H. W. Neary,

Work Bench.

No. 87,584. Patented Mar. 9, 1869.

Fig. 1.

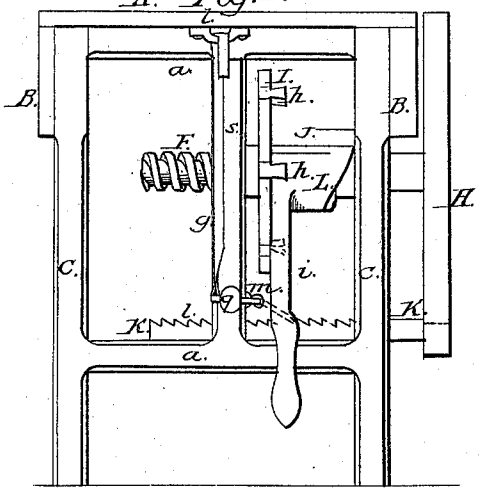

Fig. 2.

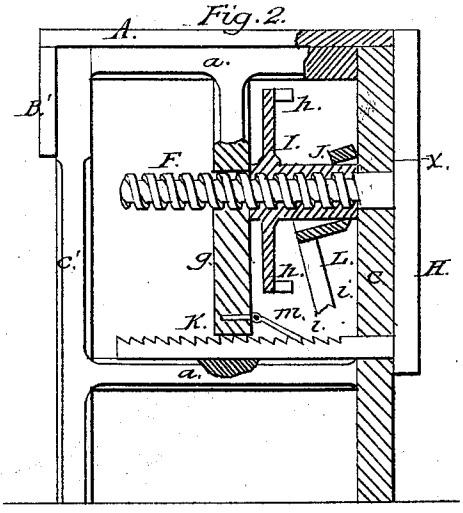

Fig. 3.

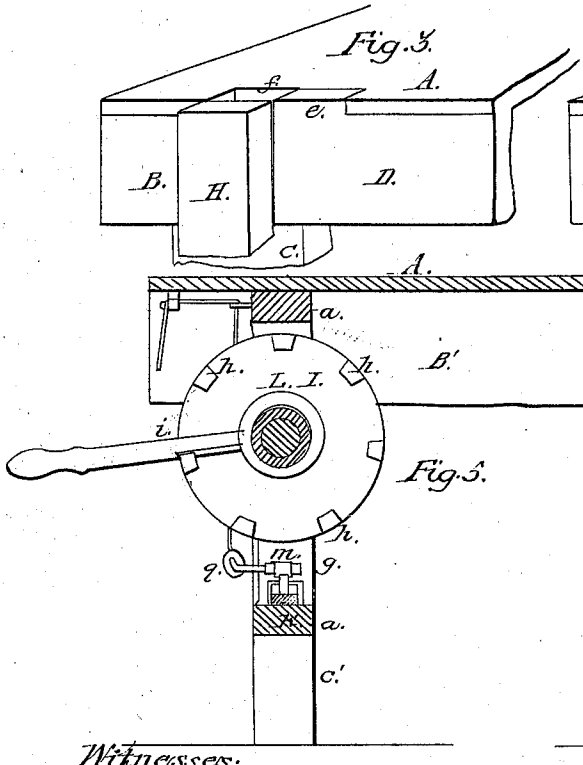

Fig. 4.

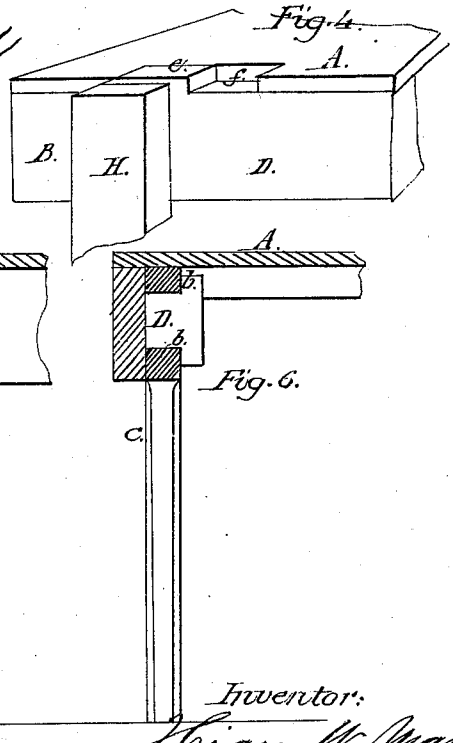

Fig. 5.

Fig. 6.

Witnesses:
Chas. J. Price
John Dalker

Inventor:
Hiram W. Neary
by
W. Howson
Attor.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

United States Patent Office.

HIRAM W. NEARY, OF PRINCETON, NEW JERSEY, ASSIGNOR TO HIMSELF AND NATHANIEL SCHENCK, OF SAME PLACE.

Letters Patent No. 87,584, *dated March* 9, 1869.

IMPROVEMENT IN WORK-BENCH.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HIRAM W. NEARY, of Princeton, New Jersey, have invented an Improved Work-Bench; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists, first, of a sliding block, adapted to the side of a work-bench, and to the vise, as fully described hereafter, so as to adapt the bench to the uses of both carpenters and cabinet-makers; and

It consists, secondly, of certain improvements, fully described hereafter, in the construction and operation of the vise.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is an end view of my improved work-bench.

Figure 2, the same, partly in section.

Figures 3 and 4, perspective views, in different positions, of a portion of the bench.

Figures 5 and 6, longitudinal and transverse sections of parts of the bench.

Similar letters refer to similar parts throughout the several views.

The frame of the bench is constructed in the usual manner, consisting of a top, A, and of side-pieces B and B′, which are supported upon legs *c c′*, &c., braced together by cross-pieces *a a*.

A portion of the side-piece B is cut away for the reception of a block, D, which is arranged to slide longitudinally in guides *b b*, fig. 6, its motion being limited by a projection, *e*, on its upper edge, which enters a recess, *f*, formed in the front of the bench. (See figs. 3 and 4.)

The screw F, by which the jaw H of the vise is operated, fits loosely in, and is arranged to slide longitudinally through openings formed in the leg *c*, and in an upright, *g*, which is secured to the cross-pieces *a a*.

A nut, J, having internal threads corresponding to those cut upon the screw, is arranged to turn upon the latter, being confined longitudinally between the leg *c* and upright; and the nut is provided near its rear end with a wheel or disk, I, having on its face, near to the rim, a number of projections, *h*, for a purpose described hereafter.

A collar, L, provided with a rod or handle, *i*, is fitted loosely over the nut J, and is bevelled at its front end, so that it may be moved to the inclined position shown in fig. 2, and its rod turned outward from the path of the projections *h* of the disk.

The lower end of the jaw H of the vise is steadied by a bar, K, which passes through and slides in the leg of the bench, and in the upright *g;* and on the upper edge of this bar is a ratchet, *l*, with which, under the circumstances described hereafter, engages a pawl-lever, *m*, hung to the upright *g*, and actuated by a weight, *q*, which has a tendency to raise the pawl clear of the teeth of the ratchet.

The pawl is also operated in such a manner as to cause it to engage with the teeth of the ratchet, by a strap or cord, *s*, which passes upwards, and through eyes or staples *t t*, secured to the under side of the top of the bench.

When it is desired to move the jaw of the vise, the strap *s* is loosened, and the pawl *m*, actuated by its weight, allowed to disengage itself from the teeth of the ratchet on the bar K, the latter being then free to slide in either direction as the jaw moves.

The jaw is moved from or towards the side of the bench by turning the nut J, which, being held between the upright *g* and leg *c*, causes the screw to be moved longitudinally, and without turning, as will be readily understood on reference to fig. 2.

The nut itself is turned by means of its disk I and the handled sleeve L, the latter turning upon the nut as a pivot, while its handle is caused to bear upon one side of each of the projections *h* in succession, and thus turn the disk in the required direction. (See fig. 5.)

When a piece of work is to be grasped between the jaw H and the side of the block D, fig. 4, the jaw is first moved outward sufficiently for the introduction of the work, the strap *s* being then tightened, and the pawl *m* caused to engage with the ratchet *l*, which will prevent the bar K from being driven back.

The jaw H, thus held at its lower end, is moved toward and caused to grasp the work between its upper end and the block D, by operating the nut J and screw, in the manner above described, the gripe being firmer and more certain than if the bar K were allowed to slide as usual.

In an ordinary carpenter's bench, the vise is secured to the outside, as seen in fig. 4, and is only adapted for grasping large and rough work, while in a cabinet-maker's bench, the vise intended for finer work closes into a recess in the side of the bench, as seen in fig. 3, and cannot be used for work for which the carpenters' bench is adapted.

By means, however, of the sliding piece D, I am enabled to adapt my improved bench and its vise to any kind of work, the sliding block, when moved back, as shown in fig. 3, opening the recess *f*, into which the jaw H enters snugly, while by moving it in a contrary direction, and filling up the recess, as seen in fig. 4, a bench adapted for carpenters' work is obtained.

I claim as my invention, and desire to secure by Letters Patent—

1. A work-bench, having a recess adapted for the reception of the jaw H, and an adjustable block D, sliding in said recess, all substantially as and for the purpose described.

2. The jaw H, with its screw F, arranged upon a bench, substantially as described, in combination with

a nut, J, having projections *h*, and with a lever, *i*, hung to the screw F, for operating the nut, substantially as specified.

3. The jaw H, its screw F, and guide K, the pawl *m*, weight *q*, straps *s*, and staples *t t*, all constructed and arranged as set forth.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HIRAM W. NEARY.

Witnesses:

W. W. DOUGHERTY,

C. B. PRICE.