H. S. KUHN.

VISE.

APPLICATION FILED NOV. 14, 1910.

1,000,416. **Patented Aug. 15, 1911.**

FIG_1_

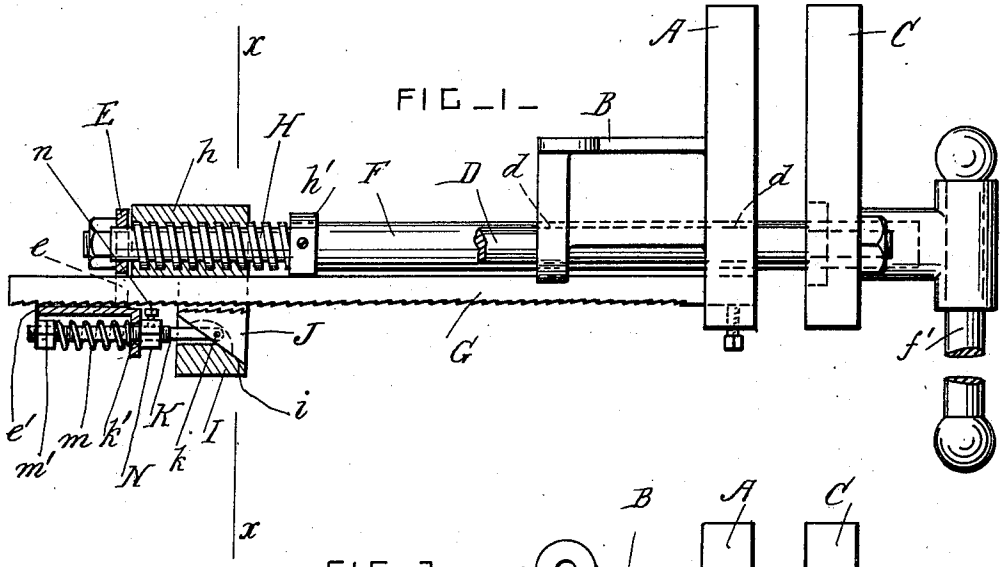


FIG_2_

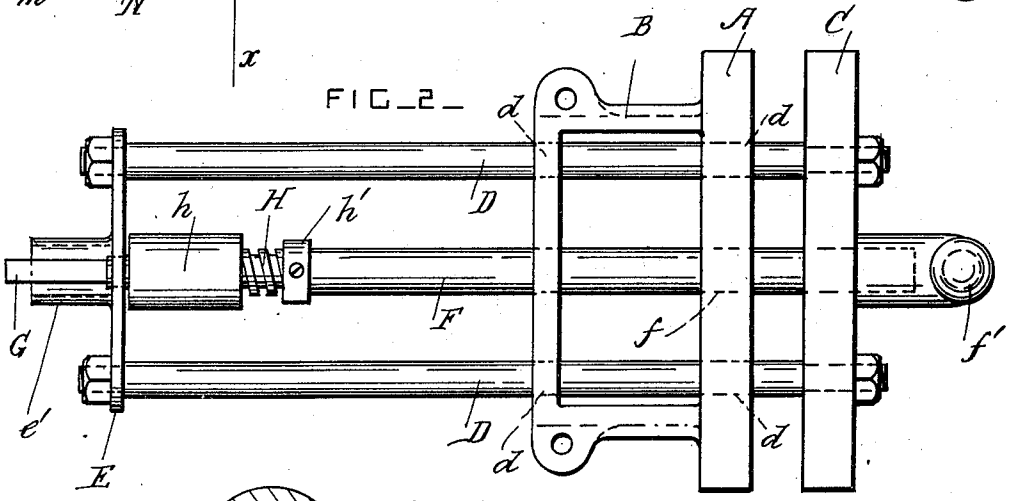


FIG_4_

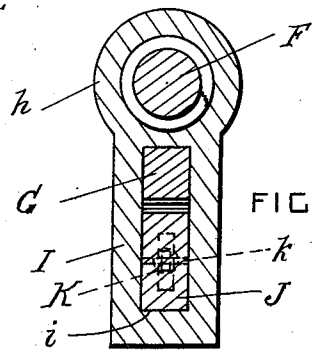
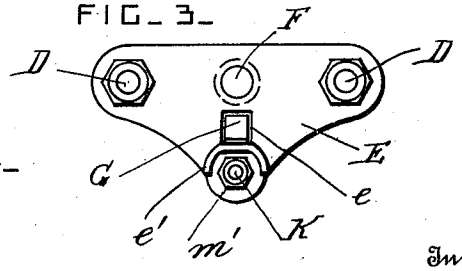


FIG_3_



Witnesses

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VISE.

1,000,416. Specification of Letters Patent. **Patented Aug. 15, 1911.**

Application filed November 14, 1910. Serial No. 592,358.

To all whom it may concern:

Be it known that I, HARRY S. KUHN, a citizen of the United States, residing at Waynesboro, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in 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.

This invention relates to vises for woodworkers and others; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed whereby the slidable vise jaw is quickly slid to its approximate position by hand and is subsequently caused to clamp the work by means of a screw.

In the drawings, Figure 1 is a side view of the vise, partly in section. Fig. 2 is a plan view of the vise, from below. Fig. 3 is a rear view of the stop-plate. Fig. 4 is a cross-section through the nut, taken on the line x—x in Fig. 1.

A is a stationary or non-slidable vise jaw provided with a bracket B for securing it to the underside of any suitable work-bench or support.

C is a movable vise jaw, and D are two rods arranged parallel to each other and secured at one end to the slidable vise jaw. These rods form a guide for the movable vise jaw and they are slidable longitudinally in guide holes d in the stationary vise jaw and in the bracket B.

E is a stop-plate which is secured to the free end portions of the rods D.

F is the operating spindle of the vise which is journaled in the slidable vise jaw C and in the stop-plate E, and which is slidable longitudinally in a hole f in the stationary vise jaw. The spindle F is provided with a handle f'.

G is a serrated locking-bar having one end secured to the stationary vise jaw. The free end portion of the locking-bar is slidable in a hole e in the stop-plate and may rest lightly on a guard e' which projects from the stop-plate.

The operating spindle F is provided with a short screwthreaded portion H, and h is a screwthreaded nut which engages with the screwthreaded portion H. A collar h' is secured on the operating spindle at the front end of the screwthreaded portion, to limit the movement of the nut. The nut h has a loop I which incloses the locking-bar, and this loop has an inclined surface i below the serrated lower side of the locking-bar.

J is a wedge which rests on the surface i and which is serrated to engage with the locking-bar.

K is a rod which is pivoted to the smaller end portion of the serrated wedge by a pin k. This rod is slidable in a hole k' in the stop-plate E, and it is provided with a retracting spring m and a nut m'. This spring and nut are arranged under the guard e', said guard being a portion of a cylinder and projecting from the stop-plate E over and partly around the spring and nut so as to protect them.

N is a nut screwed on the rod K, and arranged between the wedge and the stop-plate. This nut N is adjustable, and it is provided with a locking-screw n for securing it on the rod. This nut N forms an adjustable stop for regulating the action of the wedge.

When the nut h on the operating spindle is screwed backward toward the stop-plate E the nut N bears against the stop-plate and the serrated wedge is lowered by gravity out of engagement with the locking-bar. The movable vise jaw together with its guide rods and operating spindle can now be slid by hand to place the vise jaws at approximately any desired distance apart. The operating spindle is then revolved by hand to move the nut h away from the stop-plate and toward the collar h'. The inclined surface i raises the wedge into engagement with the locking-bar, and the continued revolution of the operating spindle moves the movable vise jaw so that the vise jaws grip the object between them. When the vise is constructed in this manner only a very short screwthreaded portion is required on the operating spindle, and the construction is much simplified.

What I claim is:

1. In a vise, the combination, with a non-slidable vise jaw, of a movable vise jaw provided with a guide which is slidable in the non-slidable vise jaw, a stop-plate secured to the said guide, an operating spindle journaled in the movable vise jaw and provided with a screwthreaded portion, a locking bar secured to the non-slidable vise jaw, a nut engaging with the said screwthreaded portion and provided with an inclined sur-

face, a clamping-wedge arranged between the said inclined surface and the locking-bar, a spring-actuated rod or pin connected to the said wedge and slidably supported by the said stop-plate substantially parallel with the operating spindle and operating to raise the said wedge into engagement with the locking-bar, and a stop on the said rod between the wedge and the stop-plate, said stop operating to permit the wedge to move out of engagement with the locking-bar when the stop is pressed against the stop-plate.

2. In a vise, the combination, with a non-slidable vise jaw provided with a supporting bracket, of a movable vise jaw, two parallel guide rods secured to the movable vise jaw and slidable in the non-slidable vise jaw and its bracket, a stop-plate secured to the said guide rods, an operating spindle journaled in the movable vise jaw and arranged between the said guide rods and provided with a screwthreaded portion, a locking-bar secured to the non-slidable vise jaw, a nut engaging with the said screwthreaded portion and provided with an inclined surface, a clamping-wedge arranged between the said inclined surface and the locking-bar, a spring-actuated rod connected to the said wedge and supported by the said stop-plate, and a stop on the said rod between the wedge and the stop-plate.

3. In a vise, the combination, with a non-slidable vise jaw, of a movable vise jaw provided with a guide which is slidable in the non-slidable vise jaw, a stop-plate secured to the said guide and provided with a projecting guard, an operating spindle journaled in the movable vise jaw and provided with a screwthreaded portion, a locking-bar secured to the non-slidable vise jaw and slidable in the stop-plate over the said guard, a nut engaging with the said screwthreaded portion and provided with an inclined surface, a clamping-wedge arranged between the said inclined surface and the locking-bar, a spring-actuated rod connected to the said stop-plate under the said guard, and a stop on the said rod between the wedge and the stop-plate.

In testimony whereof I have affixed my signature in the presence of two witnesses.

HARRY S. KUHN.

Witnesses:
M. G. HARMONY,
H. S. LESHER.