

(No Model.)

J. B. RICHARDS.
WORK BENCH ATTACHMENT.

No. 259,211.

Patented June 6, 1882.

Fig. 1

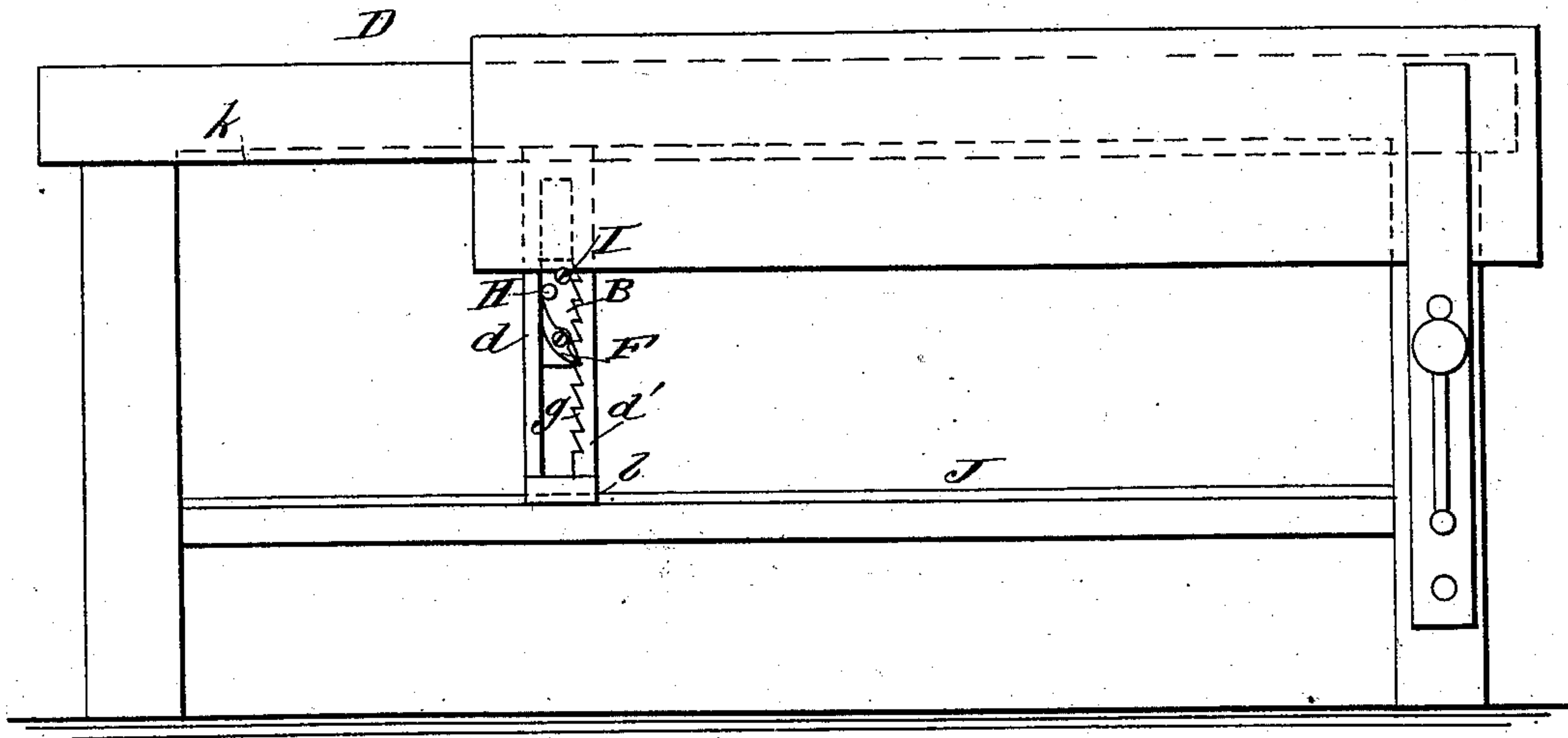


Fig. 2

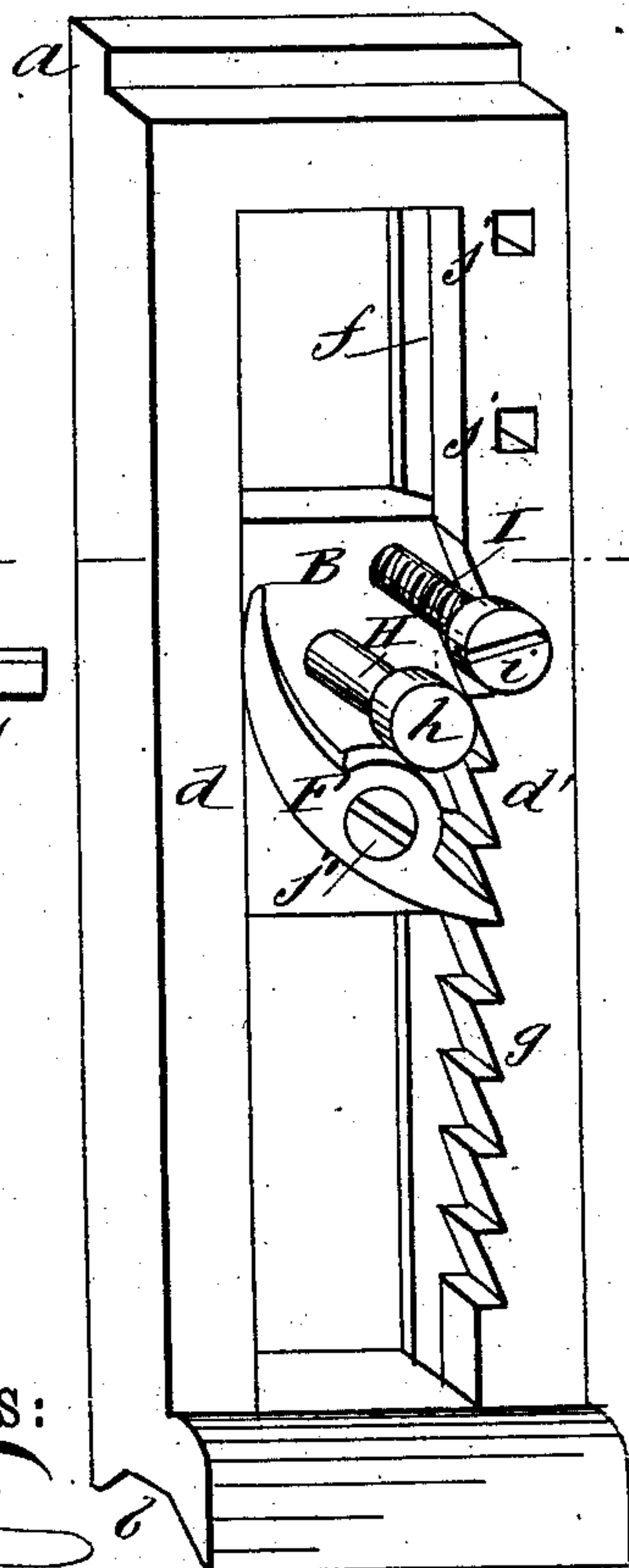


Fig. 4

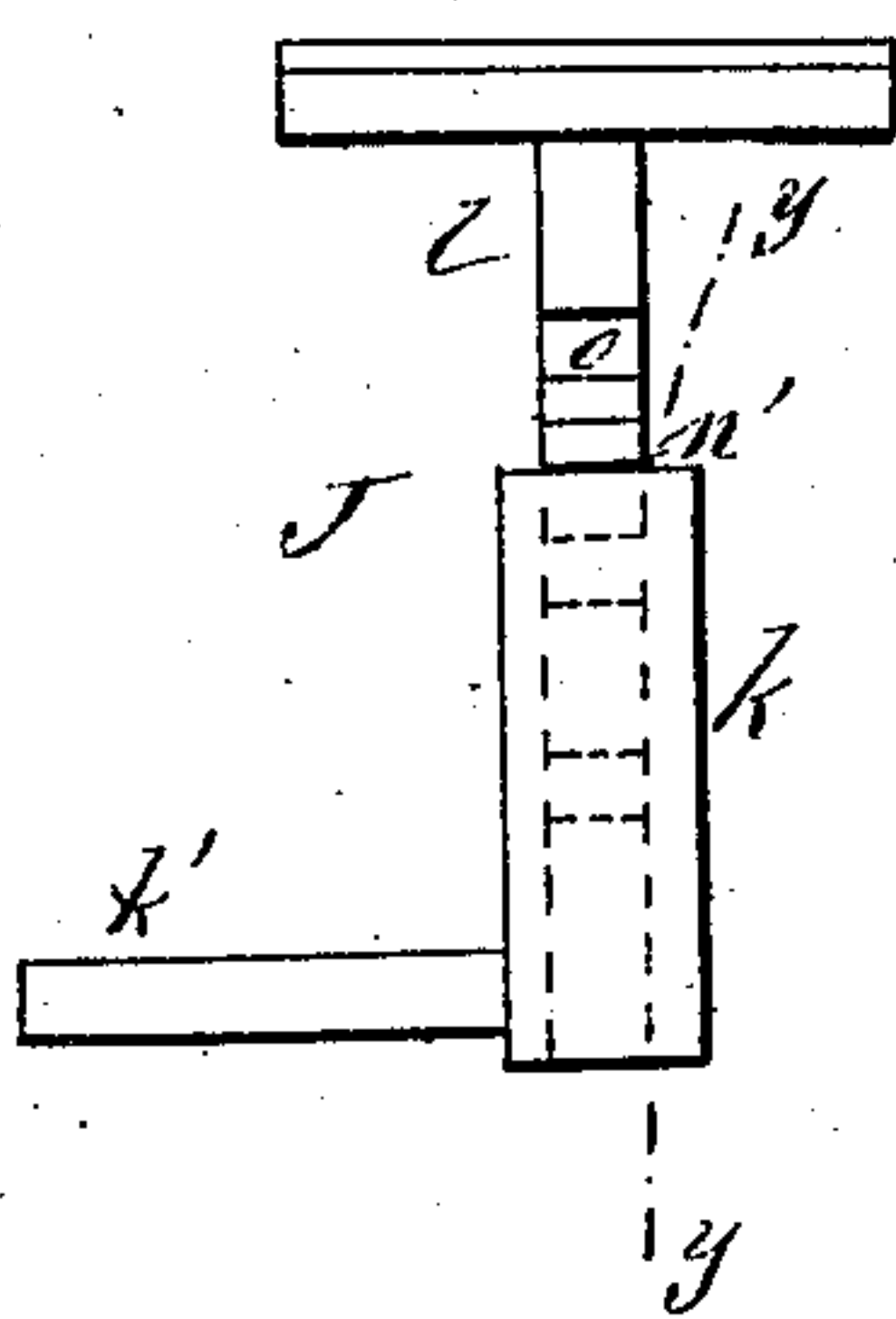
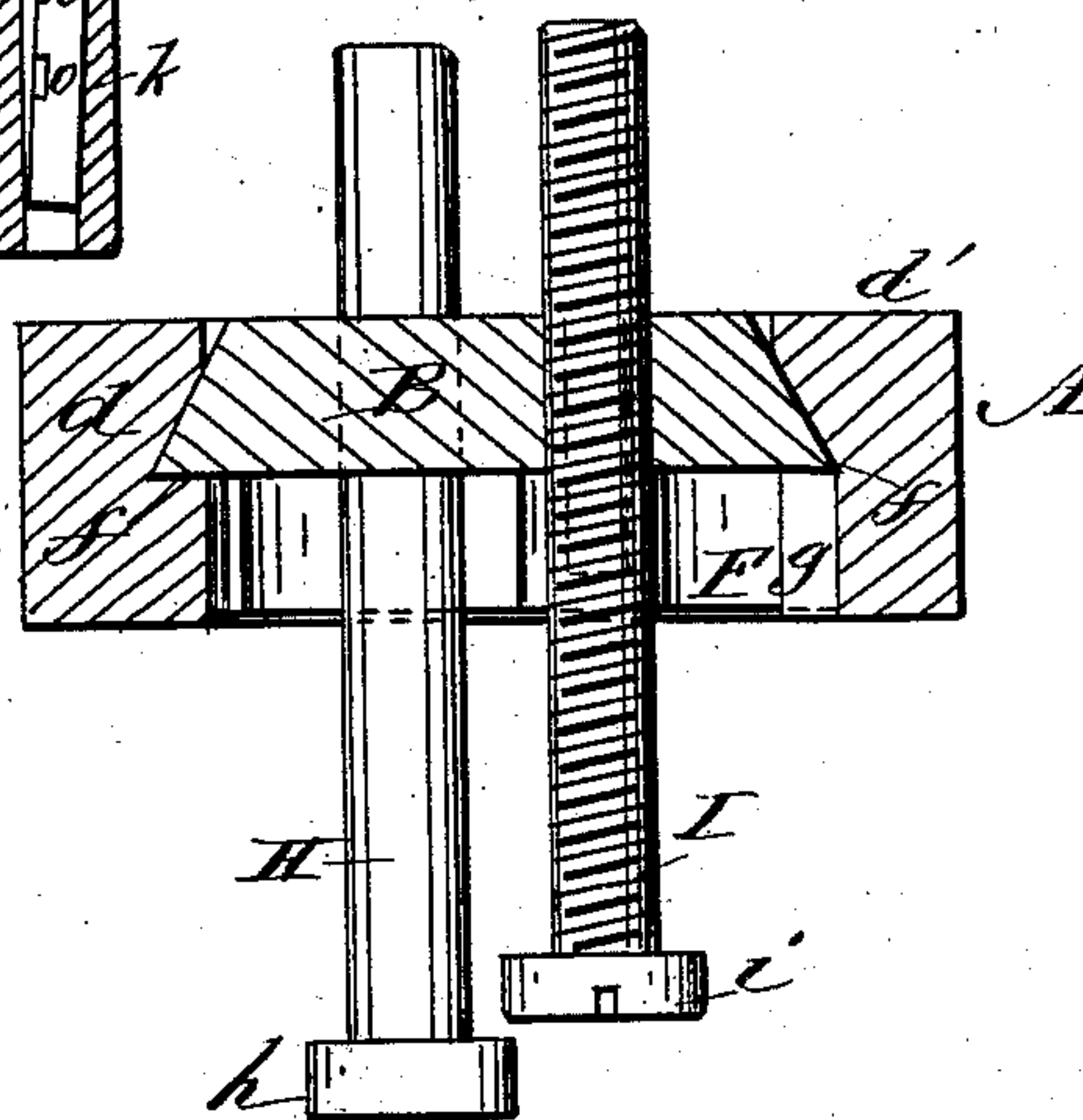


Fig. 5

Fig. 3



WITNESSES:

C. Neveu
C. Sedgwick

INVENTOR:

J. B. Richards
BY *Mum Ho*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JONATHAN B. RICHARDS, OF WAGER, ARKANSAS.

WORK-BENCH ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 259,211, dated June 6, 1882.

Application filed March 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, JONATHAN B. RICHARDS, of Wager, in the county of Benton and State of Arkansas, have invented a new and Improved Bench-Pin Attachment, of which the following is a full, clear, and exact description.

The object of my invention is to provide a bench-pin to be attached to wood-workers' benches which shall be adapted to be moved vertically and horizontally, for holding lumber of different widths and lengths, and one which shall be adapted to be used with both high and low vises.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a bench, showing the manner of using my new bench-pin. Fig. 2 is a perspective view of the complete device removed from the bench. Fig. 3 is a sectional plan view taken on the line *x x*, Fig. 2. Fig. 4 is a front elevation of the attachment for holding the work for elevated vises; and Fig. 5 is a sectional elevation of the same, taken on the line *y y* of Fig. 4.

A is the frame of the device, which may be of metal or wood, formed with the lip or projection *a* at its upper end and with the crotch or saddle *b* at its lower end. The parallel bars *d d'* of the frame are formed with the grooves *f f*, which constitute ways in which the block B moves, and in one side of the bar *d'* are formed the ratchet-teeth *g*, with which the pawl F engages for holding the block B at any desired point of elevation in the frame. This bar *d'* is also formed with the square holes or passages *j j* for the attachment to the frame of the elevated support shown in Figs. 4 and 5.

H and I represent the pins upon which the lumber is to be placed, which are carried by the sliding block B. The pin H is a plain pin, formed with the head *h*, and is held a little below the pin I in a plain hole made through the block, in which it fits loosely. The pin I is a screw-threaded pin, formed with the head *i*, and is held in a screw-tap made through the block.

The bench D, with which my improved device is to be used, will be formed with a groove or rabbet for the lip *a* to fit in, as shown in dot-

ted lines at *k* in Fig. 1, and will be provided with the rail J, which reaches from leg to leg of the bench upon which the device rests and moves, the upper edge of the rail being convex in form for the crotch *b* of the frame to fit upon, for holding the frame in place in the bench and for permitting its free movement upon the rail to suit the length of lumber to be worked.

In case the lumber to be worked is straight, the pin H will be used to support it, which will of course be drawn out of the block a suitable distance to suit the thickness of the lumber; but in case the lumber is bent or warped the pin I will be used, the head of it being adapted to be screwed against the lumber for straightening it and for holding it against the side of the bench.

While the pin H is being used the pin I may be entirely unscrewed from the block and laid away; or it may be screwed into the block so far that it will not interfere with the use of the pin H.

The pawl F is pivoted to the block B upon the pivot *j'* below the pins H and I, as shown, and it is so formed that the part of it above the pivot is of greater weight than the part below, so that the pawl is always held in position to engage with the teeth of the ratchet without the use of a spring or similar means for holding its lower end forward.

In use the device is simply to be moved along upon the rail J to suit the length of timber to be worked, and the block B raised or lowered, as the case may be, to suit the width, the pawl holding the block firmly at any desired point of elevation in the frame.

The grooves *f f* in the bars *d d'*, in which the block moves, are triangular in form, and the edges of the block are beveled to fit the grooves, as is clearly shown in Fig. 3. This formation of the edges of the block and the groove is not essential, however, to the device, as the block may be formed with plain tongues and the bars with plain grooves and accomplish the same end; but the form of tongue and groove shown is a cheaper construction, and is therefore preferred.

In case the device is to be used with an elevated vise, the elevated support J is to be used, which is formed of the sleeve *k*, having the lateral arm *k'* and the adjustable T-bar *l*,

which is held in the sleeve *k* by means of the removable wedge or key *n*. The T-bar is formed upon one side with the notches *o*, and the wedge or key *n* is formed with the head *n'*, and the projection or lug *n''* upon its back, which fits in the notches *o* of the T-bar, as shown clearly in Fig. 5.

In order to attach the elevated support J for use, the arm *k'* is to be placed in one or the other of the square holes *j* in the frame *d'*, which arm is of sufficient strength to support the work. The T-bar *l* is then to be adjusted the proper height by raising the bar and placing the lug *n''* in one or the other of the notches *o* of the bar, which will hold the bar at the height desired.

With this construction it will be seen that the device, with its attachment, is a complete tool for its purpose, adapted to be used with both high and low vises, and is cheap and simple.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the frame A, having the lip *a* at its upper end, the saddle *b* at its lower end, and parallel bars having grooves *f* and teeth *g*, the sliding block B, carrying the pivoted pawl F and pins H I, and the bench D, grooved to receive lip *a*, and having rail J upwardly convexed to receive saddle *b*, as and for the purpose specified.

2. The frame A, formed with the holes *j*, in combination with the elevated support J, formed of the sleeve *k*, provided with the arm *k'*, and the adjustable T-bar *l*, substantially as described.

JONATHAN B. RICHARDS.

Witnesses:

THOS. J. ELTON,
J. J. ARTHURS.