

No. 627,183.

Patented June 20, 1899.

H. E. GOODELL & H. D. LANFAIR.

BENCH HACKSAW.

(Application filed Aug. 23, 1898.)

(No Model.)

2 Sheets—Sheet 1.

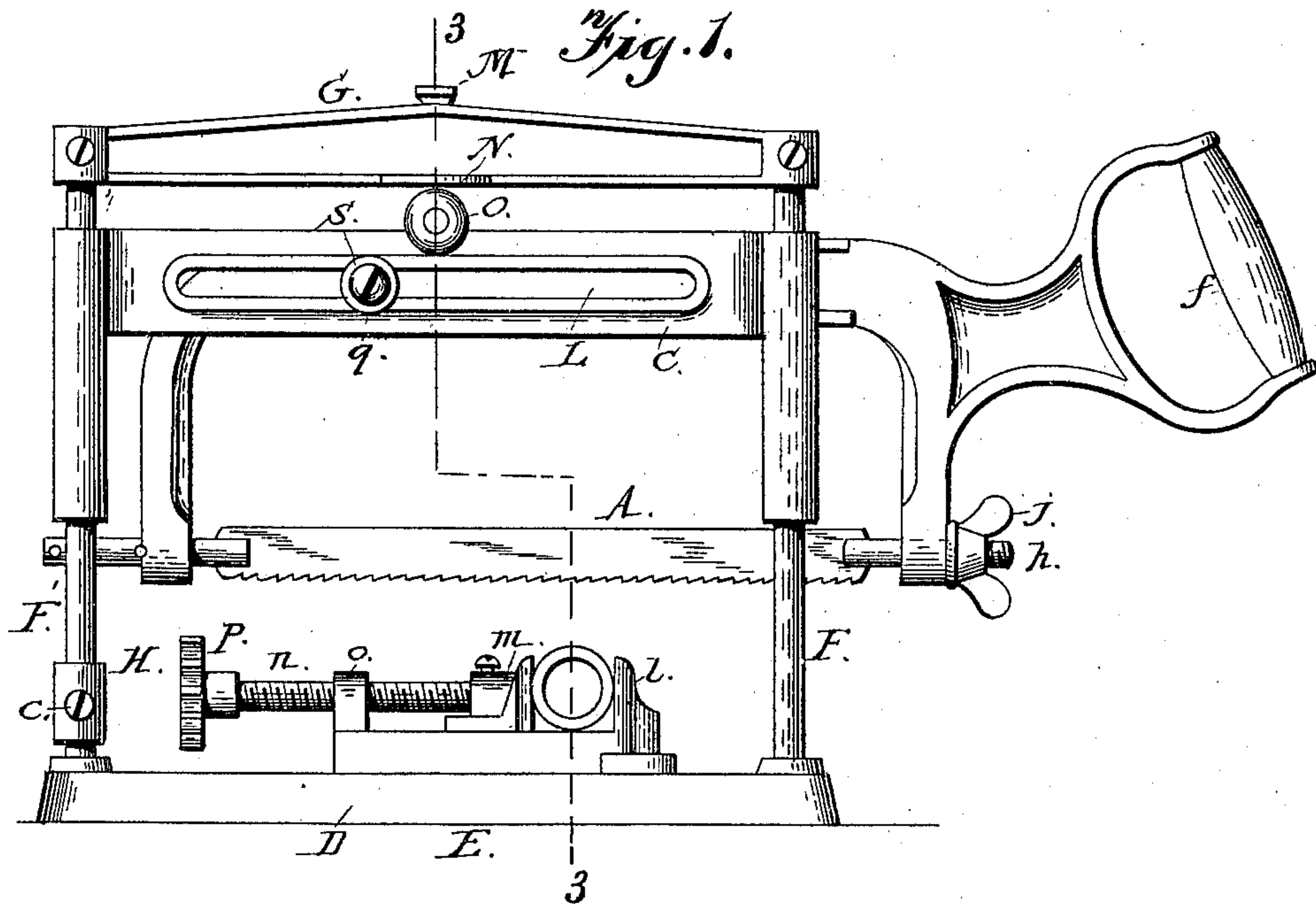
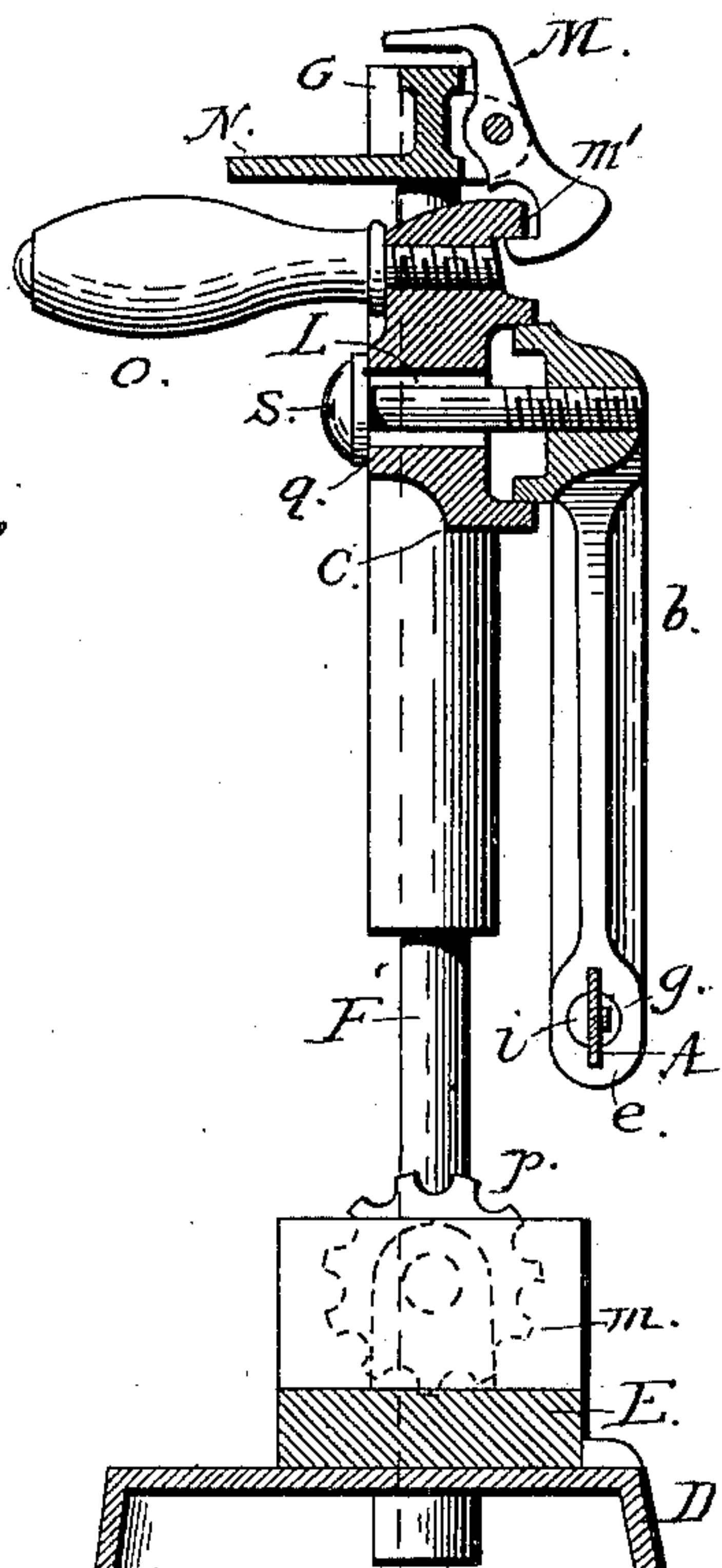


Fig. 3.



Witnesses

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2 Sheets—Sheet 2.

Fig. 2.

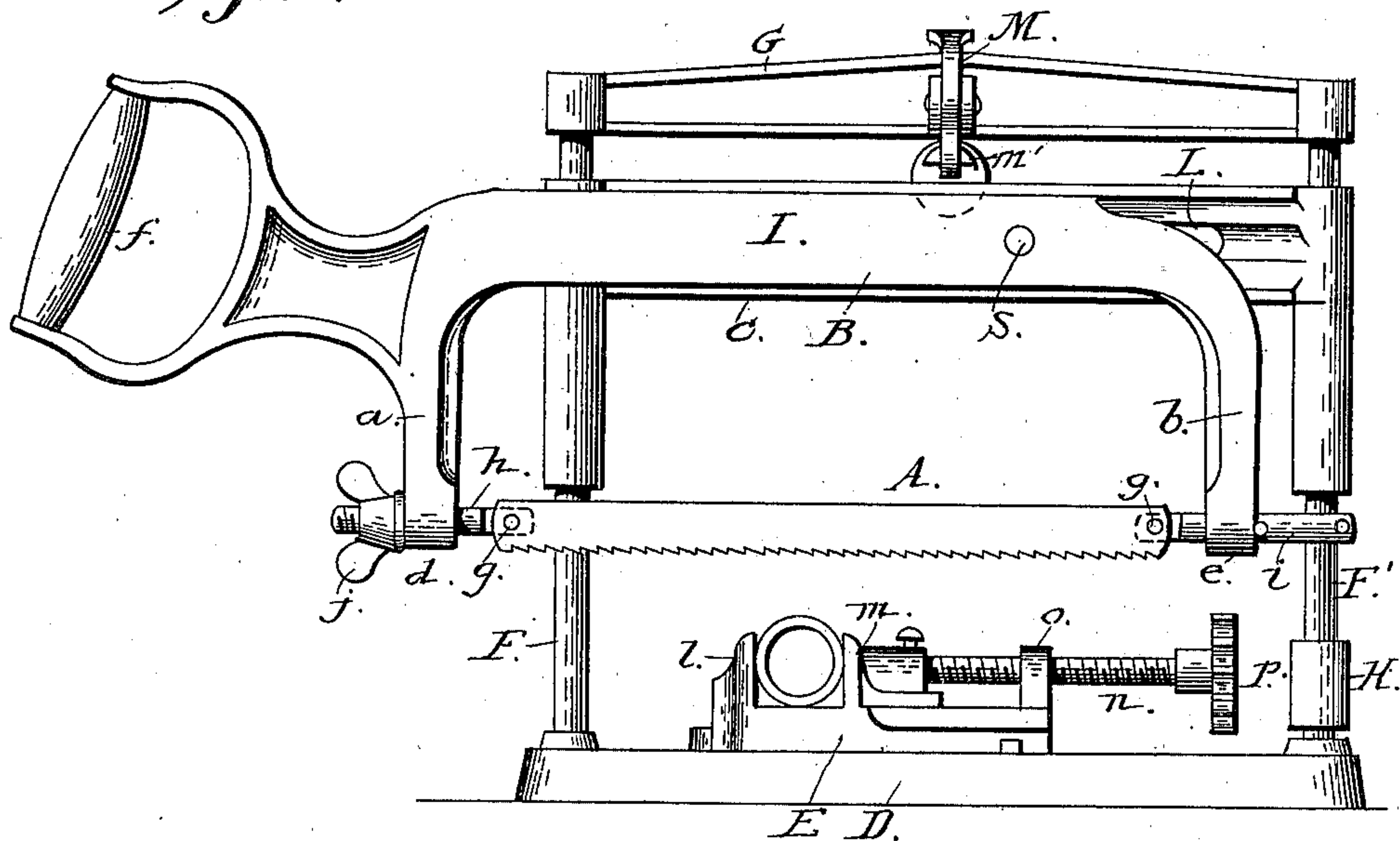
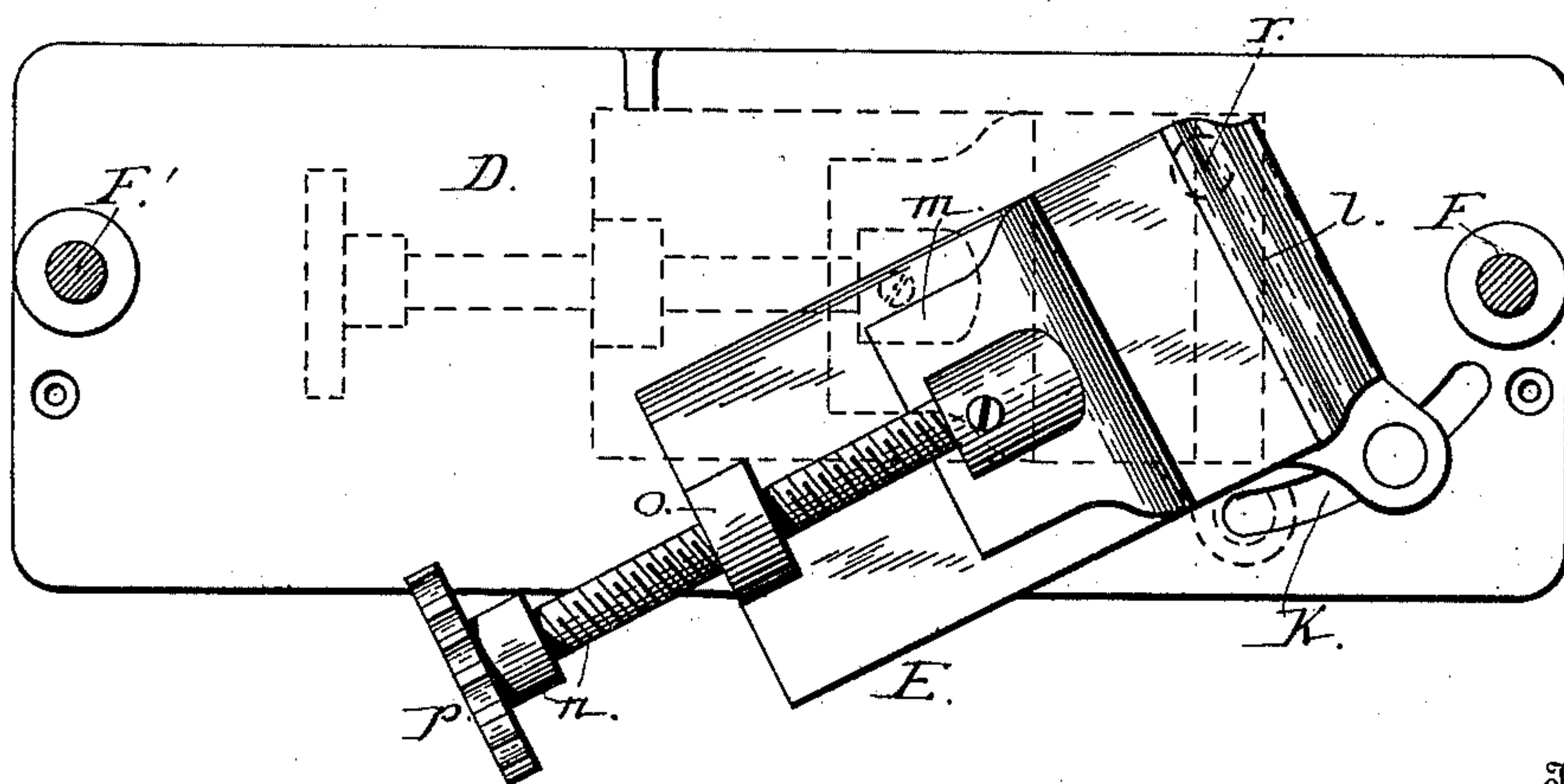


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY E. GOODELL AND HERBERT D. LANFAIR, OF GREENFIELD, MASSACHUSETTS, ASSIGNORS TO GOODELL, SON & CO., OF SAME PLACE.

BENCH-HACKSAW.

SPECIFICATION forming part of Letters Patent No. 627,183, dated June 20, 1899.

Application filed August 23, 1898. Serial No. 689,315. (No model.)

To all whom it may concern:

Be it known that we, HENRY E. GOODELL and HERBERT D. LANFAIR, citizens of the United States, residing at Greenfield, in the county of Franklin and State of Massachusetts, have invented certain new and useful Improvements in Bench-Hacksaws; and we 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.

Our invention is an improvement in hacksaws, a carriage, and the frame for the same.

It has for its object chiefly to provide a hacksaw firmly and adjustably fixed in a frame and in connection therewith a carriage, by means of which the said saw may be adjusted vertically and reciprocated horizontally. In connection with the base of the carriage is an adjustable vise adapted to hold the materials of varying size to be cut at any angle with reference to the plane of the saw.

In the drawings, Figure 1 is a front elevation of the hacksaw and the various parts comprising the frame-carriage, &c. Fig. 2 is a rear elevation of the same. Fig. 3 is a vertical section of the same on line 3 3, Fig. 1. Fig. 4 is a horizontal sectional view showing the base D, vise E, &c.

Similar references in the drawings and specification refer to like parts throughout.

In the drawings illustrating our invention, A is the saw.

B is the frame for the saw, having a bow I, arms *a b*, sockets *d e*, and a handpiece *f*.

The saw A is composed of a flat blade serrated in the usual way, and it is held upon pins *g g*, secured to cylindrical pieces *h* and *i*, resting in the sockets *d* and *e* of the arms *a* and *b*. The cylinder *h* has a screw-threaded end, upon which is run a clamping thumb-nut *j*, by which the saw is given a proper tension. The pins *g g* are inclined outward to more effectually hold the saw-blade against springing from place during work.

D is the base for the carriage-frame, provided with screw-holes for a bench-hold, openings for the uprights of the carriage, and a segmental slot K. Pivoted in the base D is the swivel clamping device or vise E, movable about a screw *r*, for holding the piece to be

sawed to position. This clamping device E has a fixed jaw *l* and a movable jaw *m*, the latter being controlled by a screw *n*, secured thereto and passing through a screw-threaded bearing *o*. The free end of the screw *n* is finished by a thumb-wheel *p*.

The uprights F F' are firmly secured to the base D and are united at their upper ends by a yoke G, said yoke and uprights being secured by screws at their upper junction. At the base of the upright F' is a collar H, secured by a screw *c*, which collar limits the downward movement of the saw and forms a rest for the carriage.

The carriage-yoke C is grooved out to form a flange-guide and bearings for the horizontal portion of the saw-bow I, and said yoke has a long slot L to receive traveling screw S, connected with said saw-bow. A washer *q* is interposed between the head of the screw S and the yoke of the carriage.

M is a latch hinged to yoke G, adapted to catch onto the offset *m'* of the carriage-yoke. A handhold N is secured to the yoke of the carriage.

In the operation of the saw you grasp the saw-handle by the right hand, placing the left upon the small handle or handhold O at the left, with the thumb upon the thumb-piece N. You allow the saw to bear upon the metal to be cut as heavy as necessary, considering the different classes of work. The saw may be adjusted to place by loosening the nut *j* and slipping the openings of the saw over said pins and then tightening said thumb-nut. The vise may be readily swiveled about its axis to suit the bevel required for the bar to be cut.

Having thus described our invention, what we claim-as new, and desire to secure by Letters Patent, is—

1. The combination with the base of the saw, carriage, the uprights firmly secured thereto, a yoke uniting the said uprights, provided with a latch and a thumb-piece, as described, of the carriage, having arms fitting over said uprights united by a yoke provided with a slot and a screw for adjusting purposes and the saw movably secured to said carriage, as and for the purpose set forth.
2. The metal-cutting device which consists of a saw guided horizontally in a slit or slot

and held by a suitable bolt and washer in a yoke; a clamping device for the material to be cut having a fixed jaw and a movable jaw, the former integral with the carriage and capable of movement laterally about a pivot in the base guided by a segmental slot in said base and clampable, by a suitable clamping device, to position as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

HENRY E. GOODELL.
HERBERT D. LANFAIR.

Witnesses:

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