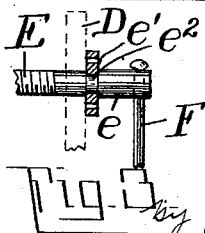
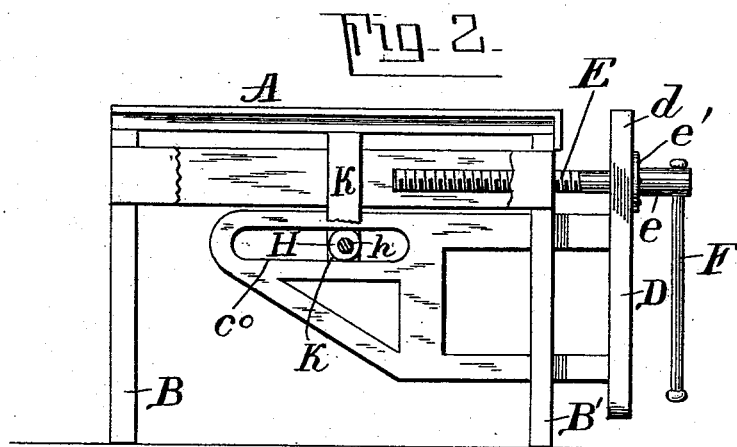
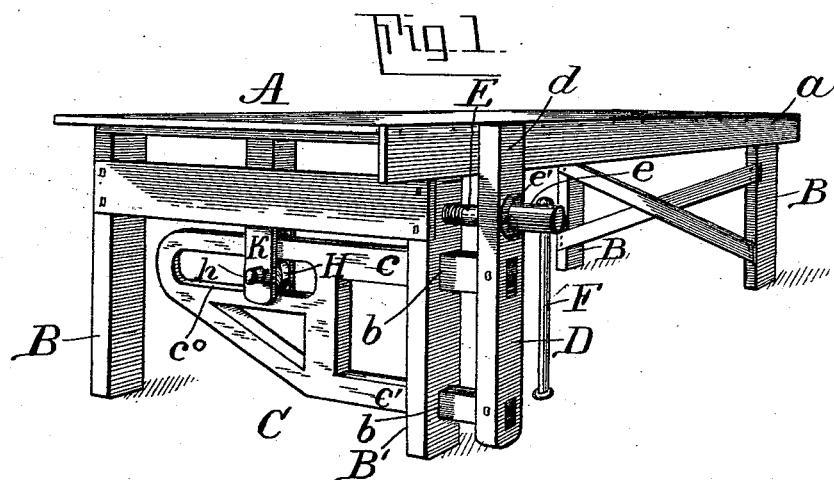


(No Model.)

T. J. WELSH.  
BENCH VISE.

No. 522,501.

Patented July 3, 1894.



Witnesses

W. S. Allen  
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# UNITED STATES PATENT OFFICE.

THOMAS J. WELSH, OF YORK, ILLINOIS.

## BENCH-VISE.

SPECIFICATION forming part of Letters Patent No. 522,501, dated July 3, 1894.

Application filed April 26, 1894. Serial No. 609,106. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS J. WELSH, a citizen of the United States, residing at West York, in the county of Crawford and State of Illinois, have invented certain new and useful Improvements in Carpenters' Bench-Vises; 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.

My invention relates to improvements in vises for use with carpenters' benches, and in similar relations, and it consists of certain novel features hereinafter described and claimed.

Reference is had to the accompanying drawings, in which the same parts are indicated by the same letters.

Figure 1 represents a perspective view of a carpenter's bench fitted with one of my improved vises. Fig. 2 represents an end view of the said bench and vise, parts being broken away to better show the invention; and Fig. 3 represents a detail view of the method of connecting the screw to the sliding beam.

A represents a carpenter's bench of ordinary construction, and provided with a side strip *a*. This table is mounted on legs *B*, in one of which as *B'*, slots *b* are cut to receive the sliding arms *c* and *c'* of the frame *C*. Secured to the ends of these arms *c* and *c'* is a beam *D* provided at its upper end with a holding arm or jaw *d*. This beam *D* is perforated to receive the neck of the screw *E*; and the adjacent leg of the table is provided with a female screw to receive the male screw *E*. The head *e* of the screw *E* is grooved as at *e'* so as to hold the collar *e'* which is secured to the said beam *D*, and the said head *e* is perforated to receive the sliding hand lever *F* for turning the screw *E* and operating the vise.

The inner end of the frame *C* is slotted as at *c* to receive the roller *H* which is mounted on the shaft *h*, journaled in the bearings *K* secured beneath the table in any convenient way. This roller *H* not only supports the weight of the inner portion of the frame *C*, but also prevents the inner end of the frame from tilting up when pressure is brought on the vise, and so prevents the arms *c* and *c'* from binding in the slots *b*.

It will be seen that turning the screw *E* in one direction will close the vise, while turning it in the opposite direction will open the vise.

It will be obvious that the herein described device is extremely simple and cheap in construction, and might readily be made by any ordinary workman out of materials that commonly may be easily obtained.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

In a vise for carpenters' use, the combination with the leg *B'* slotted at *b*, of the sliding frame *C* having arms *c* and *c'* sliding in said slots, the said frame being slotted horizontally at *c''*; the roller *H* mounted on the shaft *h* journaled in bearings *K*, and revolving in said slot *c''*; the beam *D*, secured to the ends of the sliding arms *c* and *c'*; the screw *E* revolvably mounted in said beam and engaging in a female screw in said leg *B'*; and the set collar *e'* engaging in an annular groove in said screw, substantially as described.

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

THOMAS J. WELSH.

Witnesses:

RADER KNOPP,  
ISAAC SEYMOUR.