(No Model.)

J. C. LYNCH.

WORK BENCH VISE.

No. 345,244. Patented July 6, 1886.

Fig. 1.

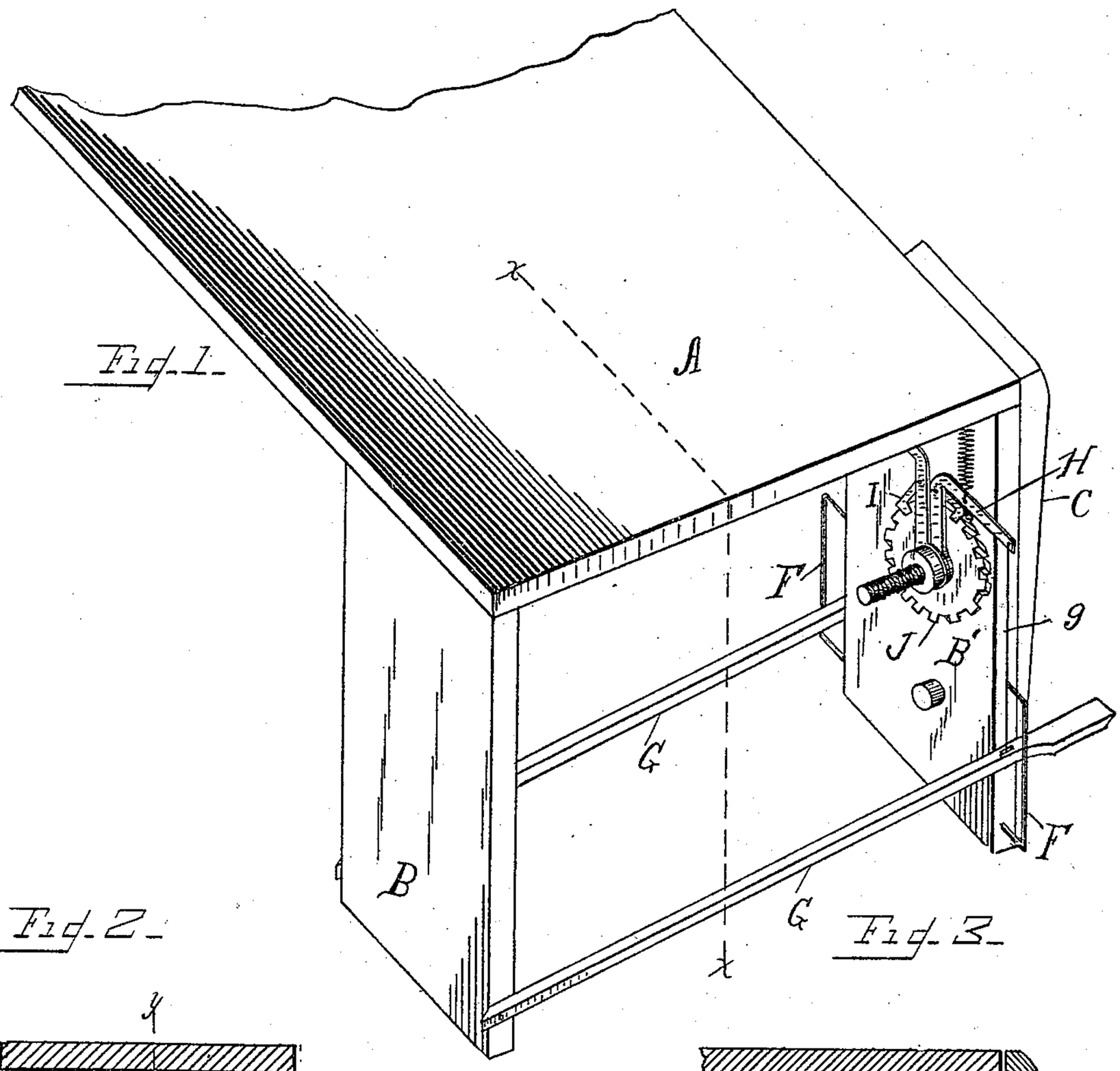


Fig. 2.

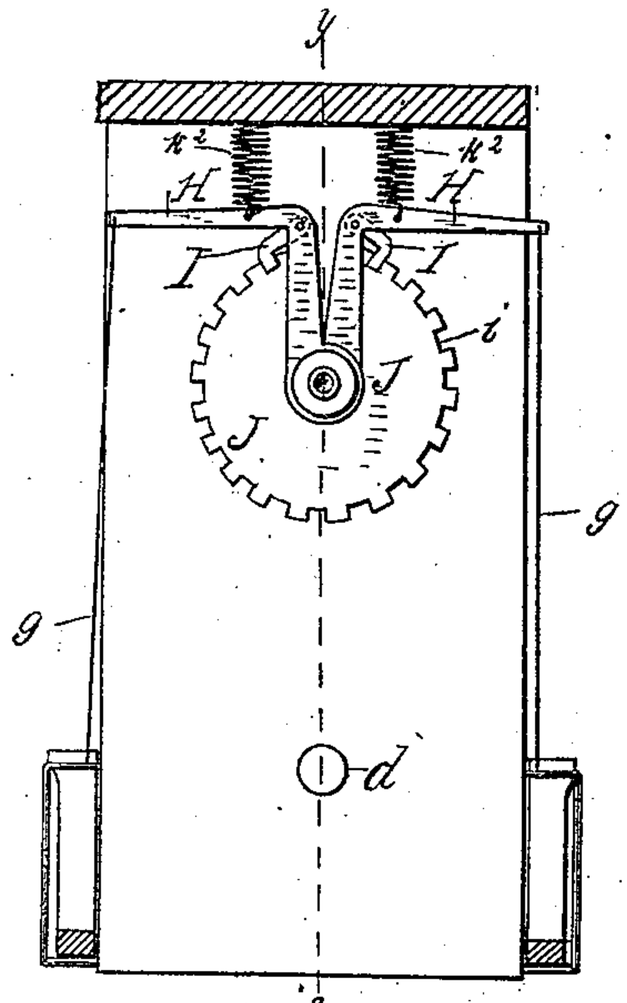
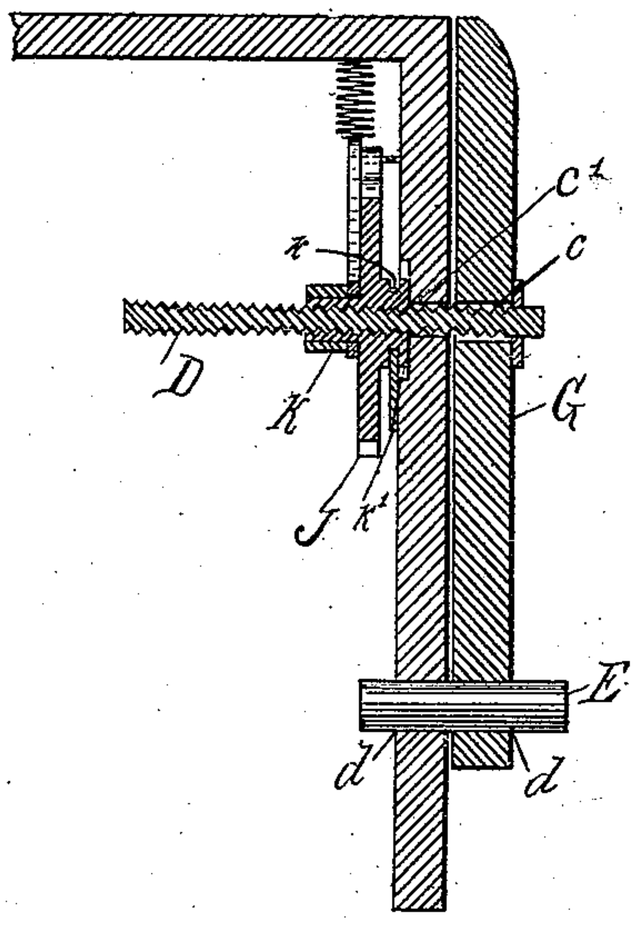


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN C. LYNCH, OF SYCAMORE, OHIO.

WORK-BENCH VISE.

SPECIFICATION forming part of Letters Patent No. 345,244, dated July 6, 1886.

Application filed January 7, 1886. Serial No. 187,898. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. LYNCH, a citizen of the United States, residing at Sycamore, in the county of Wyandot and State of Ohio, have invented certain new and useful Improvements in Carpenters' Bench-Vises, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in vises for carpenters' work-benches and similar supports, whereby articles of various kinds are securely held in position while being operated upon, and are afterward released therefrom when desired; and to this end the invention consists in the novel construction and arrangement of the several parts, as will be hereinafter more fully described and specifically claimed.

In the annexed drawings, to which reference is made, and which fully illustrate my invention, Figure 1 is a perspective view of a bench with my device applied thereto. Fig. 2 is a longitudinal section taken on the line *x x*, Fig. 1; and Fig. 3 is a cross-section of the same, taken on the line *y y*, Fig. 2.

A represents a work-bench mounted upon legs B and B′. To one of these legs, B′, is clamped a jaw, C, said jaw and leg being provided with holes *c* and *c′*, these holes *c* and *c′* being in alignment with each other and made in or near the middle or center thereof, through which a traversing screw, D, is inserted. The jaw C and leg B′ are each provided with another hole, *d* and *d′*, through which a pin, E, is passed for securing loosely but firmly the jaw C and leg B′ near their lower ends. By thus securing the leg and jaw the latter can be moved to and from the leg B′ through the medium of the traversing screw D. This leg B′ has two guards, F F, secured to the sides near their lower ends, which receive the free ends of two treadles, G G, while the opposite ends of these treadles are pivotally connected in any suitable manner to each side at the lower ends of the leg B, thereby forming a fulcrum for the treadles. To the free end of these treadles G G a wire, *g*, is connected with the outer and smaller ends of two bell-crank levers or arms, H, as shown in Fig. 2 of the drawings. The other ends of these levers or arms are constructed gradually larger from their angles and terminate in circular plates, which are provided with two holes, one in each, which embrace the traversing screw D, upon which they vibrate alternately and in opposite directions as one or the other of the treadles is depressed.

Pivoted at their inner ends and to the angles of the levers or arms H are two dogs or catches, I I, their free ends engaging with notches *i* in a cog-wheel, J, made integral with a hub or nut, K, secured upon the traversing screw D sufficiently loose to allow the screw to traverse back and forth with the jaw C. This nut or hub K of the wheel J is provided at its inner end, or the end next to the leg B′, with a circumferential groove, *k*, within which is seated or projects the semicircular end of a metallic plate, *k′*, located below the nut K, and rigidly secured by screws or nails to the inner side of the leg B′, and near the opening through which the traversing screw passes. This metallic plate *k′* holds the hub with its wheel securely and snugly in position upon the traversing screw D.

Secured to the under side of the bench A, and near the leg B′, are two coiled or spiral springs, k^2. The upper ends of each are seated in holes in said bench securely, and their lower ends are connected to the bell-crank levers near their angles by being passed through holes therein and twisted or otherwise fastened, thus forming a complete and secure connection between the levers and bench, the function of these coiled springs being to raise the levers and treadles, and thus throw the dogs or catches out of gear with the wheel upon the return movement of the treadles, thereby stopping the movement of the levers and the intermittent and partial rotation of the wheel, the treadles then having resumed their normal positions after having made their downward stroke in operating the mechanism.

The leg B′ of the bench has driven into it upon its inner side, and near the top, two stop-pins, the object of which is to lock the levers in position when not in use.

It will be seen from the foregoing description that my device in its operation is simple, effective in its work, and cheap in its construction.

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

1. In a carpenter's vise, the combination, with the bench A and legs B and B′, of the wheel J, forming an integral part of the nut or hub K, levers H H, connected to the bench by means of coiled springs k^2 k^2, and to the treadles G G by the wire *g*, screw D, and vise C, all arranged substantially as herein shown and described.

2. The combination, with bench A, having the legs B B′, and the vise-jaw C, of the traversing or adjusting screw D, passing through said vise-jaw and its adjacent leg, said screw having a pinion and screw-thread collar integral therewith, and pawls loosely secured to said collar for actuating the vise-leg through the treadles G and their connections, substantially as described.

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

JOHN C. LYNCH.

Witnesses:

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