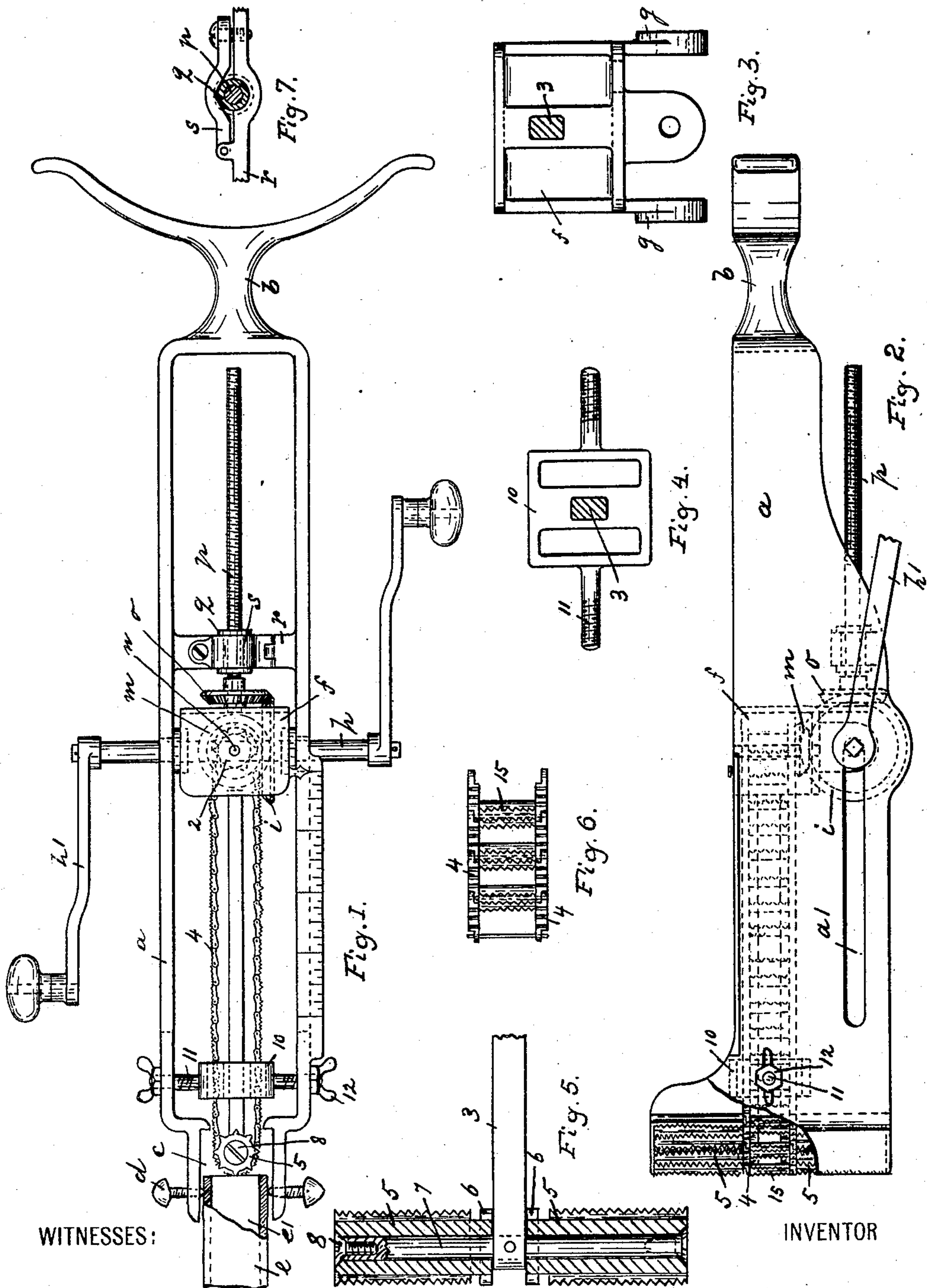


No. 754,753.

PATENTED MAR. 15, 1904.

G. A. D'ISEPO.
PORTABLE MORTISING CHAIN CUTTER.
APPLICATION FILED DEC. 12, 1903.

NO MODEL.



WITNESSES:

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PORTABLE MORTISING CHAIN CUTTER.

SPECIFICATION forming part of Letters Patent No. 754,753, dated March 15, 1904.

Application filed December 12, 1903. Serial No. 184,852. (No model.)

To all whom it may concern:

Be it known that I, GIUSEPPE ANDREOTTA D'ISEPO, a subject of the King of Italy, residing in Passaic, county of Passaic, and State of New Jersey, have invented certain new and useful Portable Mortising Chain Cutters; 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, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in drilling-tools especially applicable for drilling or cutting substantially rectangular-shaped holes—such, for instance, as the holes in doors into which the door-locks are secured or the lock-holes in cabinet or closet drawers, &c.

The object of the invention is to provide such a drilling-tool of simple, strong, and durable construction, reliable and quick in operation, easily handled and adjusted, and not liable to get out of order.

The invention consists in the improved drilling-tool, its drill or cutter operating and feeding mechanism, and in the combination and arrangements of the various parts thereof, substantially as will be hereinafter more fully described and finally embodied in the claim.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several figures, Figure 1 is a top plan view of my improved tool; Fig. 2, a side elevation of the same; and Figs. 3, 4, 5, 6, and 7 are enlarged detail views of certain parts, as will be hereinafter more fully pointed out.

In said drawings, *a* represents a substantially rectangular-shaped frame provided at one end with a suitable handle *b* and having its other end open and formed into a clamp *c*, with fastening-screws *d*, by means of which said tool is secured to the edge of a door or the like. In Fig. 1 of the drawings, *e* represents a portion of a door, and *e'* the hole cut therein for the reception of the door-lock.

In the frame *a* is slidably arranged a skeleton block *f*, (for details thereof see Fig. 3,) provided with downwardly-projecting lugs *g*, forming the bearings for the shaft *h*, which latter penetrates the frame *a* and is slidably arranged in the elongated slots *a'*, as clearly shown.

On the shaft *h*, which is operated by means of the crank-handles *h'*, is securely mounted a beveled gear *i*, meshing with beveled gear *m* on shaft *n*, the latter having its bearings in the frame *f*. The gear *i* meshes also with a gear *o*, secured on the feed-screw *p*, which latter penetrates the internally-threaded sleeve *q*, removably arranged on the cross-piece *r*, and is held in position by means of the hinged lid *s*, as will be manifest.

On the vertical shaft *n* are secured sprocket-wheels 2, engaging the links of endless sprocket-chains 4, which latter are also engaged by the sprocket-wheels 6, which are revolvably mounted on a vertical shaft 7. The last-mentioned shaft is secured in and penetrates a bar 3, which bar projects from the frame *f*, as clearly shown in the drawings. Said bar 3 is guided through the block 10, adjustably arranged in the frame *a* by means of thumb-nuts 12, engaging screws 11, projecting from the guide-block 10 through the frame *a*.

Integral with the sprocket-wheels 6 are cylindrical-shaped cutters 5, held in operative position on the shaft 7 by means of screws 8, as clearly shown in Fig. 5. The endless chains 4, heretofore mentioned, carry a number of cutters 15, adapted to cooperate with the cutters 5, and it may be well to remark that each link of the endless chains is likewise a cutter in itself.

For the purpose of getting the correct depth of the hole to be drilled an indicator or pointer is secured on the block *f* and a scale on the frames *a*, as shown in Fig. 1.

The operator after having secured the clamping end of the drilling-tool to the edge of a door, for instance, presses his body against the handle or shield *b* and turns the crank-handles *h'* from right to left. This rotates the shaft *n*, which in turn through the endless chains rotates the cutters 5. Simultaneously the endless screw *p* is rotated through the beveled gear connection *o* and *i*,

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moving the frame *f* forward, and thus the cutters 5, as will be manifest.

I do not intend to limit myself to the precise construction shown and described, as various alterations can be made without changing the scope of my invention; but

What I claim as new is—

In a portable mortising chain cutter, the combination with an elongated frame, open at one end, and provided with oppositely-arranged elongated slots, a crank-shaft penetrating said slots, a sliding carriage mounted on and forming bearings for said shaft, a second shaft revolubly mounted in said carriage and at right angles to the crank-shaft and receiving its motion from the latter, sprocket-wheels on said second shaft, a bar projecting from said carriage, a shaft penetrating the free end of said bar and secured therein, a cylindrical-shaped cutter on each side of the bar and revolubly mounted on the last-mentioned shaft, a sprocket-wheel connected with each of said cutters and in close proximity

to the bar, endless sprocket-chains connecting the last-mentioned sprocket-wheels and the sprocket-wheels on the vertical shaft in the carriage, a series of individual cutters carried by the sprocket-chains, a guide-block adjustably arranged in the elongated frame between the cutters and the carriage and penetrated by the projecting bar, a bridge or cross piece secured in the frame in rear of the carriage, an internally-threaded sleeve or collar removably arranged on said cross-piece, a screw engaging said internally-threaded sleeve or collar, and means operated by the crank-shaft for rotating said screw, all said parts, substantially as and for the purposes described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

GIUSEPPE ANDREOTTA D'ISEPO.

Witnesses:

M. B. FROME,
ADRIAN ZANETTI.