No. 724,566. PATENTED APR. 7, 1903.

M. S. GOOLEY.

VARIABLE THROW DEVICE.

APPLICATION FILED OCT. 2, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

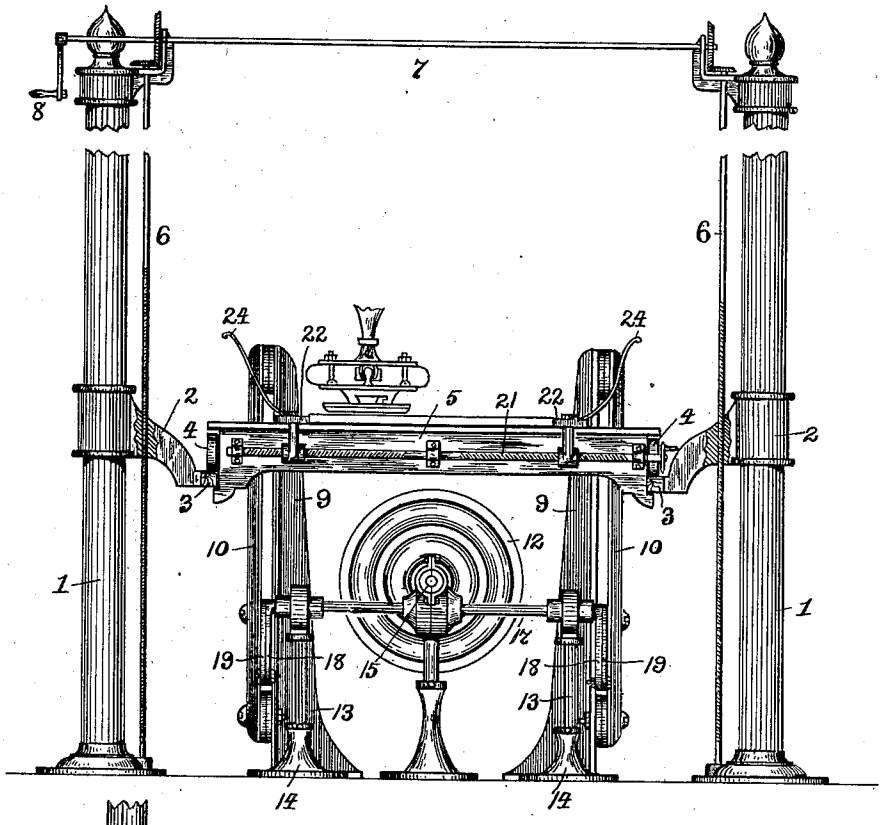
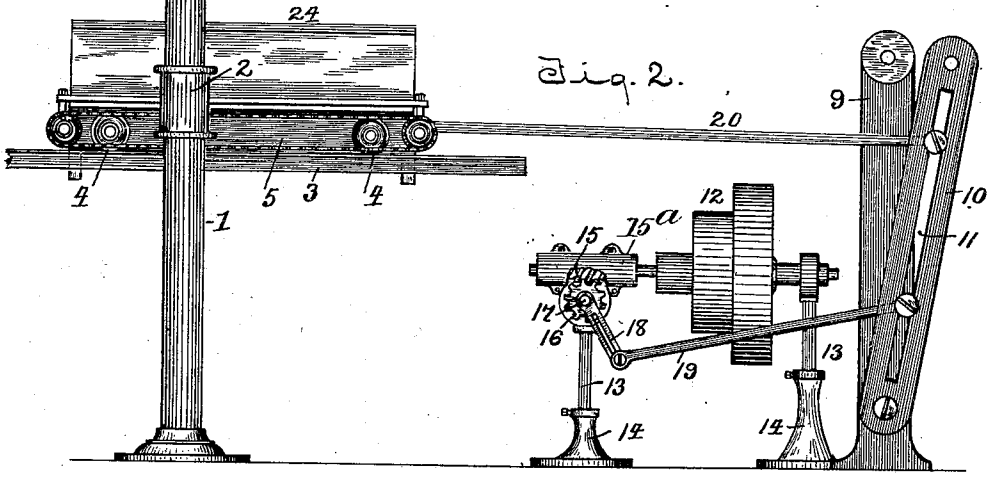


Fig. 2.



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Michael S. Gooley.
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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

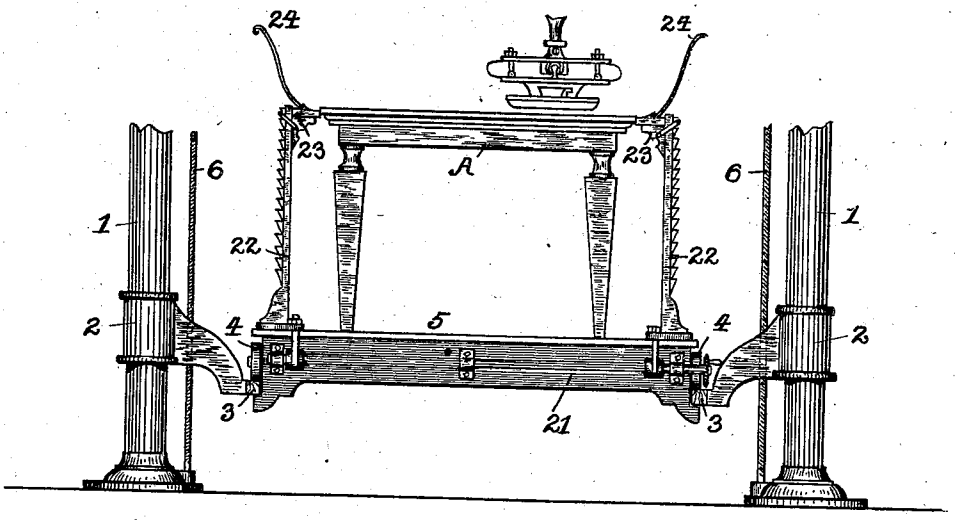
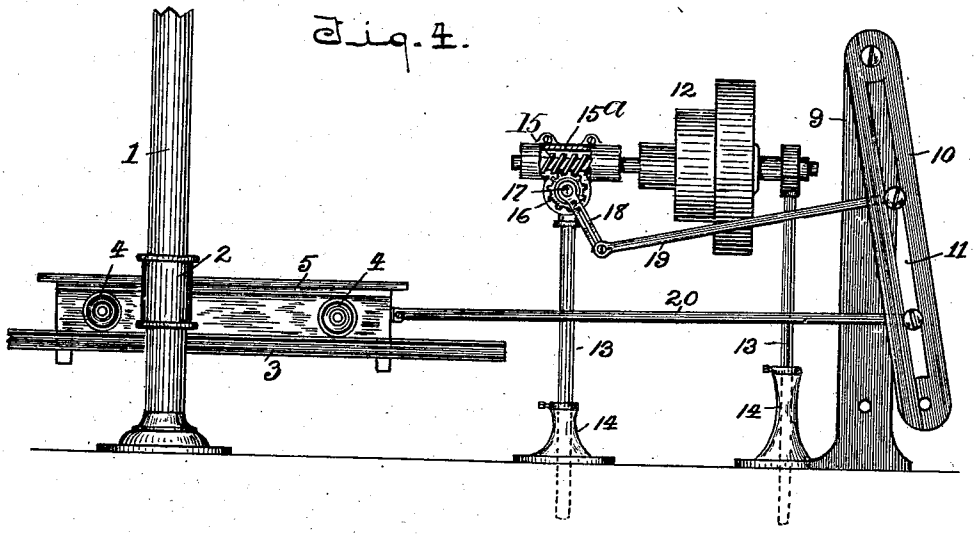


Fig. 4.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MICHAEL S. GOOLEY, OF SOUTH BEND, INDIANA.

VARIABLE-THROW DEVICE.

SPECIFICATION forming part of Letters Patent No. 724,566, dated April 7, 1903.

Application filed October 2, 1902. Serial No. 125,692. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL S. GOOLEY, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Variable-Throw Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to carriage-shifting mechanism for rubbing or polishing machines; and the object is to provide a construction by which the operating mechanism for the carriage may be adjusted relatively to the position of the carriage, carrying the object to be operated upon and permitting the stroke of the carriage to be varied.

The invention embodies a vertically adjustable reciprocal carriage, oscillatory levers connected therewith, means for driving the levers, and means to adjust the driving means relatively to the position of the carriage, all as will be hereinafter more fully described and the novelty thereof particularly pointed out and explained.

I have fully and clearly illustrated the invention in the accompanying drawings, forming a part of this application, wherein—

Figure 1 is a front elevation of the carriage-shifting mechanism and the carriage. Fig. 2 is a side elevation of the same. Fig. 3 is a front elevation of the carriage in its lowered position, showing how a table may be held thereon while being polished. Fig. 4 is a side elevation of the carriage and its operating mechanism, showing the latter adjusted to a position coincident with the lowered position of the carriage.

It is to be understood that the polisher, the mechanism for operating the same, and the power-pulleys with which the shifting mechanism for the carriage is connected do not form any part of the present invention, but are covered by a contemporaneous application, and therefore such elements and mechanisms are not shown in the accompanying drawings.

Referring to the drawings in detail, 1 1 designate the uprights on which the brackets 2 are vertically adjustable. These brackets are provided with suitable guide-tracks 3, with which the rollers 4 of the carriage 5 engage and on which the carriage reciprocates. Journaled in the top and bottom of the uprights and extending parallel therewith are threaded shafts 6, having beveled gears at their upper ends meshing with the beveled gears of a horizontal shaft 7, on the end of which is secured a crank-handle 8, which when turned will, through the medium of the beveled gears, rotate the screw-shafts 6, which engage threaded apertures in the brackets 2 and adjust the carriage vertically on the uprights 1.

My improved carriage-shifting mechanism consists of a pair of posts 9, to which are pivoted oscillatory levers 10, adapted to be pivoted at either end to the top of the posts and each provided with a longitudinal slot 11, the purpose of which will presently be explained.

The driving-pulley 12 is journaled in suitable uprights 13, which are vertically adjustable in the floor-standards 14, and on one end of the pulley is mounted a worm 15, inclosed by a casing 15^a, said worm meshing with a worm-wheel 16 on the shaft 17, as shown in Figs. 2 and 4, wherein a portion of the casing 15^a is broken away to show the worm 15. To each end of the shaft are secured crank-arms 18, each having a longitudinal slot for the adjustment of a pitman 19, which connects the said crank-arms and the levers 10, the pitman being adjustable at each end in the slots of the lever and crank-arms, which enables the operator to vary the stroke of the carriage. Connecting-rods 20 are secured at one end to the carriage and their other ends are adjustably secured in the slot 11 of the levers 10. When the carriage is lowered on the uprights 1, it is necessary that its connection with the shifting mechanism should be opposite or in the same plane with the carriage in order to provide an efficiently operative device, and, as shown in Fig. 4, the uprights 13, on which the driving-pulley and worm-gearing are mounted, are adjusted in the standards 14 to a position above the carriage and the oscillatory levers 10 are fulcrumed at the top of the posts 9 and the pitmen and connecting-rods are adjusted in the slots 11 in such a manner that the lower end of the lever 10,

which now swings, will, through the connecting-rod 20, shift the carriage back and forth.

In Fig. 3 the carriage is shown adjusted to a position when it is desired to polish the top of a table or other article of furniture, the table being indicated at A. Journaled in the sides of the carriage are screw-rods 21, on which the clamps 22 move, and, as shown in Fig. 3, these clamps consist of an upright having a vertically-adjustable block or head 23, adapted to engage the article to be polished. From the top of each block extend shields 24, which serve to catch the splash of the oil or other material used in polishing.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a device of the class described, the combination with a vertically-adjustable carriage, of means to reciprocate said carriage consisting of an oscillatory lever having a connection with the carriage, a vertically-adjustable driving mechanism having a connection with the lever, and means to adjust the lever connections relative to the position of the carriage to vary the throw of the latter.

2. In a device of the class described, the combination with a vertically-adjustable carriage, of means to reciprocate the carriage consisting of a standard, an interchangeable oscillatory lever adapted to be pivoted to the standard at its top or bottom, a vertically-adjustable driving mechanism for the lever, a connection for the lever and carriage, a connection for the lever and the driving mechanism, and means to adjust said connections on the lever to vary the throw of the carriage.

3. In a carriage-shifting mechanism for rubbing or polishing machines, the combination with the vertically-adjustable carriage, of means to reciprocate said carriage consisting of oscillatory levers adapted to have either end swing, a vertically-adjustable driving-pulley having a worm-gear connected to its shaft, slotted crank-arms on the shaft of the worm-gear, pitmen connecting the crank-arms and the oscillatory levers, rods connecting the carriage and the levers, and means to permit the ends of the pitmen and connecting-rods to be vertically adjusted on the levers.

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

MICHAEL S. GOOLEY.

Witnesses:
GEORGE OLTSCH,
MAGGIE OLTSCH.