R. A. MARSH.

PEDESTAL JAW FACING MACHINE.

APPLICATION FILED NOV. 26, 1910.

999,576.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 1.

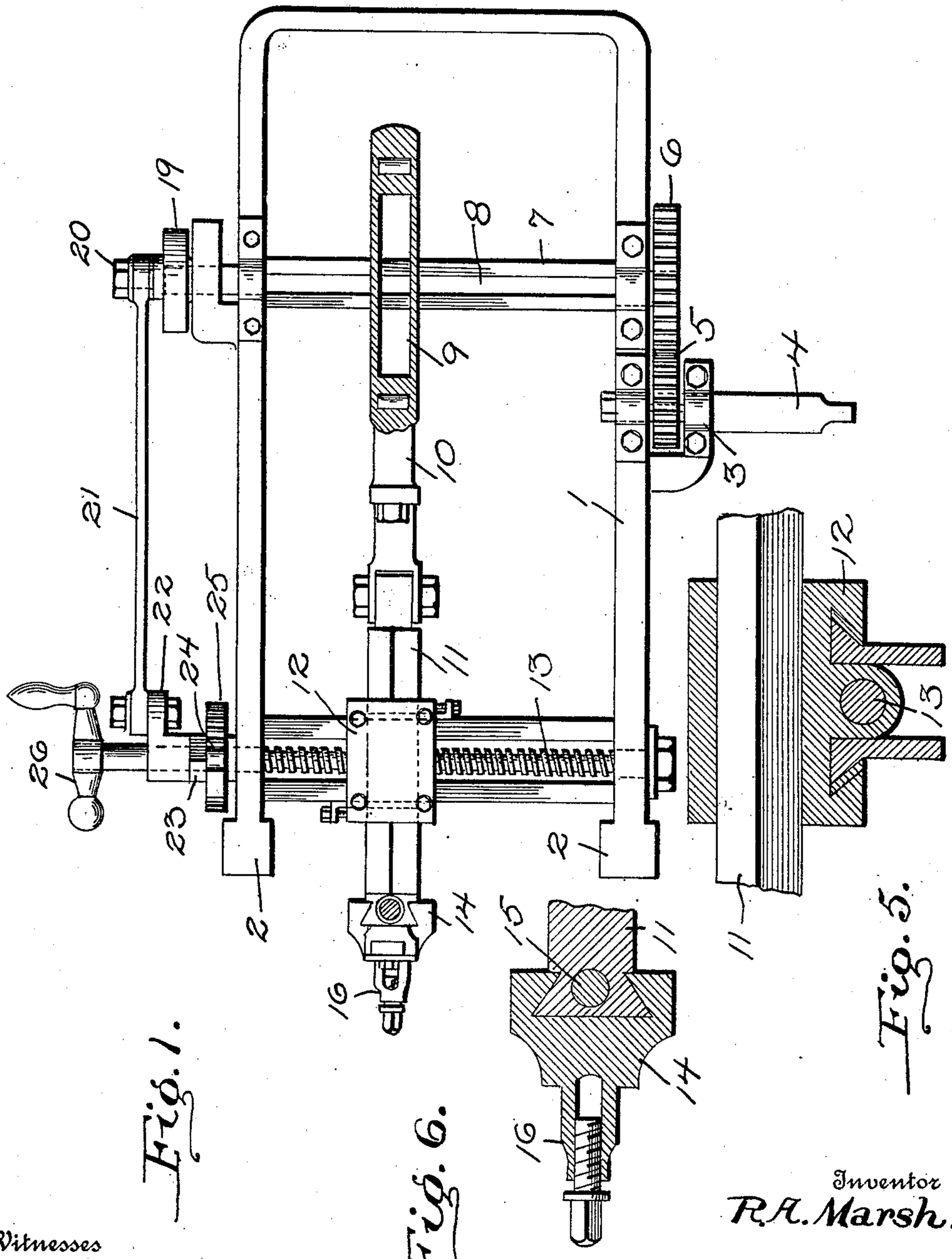

Fig. 1.

Fig. 6.

Fig. 5.

Witnesses

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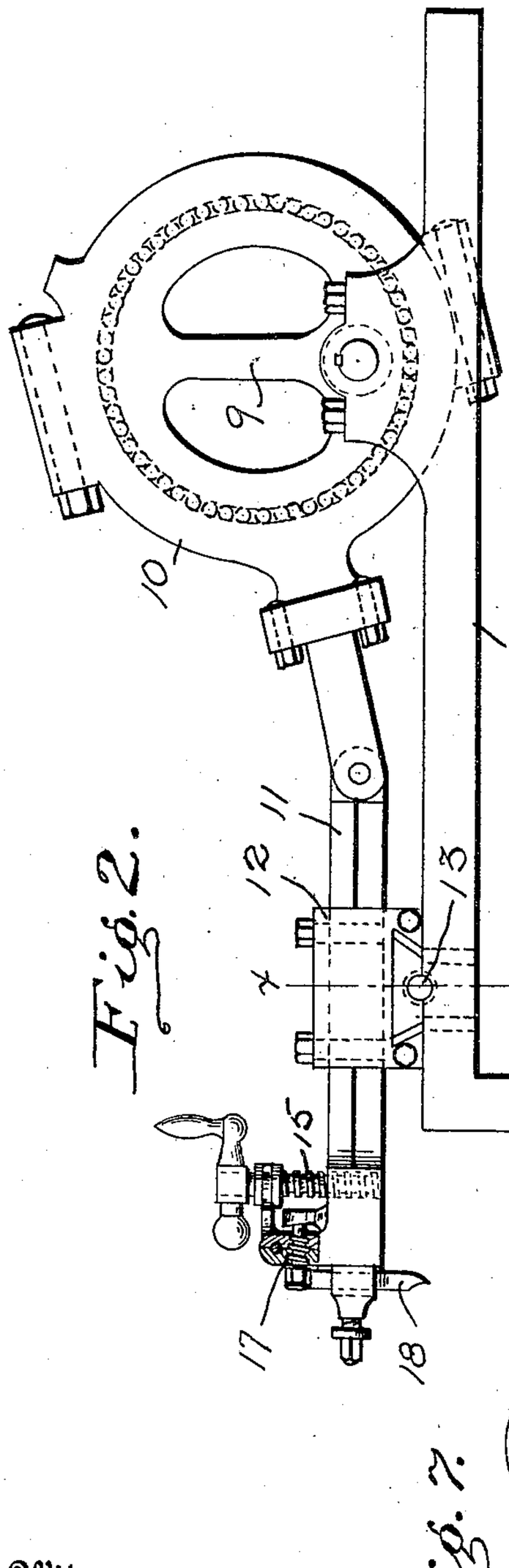

Fig. 2.

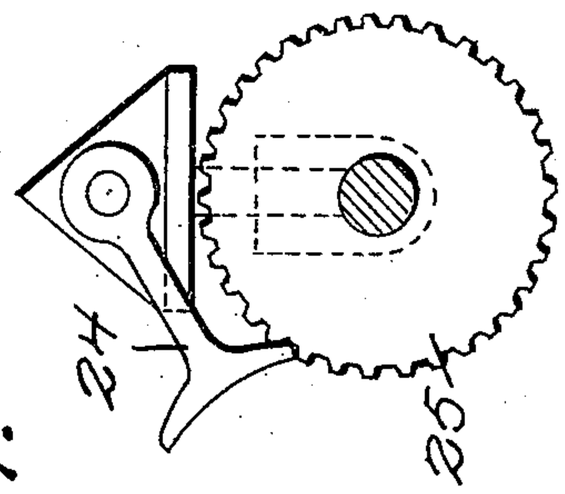

Fig. 4.

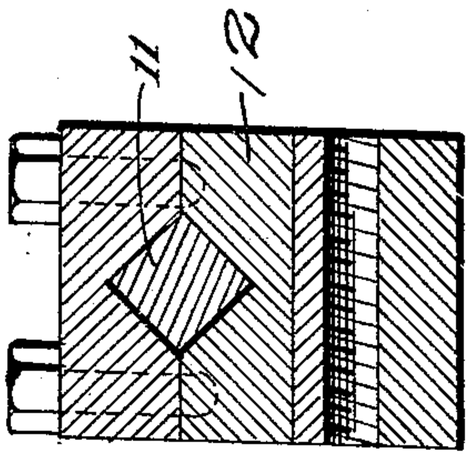

Fig. 3.

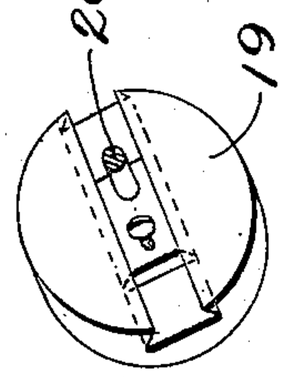

Fig. 7.

Witnesses

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UNITED STATES PATENT OFFICE.

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PEDESTAL-JAW-FACING MACHINE.

999,576. Specification of Letters Patent. **Patented Aug. 1, 1911.**

Application filed November 26, 1910. Serial No. 594,366.

To all whom it may concern:

Be it known that I, RICHARD A. MARSH, a citizen of the United States, residing at Bessemer, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Pedestal-Jaw-Facing Machines, of which the following is a specification.

This invention has for its primary object a simple and efficient apparatus or machine for facing the jaws of journal box pedestals or the like, and the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe and claim.

For a full description of the invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is an elevation of my improved jaw facing machine, parts being shown in section; Fig. 2 (Sheet 2) is an edge view thereof, parts being omitted; Fig. 3 is an enlarged transverse sectional view on the line x—x of Fig. 2; Fig. 4 is a detail view of a pawl and ratchet employed; Fig. 5 is a sectional view through the cross head at right angles to the section illustrated in Fig. 3; Fig. 6 is a detail sectional view of the cross head which carries the tool post; Fig. 7 is a detail perspective view of an eccentric or crank disk hereinafter specifically referred to.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

My improved pedestal jaw facing machine comprises a frame 1 which is provided at one end with an angularly disposed foot portion 2 by which it is designed to be clamped to the outside of a pedestal jaw. The frame 1 is provided with a bearing 3 in which a drive shaft 4 is journaled, said shaft being designed for attachment to an air motor or other prime mover. A spur pinion 5 is mounted on the shaft 4, said pinion meshing with a preferably large gear wheel 6 secured to one end of a countershaft which is journaled in the frame and which extends therethrough, as clearly illustrated in the drawings. The shaft 7 is formed with a key-way 8 and carries an eccentric 9 which is held, by the key-way 8, to rotate with the shaft, the eccentric at the same time being permitted to move on the shaft lengthwise of the latter. The eccentric strap 10 which is an anti-friction roller bearing on the eccentric 9, is connected to one end of a guide bar 11, said guide bar being mounted to reciprocate in a cross head 12, and the cross head is mounted upon a screw threaded feed shaft 13 journaled in the front end of the frame 1, as clearly illustrated in the drawing. The guide bar 11 carries at its forward end a laterally movable cross head 14 which is operated by means of a manually controlled feed screw 15 mounted in the guide bar, the cross head 14 carrying a tool post 16, the holder for the tool post being preferably provided with a spring 17, as best shown in Fig. 2.

18 designates the jaw facing tool.

In its operation, the tool 18 is designed to start the cutting at the top of the inside of the pedestal jaw, and in order to feed the tool downwardly, both automatically and also by hand if desired, the eccentric 9 is adjustably mounted on the shaft 7 and the cross head 12 has a screw threaded engagement with the feed shaft 13. In order to automatically turn the feed shaft 13, the shaft 7 is provided at one end with a grooved eccentric or cam disk 19 in which is adjustably mounted a wrist pin 20 connected to one end of an oscillating link 21. The other end of said link is pivotally (and also adjustably, if desired) connected to a crank 22 secured to one end of a pawl holder 23, the spring pressed and reversible pawl 24 being designed for engagement with a ratchet wheel 25 secured upon one end of the feed shaft 13. It will thus be seen that the rotary movement imparted to the disk 19 by the shaft 7 will be transmitted by the link 21 and converted into an intermittent rotary movement in the feed shaft 13, whereby the tool 18 will be caused to move downwardly at each revolution of the shaft and thereby be automatically fed from the top to the bottom of the jaw. The amount of feed may be adjusted in any of the well known ways, such as varying the position of the wrist pin 20 or varying the connection between the link 21 and the crank 22, so as to vary the throw of said crank. In order to feed the shaft 13 manually, the said shaft extends through the pawl holder 23 and is provided at one end with a handle 26 by which the feed shaft may be turned.

From the foregoing description in connection with the accompanying drawings, the

operation of my pedestal jaw facing machine will be apparent. In the practical use of the machine, the foot 2 of the frame 1 is clamped to the outside of the pedestal jaw, so that the tool 18 will start the cutting operation at the top of the inside of the pedestal jaw, the tool being fed downwardly after each reciprocation and a smooth operation being thereby effected. It is manifest that the machine may be easily clamped to the frame of an engine for instance and readily operated and controlled, the automatic feed not only being capable of adjustment, but means being provided for the manual actuation of the feed screw 13 whereby to control the feed in this way, or to start the tool at any desired point.

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

1. A facing machine, embodying a framework, a shaft journaled therein, an eccentric mounted on said shaft and arranged to move lengthwise of the shaft, means for turning the shaft, a guide bar, a cross head in which the guide bar is mounted to reciprocate, a tool holder carried by the guide bar, and a screw threaded feed shaft journaled in the framework, the feed shaft working through the cross head.

2. A facing machine embodying a framework, a shaft journaled in said framework, an eccentric mounted on said shaft and movable thereon in a direction lengthwise of the shaft, means for turning the shaft, a guide bar connected to said eccentric, a cross head through which the guide bar is mounted to reciprocate, a tool holder carried by said guide bar, a feed shaft journaled in the framework and working through the cross head, and an operative connection between the eccentric shaft and feed shaft arranged to impart an intermittent movement to the feed shaft upon the continuous movement of the eccentric shaft.

3. A facing machine, embodying a framework, a shaft journaled therein, an eccentric mounted on said shaft and movable thereon in a direction lengthwise of the shaft, a guide bar having an operative connection with the eccentric, a cross head through which the guide bar reciprocates, a tool holder carried by the guide bar, a feed shaft journaled in the framework and working through the cross head, a ratchet carried by the feed shaft, a tool holder mounted on the feed shaft, a pawl carried by said holder and engaging the ratchet, a crank secured to the tool holder, a link pivotally connected to said crank, and a driving connection between said link and the first named shaft.

4. A facing machine, embodying a framework, a shaft journaled in said framework, an eccentric carried by said shaft and mounted to move thereon in a direction lengthwise of the shaft, a guide bar operatively connected to said eccentric, a cross head through which the guide bar reciprocates, a tool holder carried by said guide bar, a feed shaft journaled on the framework and working through the cross head, a ratchet carried by said feed shaft, a pawl holder mounted on the shaft, a pawl carried by said holder and engaging the ratchet, the holder being provided with a crank, a driving link connection between the first named shaft and said crank, the feed shaft extending through the aperture from the pawl holder, and a handle connected to the protruding end of the feed shaft.

5. A facing machine, embodying a framework provided with a bearing, a driving shaft journaled in said bearing, a spur pinion secured to the shaft and mounted in said bearing, a gear wheel meshing with said pinion, a shaft journaled in the framework and on which the gear wheel is mounted, an eccentric carried by said last named shaft and movable thereon in a direction lengthwise of the shaft, an eccentric strap carried by the eccentric, a guide bar pivotally connected to said eccentric strap, a cross head through which the guide bar reciprocates, a tool holder carried by said guide bar, a screw threaded feed shaft carried by said framework and working through the cross head, a ratchet carried by the said feed shaft, a pawl engaging the ratchet, a pawl holder to which the pawl is connected, the pawl holder being provided with a crank, a crank disk on one end of the eccentric shaft, a link connecting said crank disk with the crank, the feed shaft passing through the pawl holder and protruding at one end therefrom, and a handle connected to the protruding end of the feed shaft.

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

RICHARD A. MARSH. [L. S.]

Witnesses:
JAMES A. ESTES,
W. T. WELCH.