

(No Model.)

J. H. STEWART.
WORK BENCH.

No. 435,331.

Patented Aug. 26, 1890.

Fig. 1.

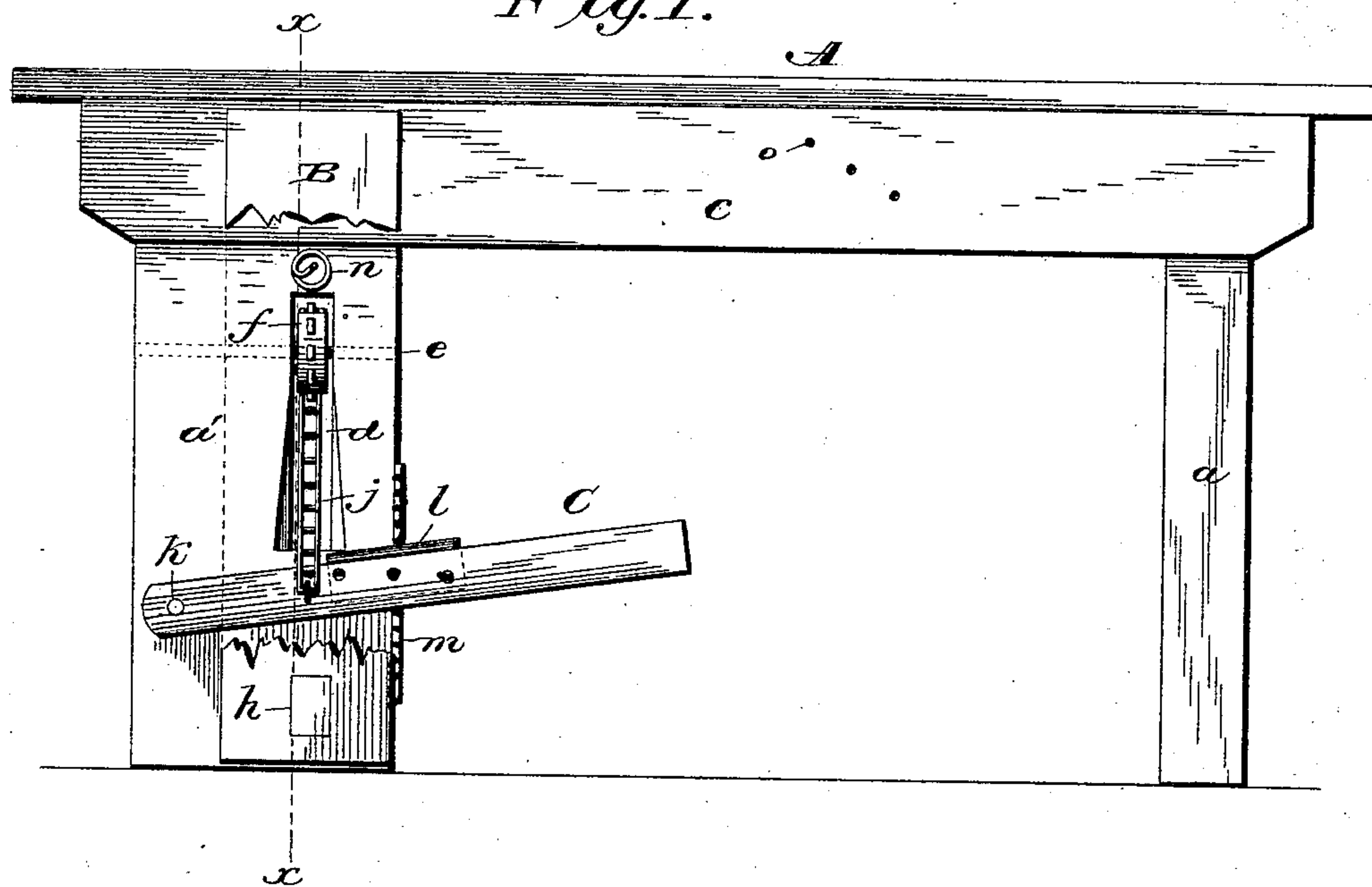
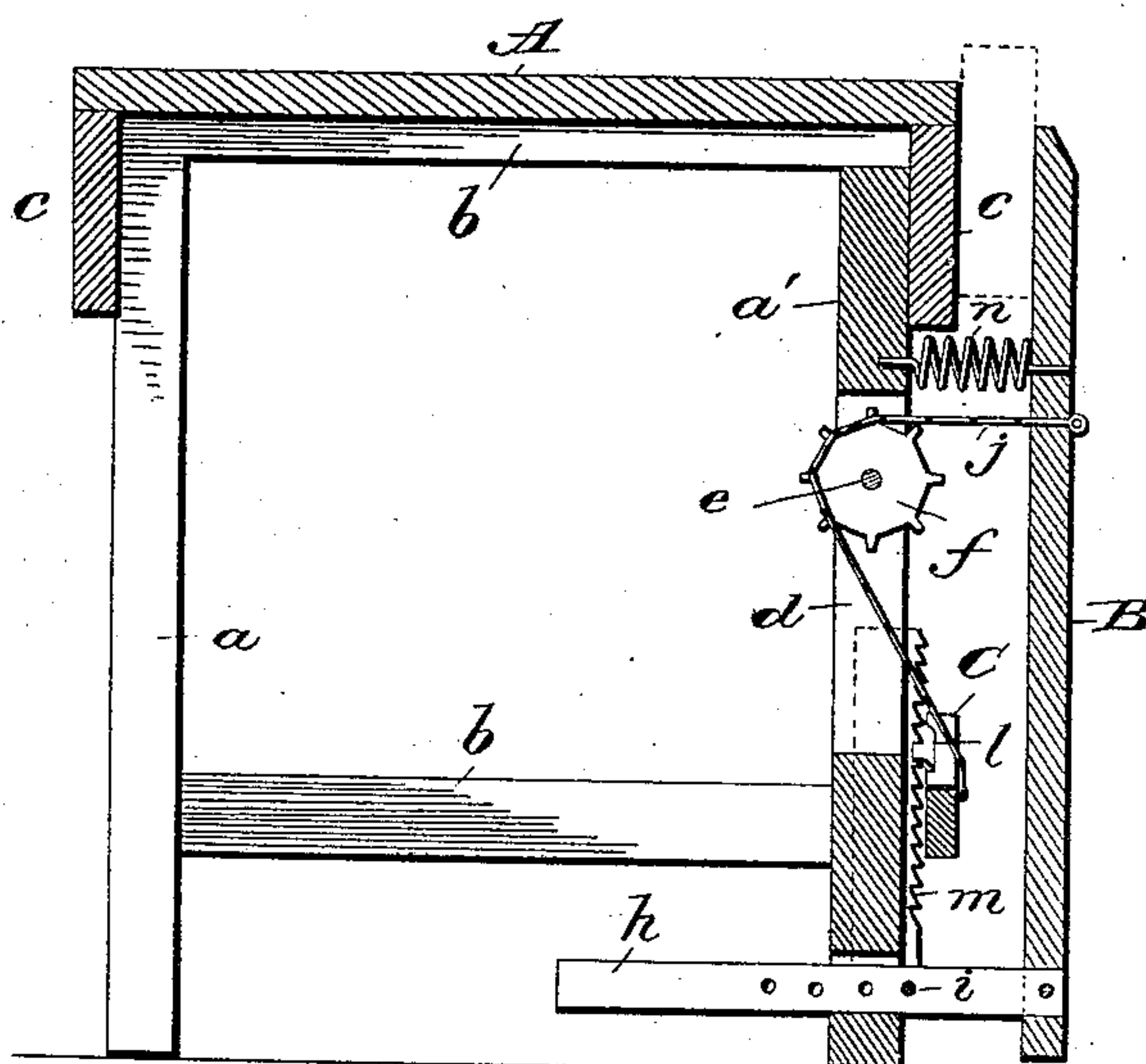


Fig. 2.



Joseph H. Stewart

Inventor

Witnesses

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By His Attorney

Inv

UNITED STATES PATENT OFFICE.

JOSEPH H. STEWART, OF BLUFF CITY, TENNESSEE, ASSIGNOR OF TWO-THIRDS TO JOHN M. HODGES AND CHARLES F. HODGES.

WORK-BENCH.

SPECIFICATION forming part of Letters Patent No. 435,331, dated August 26, 1890.

Application filed April 17, 1890. Serial No. 348,382. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. STEWART, a citizen of the United States of America, residing at Bluff City, in the county of Sullivan and State of Tennessee, have invented certain new and useful Improvements in Work-Benches; 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 of reference marked thereon, which form a part of this specification.

My invention relates to work-benches; and it consists in the improved construction hereinafter described and set forth, whereby a simple and efficient structure is provided for the purpose stated.

In the accompanying drawings, forming part of this specification, Figure 1 is a vertical side elevation of a work-bench embodying my invention, part being broken away; and Fig. 2 is a transverse section on the dotted line *xx* of Fig. 1.

The top *A* of the bench is supported upon the four legs *a a a a'*, which are within the area of the top and are connected together at the ends by upper and lower horizontal braces *b b* and at the sides immediately below the projecting side portions of the top with longitudinal side strips *c c*, which are flush with the side edges of the table. The leg *a'* is of extended width compared with the other legs, and is provided with an enlarged vertical slot *d*, which is narrower at the top than at the bottom, and within the narrow portion of said slot is a pin *e*, upon which is mounted a spur wheel or pulley *f*. A vertical clamp-bar *B* is located opposite the leg *a'*, and carries at its lower end a horizontal arm *h*, which plays through an opening in said leg and is pierced for the passage of a pin *i*, which bears against the face of the leg *a'* connected to the bar. Connected to the upper portion of the bar *B* is a flexible strap or chain *j*, which passes over the spur-wheel *f*, and is provided with perforations for the reception of the spurs of the wheel and is finally connected at its lower end with a

treadle-lever *C*, pivoted at *k* and extending transversely across the lower portion of the slot, and having a curved plate *l*, designed to engage one of the teeth upon a vertical rack-bar *m*, secured on the inner edge of the leg *a'*. A spiral expanding-spring *n* is secured to the leg *a'* and bears against the inner face of the clamp-bar above the connection of the flexible strap therewith. A pin or stud *o* projects from the side of one of the strips *c*, as shown in Fig. 1, and is desired to support the strip that is to be clamped by the bar, and said pin may be inserted in any one of several adjacent perforations to provide an adjustable rest thereat. It will be quite apparent that by depressing the foot-lever the strap will be pulled so as to draw the upper clamp end against the adjacent strip *a* so as to hold the section, the lever being held by its engagement with one of the teeth of the rack. The strain on the strap or chain is also resisted by the teeth on the spur-wheel. By releasing the treadle the spring will act to throw the clamp-bar away from the work, the clamp-bar being guided in such movement by the arm playing in the opening.

As illustrated and explained, the improved bench is not only simple and durable, but can be constructed at comparatively slight expense.

I am aware that prior to my invention it has been proposed to provide one side of a joiner's table with parallel horizontal guide-strips in which is to play a horizontal board having at its outer end a vertical clamp portion, while an operating-cord was to be connected to the inner end, pass around a pulley, and attached to a pivoted foot-lever designed to engage with a rack, so that the board could be moved to cause the clamp to move toward the side of the table, the board and clamp being moved outward when the foot-lever was released by the contractile action of a spring connected to the movable board and to a fixed part of the table. My invention will be readily distinguished from such construction, in that I provide an arrangement whereby the material is clamped against the table by direct power exerted on a vertical clamp-bar and lock the operating belt

or chain, so that it practically serves as the fulcrum for the upper portion of said bar, the spring for throwing the clamp-bar outward being above and independent of the belt or chain, the tendency of the lower part of the bar to move inward under the pressure exerted above the belt or chain fulcrum being controlled by the adjustable pin in the lower horizontal arm. Another important difference consists in the fact that the belt or chain fulcrum, spring, foot-lever connection, horizontal arm, and adjustable pin are all located at the inner side of the clamp-bar, so as to be guarded thereby, and thus be out of the way and not only obviate objectionable projections but secure a compact arrangement of parts. It will be noted that the lever C extends parallel with the side of the bench and the side strip c thereof, so that the workman can stand centrally at the side and adjust the pin o to sustain either the end or central portion of the material and depress the lever without the necessity for changing his position. This is not possible in the construction previously disclaimed, since the lever is located at one end and at right angles to the plane in which the work is to be clamped.

I claim—

1. The combination, with a work-bench, of a movable clamp-bar spring for throwing the same outwardly, a lever pivoted to a fixed part of the bench and extending inwardly parallel with the side of the bench at which the work is clamped, and connections be-

tween said lever and clamp-bar to operate the latter from the lever, together with devices for locking and retaining said lever in a depressed position, substantially as set forth.

2. The combination of a work-bench having a top, side strips flush with the edges thereof, one of the latter being provided with a vertical series of perforations and a pin fitting into one of the same, a vertical flat leg, slotted as described, a sprocket-wheel mounted in said slot, a horizontal pivoted foot-lever extending inward along the bench and parallel with the side strip to which the work is clamped, a rack for engaging said lever, a belt or chain connected to said foot-lever passing around and geared with a sprocket-wheel and connected to a clamp-bar, a horizontal arm carried by the lower portion of the clamp-bar and playing through an opening therefor in the leg and having a series of perforations, a pin passing through one of said perforations, together with an expanding-spring between said leg and bar, the sprocket-wheel, chain, and spring-connection with the clamp-bar, chain-connection with the lever, and adjustable horizontal bar, all being in the rear of the clamp-bar and masked thereby, substantially as set forth.

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

JOSEPH H. STEWART.

Witnesses:

R. B. CROSS,
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