

A. O'DELL.

Improvement in Hand Screws.

No. 122,905.

Patented Jan. 23, 1872.

Fig 3.

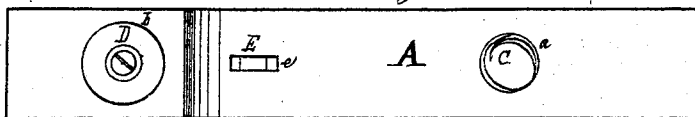


Fig 2.

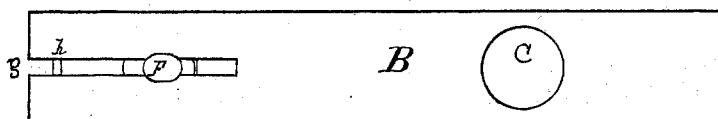
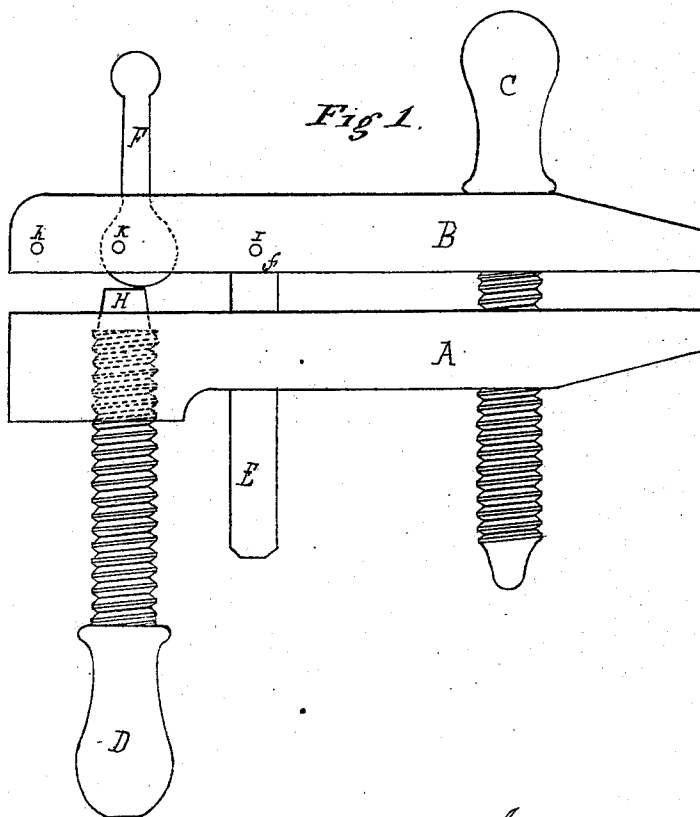


Fig 1.



Witnesses.

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By Myers & Co. Attys.

UNITED STATES PATENT OFFICE.

ABIEL O'DELL, OF TORONTO, CANADA.

IMPROVEMENT IN HAND-SCREWS.

Specification forming part of Letters Patent No. 122,905, dated January 23, 1872.

SPECIFICATION.

I, ABIEL O'DELL, of Toronto, Canada, have invented certain Improvements in Lever-Power Hand-Screws, of which the following is a specification:

Figure 1 is a side elevation of a machine embodying my invention. Fig. 2 is a vertical view of my device. Fig. 3 is a vertical view of my lever-power hand-screw inverted.

My invention relates to the combination of a cam-lever and guide with the jaws and screws of an ordinary "hand-screw," for the purposes as will be hereinafter more fully described.

A is the lower jaw of the device, which is provided with female screws therein at *a* and *b* for the reception of the screws C and D, and with an aperture, *e*, for the guide E. B is the upper jaw of the hand-screw, and has therein a female screw for the reception of the male screw C, and a slot at *f* for the reception of the guide E. Said jaw is also slotted at *g* for the reception of the cam-lever F, and provided with the rigidly-secured transverse bar *h*, which projects across the said slot and bars the descent of the handle of the cam-lever F below a horizontal position. The male screw C, which projects through jaws A and B, is employed for adjusting the jaws of the device to the proper width or character of the intended work. The material to be secured being first placed loosely within the jaws, whereupon the cam-lever F is easily elevated with the hand, which causes the jaws to compress and firmly grasp the material placed therein, and to hold it rigidly until again released by the depression of the cam-lever into a horizontal position. D is a male screw working through the lower jaw A, and having located rigidly upon its one end or apex the metallic thimble H, upon which

latter the cam-lever F is caused to impinge and press by the elevation of said lever from a horizontal position, thereby contracting the jaws of the device. A screw, nail, or other metallic equivalent may be secured in or on an end of the screw D to meet the pressure of the cam-lever, but thimble H is preferable in practice. E is a guide, which is secured in a slot in jaw B by the pin I, and projects through an aperture, of conformation similar thereto, provided in jaw A. F is a cam-lever, or a combination of cam and lever, located in the slot *g* and pivoted at K. The operation of this combined cam and lever is such that in an instant, by its elevation into a perpendicular or its depression into a horizontal position, the jaws of the press are caused to close upon and rigidly grasp the material placed therein, or to open and release the same.

My lever-power hand-screw may be constructed either of wood or metal, and, although chiefly designed as a cabinet hand-screw, it may be also employed with similar advantage as a carpenter's bench-screw; and the same power may be applied in door-clamps advantageously.

Claim.

The combination of the cam-lever F and guide E with the jaws A and B and screws C and D of an ordinary hand-screw, substantially as shown and set forth.

In testimony of this my application for Letters Patent for an improvement in lever-power hand-screws I have hereunto signed my name the day and year first above written.

Witnesses:

W. HEWITT,
D. HEWITT.

ABIEL O'DELL.