be finished—that is to say, that portion of the wood unduly protruding beyond the shank of the shovel or the like may be cut away and the shank and handle given a smooth and finished appearance. Heretofore this work has been accomplished by an operator holding a shovel and applying it to a grinding or buffing wheel and using his judgment as to the amount to be cut away and the outline left, and by this method each side of the handle, straps, or shanks must be finished separately, requiring skilled labor and consuming considerable time, and consequently making this operation expensive as well as unsatisfactory, due to the irregularity of the work produced. All of these disadvantages I readily overcome by the use of my improvement.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an elevation of a machine made in accordance with my improvement, showing a section of a handle placed between the buffing-belts prior to the latter being brought in contact with said handle and straps; Fig. 2, a similar view showing the buffing-belts brought into action; Fig. 3, a vertical section taken outside of the presser-frames, and Fig.

4 a horizontal section taken at the line  $xx$  of Fig. 3.

In carrying out my invention as here embodied, A represents the frame of the machine, which may be of any suitable construction, having a table B supported thereby, and through this table is a central opening C, through which pass the inside sections of the belts D. These belts are mounted upon the pulleys E and F, the former journaled in stationary bearings G, secured to the base of the frame, while the latter are journaled upon the studs H. These studs are secured to the blocks I, which are made adjustable by means of the threaded rods J, having hand-wheels K secured upon the upper ends thereof, while the lower portions of these rods are threaded into the nuts L, formed upon the blocks I. This arrangement, as is well understood, will permit the adjusting of the pulleys F for tightening the belts D, thereby providing for the taking up of any undue slack which may be in said belts.

M are drive-pulleys which are secured upon the same shafts with the pulleys E and receive their power from any suitable source by belting.

Guideways N are secured upon the upper surface of the table and have fitted therein the presser-frames O, which in turn have journaled between their sides the rolls P. These rolls serve to permit the free running of the belts, whereby the presser-frames are forced inward, thereby deflecting the belts out of their perpendicular line to bring them in contact with the handle Q, as will be hereinafter set forth.

The presser-frames have lugs R projecting downward therefrom through suitable slots in the table, and the arms S are connected with said lugs by bolts T, passing through slots in the arms and secured in the lugs. The arms S are secured upon the rock-shafts U, which are journaled in the bearings V, and these shafts have also secured thereon the levers W, which are connected by the connecting-rod X with the treadle Y in such manner that when said treadle is depressed the levers W will be drawn downward and the arms S swung inward, thereby forcing the presser-frames inward and in so doing deflecting the belts D and bringing their



abrading-surface in contact with the handle Q.

The belts are arranged to travel in the direction of the arrows marked adjacent thereto, and this downward movement of these belts will firmly hold the shovel or the like against the table while the belts are acting upon the straps and handle; and this action, on account of the flexibility of the belt, will have a tendency to give the proper rounding shape to the handle while reducing it so as to conform with the shank or straps.

In cutting away a portion of the wooden handle to cause it to conform to the straps or shank it is also necessary to cut away a portion of the metal of said straps or shank, so as to cause it to likewise conform to the wood and make a smooth and unbroken finish to avoid injury to the hand and to enable the user of the finished shovel to better grasp this portion of the handle.

In practice the operator has only to place the shovel upon the table, so as to bring that portion of the handle desired to be operated upon between the belts, place his foot upon the treadle, and so manipulate the handle as to cause the belts to properly act thereon, and this will produce the desired result in an exceedingly short time, and the work thus produced will be uniform.

The pulley F, revolving upon the studs H, may be lubricated by the channel *a*, formed in each stud, with which is connected the hole *b*, as clearly shown in Fig. 3.

Of course I do not wish to be limited in using the belts in a vertical position, as it is obvious they may be operated horizontally, although experiment has shown that it is preferable to use the belts vertically.

I am aware that belts have been used for abrading and polishing, and I do not broadly lay claim to such a device.

What I claim as new and useful is—

1. In combination with a table adapted to support the work, two belts so mounted as to bring their adjacent surfaces parallel, guideways on the table, presser-frames mounted to travel in the guideways, rolls on the guide-

frames adapted to engage the belts, depending lugs on the presser-frames, connected with the lugs and levers for operating the arms and a connecting-rod for actuating the levers; substantially as described.

2. In combination with a table adapted to support the work, two belts so mounted as to bring their adjacent surfaces parallel, guideways on the table, presser-frames mounted to travel in the guideways, rolls on the guide-frames adapted to engage the belts, and means for moving the presser-frames with relation to the work, substantially as described.

3. A machine for buffing and finishing straps, shanks and handles of shovels and the like after being secured within the shank, consisting of a suitable frame, pulleys mounted thereon, two belts running over said pulleys so as to bring their inner sections approximately parallel and in proximity to each other, a table for supporting the work, presser-blocks slidably mounted upon said table, rolls carried by the presser-blocks, and means for forcing the blocks inward, as specified.

4. In a machine for buffing and finishing straps, shanks and handles for shovels and the like after being secured within the straps or shanks, consisting of a suitable frame, pulleys mounted thereon, two belts running over said pulleys so as to bring their inner sections approximately parallel and in proximity to each other, a table for supporting the work, presser-blocks slidably mounted upon said table, rolls carried by the presser-blocks, rock-shafts journaled in the frame, arms connecting said shafts with the sliding blocks, levers also attached to the rock-shafts, and a treadle connected with said levers for operating the presser-blocks, as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

WILLIAM DAY ROWLAND.

Witnesses:

MARY E. HAMER,  
E. H. FORSYTH.