No. 610,080. Patented Aug. 30, 1898.

B. F. OGDEN.

PLANING MACHINE.

(Application filed Sept. 24, 1897.)

(No Model.) 2 Sheets—Sheet 1.

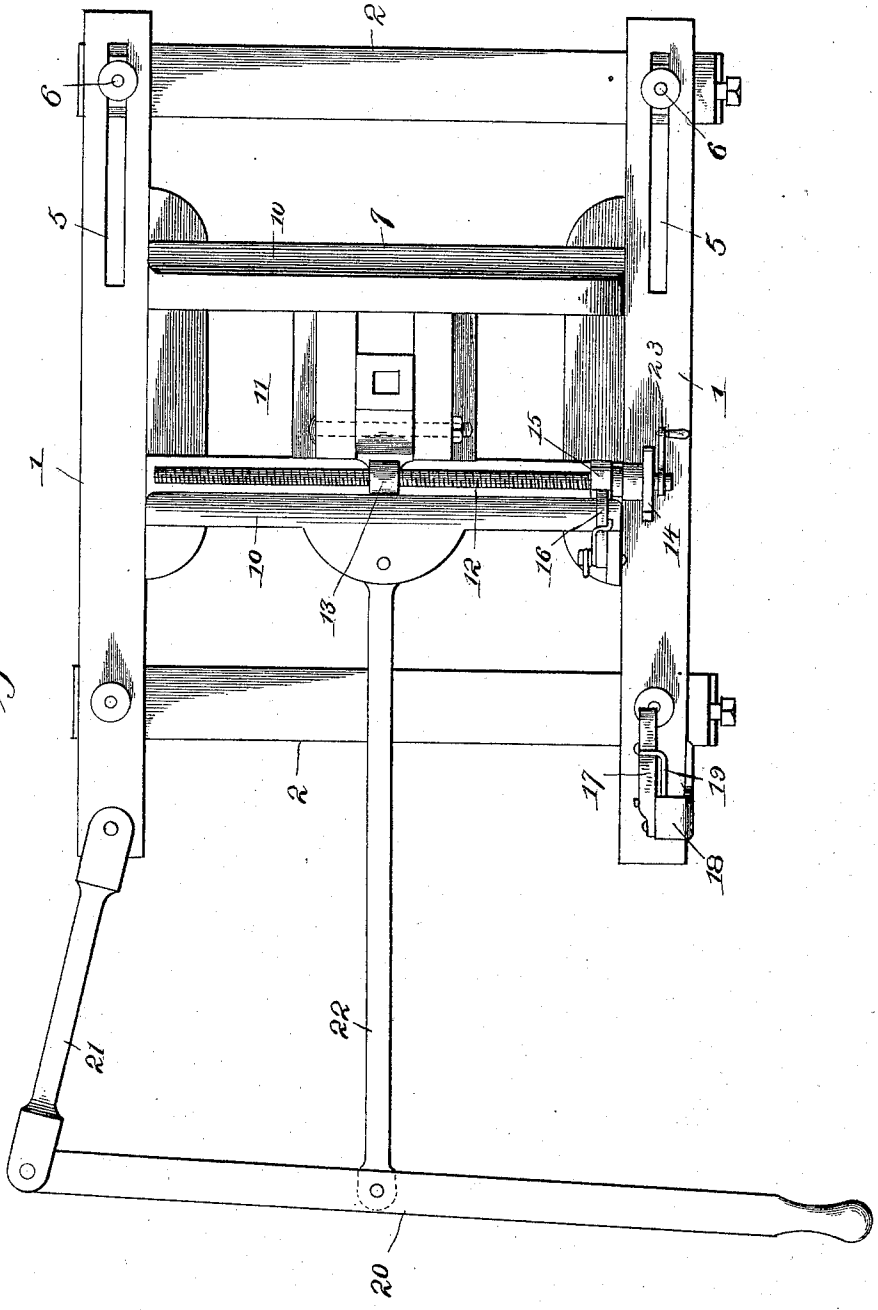

Fig. 1.

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2 Sheets—Sheet 2.

Fig. 2.

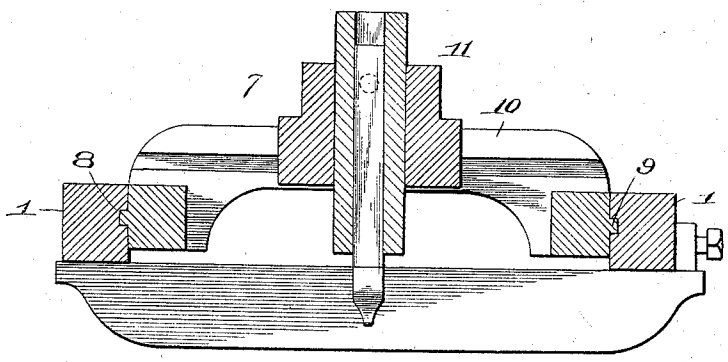
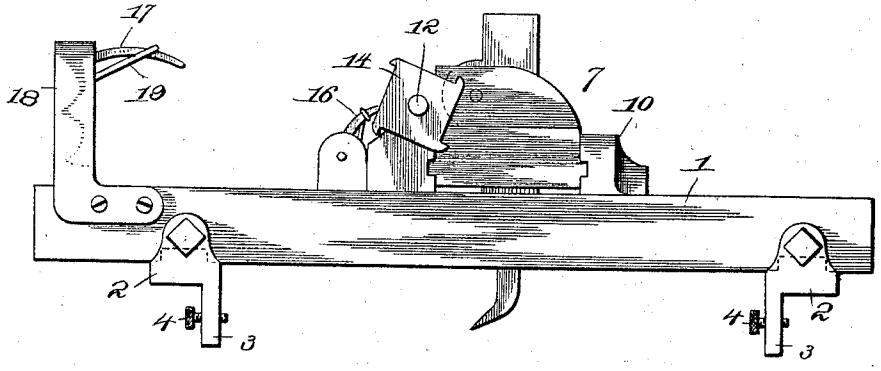


Fig. 3.



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UNITED STATES PATENT OFFICE.

BENJAMIN F. OGDEN, OF WELLSVILLE, MISSOURI.

PLANING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 610,080, dated August 30, 1898.

Application filed September 24, 1897. Serial No. 652,921. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. OGDEN, a citizen of the United States, residing at Wellsville, in the county of Montgomery and State of Missouri, have invented certain new and useful Improvements in Planing-Machines; 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.

This invention has reference to a novel construction in a planing-machine and is adapted for use in planing engine-valves, the object being to provide an inexpensive device of this character that can be fastened to the steam-chest after the cover has been removed and which can be operated to plane the side of the valve true and in an efficient manner.

The invention consists in features of construction hereinafter fully described and specifically claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of a planing-machine constructed in accordance with this invention. Fig. 2 is a vertical transverse section. Fig. 3 is a side elevation.

Referring now to said drawings, 1 indicates the side pieces of the frame, which are joined together near their ends by cross-pieces 2. These cross-pieces are provided with downwardly-extending flanges 3, having set-screws 4, by means of which the frame can be clamped upon the steam-chest of the engine. The cross-piece at one end is permanently connected with the side pieces, while at the other end it is adjustably engaged, so as to accommodate the machine to steam-chests that vary in size, the particular construction embodying the slot 5 and the ends of the side pieces 1, through which the bolt 6 passes. The tool-carriage 7 is mounted to slide upon the side pieces 1 conveniently by means of grooves 8 in the side pieces and the tongues 9 upon the sides of the carrriage. Mounted upon the carriage are the transverse guides 10, upon which slides the tool-holder 11. Mounted also upon the carriage is a transvese feed-screw 12, passing through a nut 13 upon the tool-holder 11 and provided at one end with a ratchet-plate 14. The feed-rod is also provided with a toothed wheel 15, that is engaged by a pawl 16 to prevent the back rotation thereof. Mounted upon one of the side pieces 1 is a spring-finger 17, situated in the path of the ratchet-plate 14 and adapted to engage said plate as the tool-carriage reaches the end of its movement, so that the feed-screw is turned each time when the toothed carriage reciprocates, and thus gradually feeds the tool-holder across the carriage for obvious reasons. The adjustment of the tool within the tool-holder is accomplished in any approved manner. The said spring-finger 17 consists conveniently of a pivoted finger mounted upon an arm 18 and held in the path of the ratchet-plate by a spring 19. For moving the carriage back and forth a lever 20 is employed that is pivoted at one end to a link 21, that is pivoted to one of the side pieces, while a connecting-rod 22 is connected with the carriage 7 and with said lever 20.

In operation it is seen that the cover of the steam-chest can be removed and this planing-machine clamped upon the chest by means of set-screws passing through the flanges 3. When the tool is set, the carriage can be moved back and forth by means of the lever to plane the sides of the valve, it being noted that for each reciprocation of the carriage the feed-screw is turned a partial revolution to feed the tool-holder transversely across the carriage for obvious reasons. The end of the feed-screw 12 is provided with a crank 23, so that when the carriage is moved to the end of its guides the pawl 16 can be lifted and the crank rotated to run the tool-holder back to the other side of the carriage.

Having thus described the invention, what is claimed as new is—

1. A planing-machine comprising a frame provided with cross-pieces having flanges provided with set-screws, a carriage movable upon said frame, a lever mounted upon the frame connected with said carriage, a tool-holder movable in transverse guides upon the carriage, a feed-screw mounted upon the carriage and engaging a nut carried by said tool-holder, a ratchet-plate upon said feed-screw, and a spring-finger mounted upon the frame and situated in the path of said ratchet-plate.

2. A planing-machine comprising a frame having side pieces and cross-pieces, said cross-

pieces being provided with flanges having set-screws while one of the cross-pieces is adjustably connected with the side pieces, a sliding carriage, a lever pivoted at one end to a link that is pivoted to the carriage, a connecting-rod pivoted to said lever and connected to the carriage, a tool-holder movable in transverse guides upon the carriage provided with a nut, a feed-screw mounted upon the carriage and engaging the said nut, a ratchet-plate upon said feed-screw, and a spring-finger mounted upon the frame and situated in the path of said ratchet-plate.

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

BENJAMIN F. OGDEN.

Witnesses:
W. H. REED,
JAMES L. BARKER.