J. W. CODDING & F. H. PUTNAM.

BENCH VISE.

APPLICATION FILED JULY 30, 1914.

1,195,339.

Patented Aug. 22, 1916.

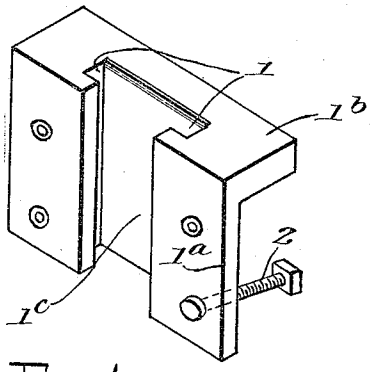


Fig 1

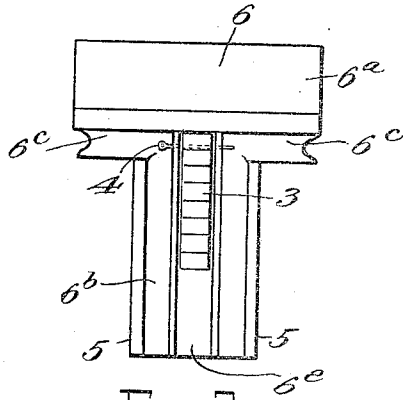


Fig 2

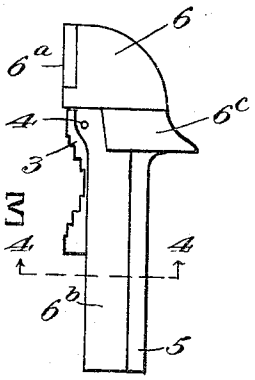


Fig 3

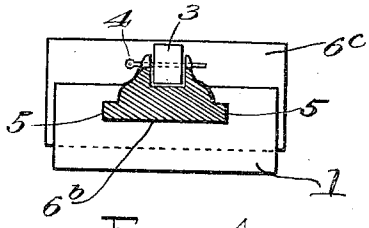


Fig 4

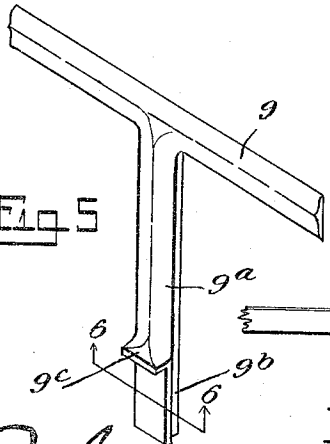


Fig 5

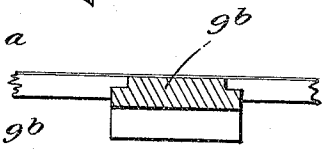


Fig 6

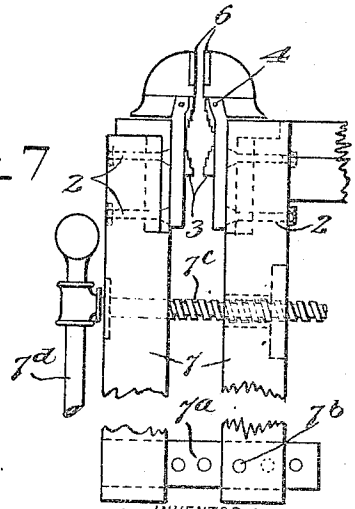


Fig 7

WITNESSES:

F. E. Griffith

C. D. Randall

INVENTORS

John W. Codding

Frank H. Putnam

BY

Dowell & Dowell

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN W. CODDING AND FRANK H. PUTNAM, OF SPOKANE, WASHINGTON.

BENCH-VISE.

1,195,339. Specification of Letters Patent. Patented Aug. 22, 1916.

Application filed July 30, 1914. Serial No. 854,088.

To all whom it may concern:

Be it known that we, JOHN W. CODDING and FRANK H. PUTNAM, citizens of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Bench-Vises; and we hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is a novel combination bench vise, and it comprises socket pieces adapted to be attached to the legs of an ordinary carpenter's bench vise, and removable interchangeable jaws which can be readily connected with said socket pieces and will be retained in position by gravity; and it also includes means whereby the vise can be used to grip pipes or rods, and whereby it may also be used to grip saws, sheet metal, leather, etc.

The invention is designed to do away with the necessity for having a number of vises in a shop and provides a vise with interchangeable parts any of which the workman can readily place in position; and it also enables an ordinary wooden, or carpenter's bench vise, to be readily converted into a powerful anvil vise, a pipe and rod vise, a saw clamp, etc., as hereinafter explained, thus greatly reducing the cost of a full equipment of vises and enabling one bench vise to be employed for a large number of purposes, and providing the workman with a series of vise tools suitable to the work he wishes to do, and simplifying and expediting his work by providing him with a proper vise or clamping tool suitable to the work in hand.

The invention will be more clearly understood from the following description in connection with the accompanying drawings in which—

Figure 1 is a perspective view of one of the vise socket members detached. Fig. 2 is a front view of one of the removable and interchangeable vise jaws provided with a detachable pipe or rod clamp member. Fig. 3 is an edge view of Fig. 2. Fig. 4 is a section on the line 4—4, Fig. 3. Fig. 5 is a perspective view of a saw clamping jaw. Fig. 6 is a detail section on the line 6—6, Fig. 5. Fig. 7 is a sectional elevation of an ordinary bench clamp vise with our improvements applied thereto.

Referring to Fig. 7; 7 designates the legs of an ordinary bench vise which are usually made of wood, and are adjustably connected at bottom by a bar 7^a and pin 7^b, and their upper ends are adjustable to or from each other by means of a screw 7^c operable by a handle 7^d in the usual manner. In applying our invention to such a vise we provide socket members 1 which are preferably made of cast iron and have a vertical portion 1^a and a horizontal top flange 1^b and each has a vertical dove-tailed or T-slot 1^c in its vertical portion, the dove-tailed slot forming a rib on the back of the vertical portion. The socket members 1 are secured to the inner faces and upper ends of the legs 7 of the bench vise by means of bolts 2 as indicated in Fig. 7, and form a strong reinforce for the upper end of said legs, and the flanges 1^b overlie and protect the upper ends of said legs 7 and at the same time relieve the vertical strain on the bolts 2. The socket members 1 are adapted to support within the dove-tailed or T-slot 1^c, removable and interchangeable vise jaws adapted to the work for which the vise is to be used. Figs. 2, 3 and 4 represent one of these removable jaws, which has a head portion 6 and a shank portion 6^b, which shank portion 6^b is provided with lateral vertical ribs 5 and is adapted to fit within the slot 1^c of the related socket member as indicated in Fig. 4 and thus hold the jaw securely in position. The overhanging portion 6^c of the head 6 rests upon the top 1^b of the socket member and supports the jaw securely in place, and all the workman has to do in applying or removing the jaw 6 to or from the vise leg is simply to lower its shank into the slot 1^c or lift it vertically therefrom. The jaw 6 may be made of cast-iron and the working face of the same may be reinforced by a steel plate 6^a so that the jaw will not be chipped when subjected to rough usage or powerful clamping pressure.

The shank 6^b is preferably provided in its front face with a vertical slot 6^c in which is secured a rod or pipe clamp member 3, which projects beyond the face of the shank 6^b and is provided in its outer side with a transverse stepped notch as shown adapted to bite a pipe or rod in the usual manner and securely

clamp the same. The part 3 is shown as detachably attached to the jaw 6, by means of a pin 4 passing through suitable apertures in the shank of the jaw and the part 3, see Figs. 2 to 4.

Fig. 5 represents a saw, or leather, clamping jaw 9 having a shank 9^a the lower edge of which is rabbeted at 9^b so as to fit the slot 1^c of the socket members and provided above the part 9^b with a projection 9^c that will rest on the top of the socket member 1 and support the jaw 9 in position as is obvious.

From the foregoing it will be seen that with this invention we are able to convert an ordinary carpenter's wood bench vise into a powerful metal vise, and provide the same with interchangeable jaws so that it can be converted into a metal holding vise of the ordinary type, or a pipe or rod vise, or a saw clamp, etc., and in practice suitable jaws can be provided adapted for any special work, all such jaws being readily interchangeable by simply engaging or disengaging their shanks from the vertical slot in the socket member.

Having thus described our invention we claim:

1. In combination with a wooden vise comprising opposite legs, means for connecting the lower ends of said legs, and a clamping screw transfixing one leg and engaging the other leg; of a socket member attached to each vise leg, said member having a vertical dove-tailed slot in its outer face and an outwardly projecting flange on its upper end adapted to rest upon and protect the top of the leg, and also having an outstanding vertical rib on its back opposite the slot, said rib engaging a corresponding slot in the related leg; and detachable interchangeable jaw members each having a shank adapted to engage the vertical slot in the related socket member, substantially as described.

2. In combination with a wooden vise comprising opposite legs, means for adjustably connecting the lower ends of said legs, and a clamping screw transfixing one leg and engaging the other leg; of a socket member attached to the inner face of each vise leg above the screw, said member having a vertical dove-tailed slot in its outer case and an outwardly projecting flange adapted to rest upon the top of the leg, and also having an outstanding rib on its back opposite the slot, said rib engaging a corresponding slot in the related leg; and detachable jaw members each having a shank adapted to engage the related socket member, said jaw members being interchangeable, substantially as described.

3. In combination with a wooden vise comprising opposite legs, means for connecting the lower ends of said legs, and a clamping screw transfixing one leg and engaging the other leg; of a socket member attached to the upper end and inner face of each vise leg above the screw, detachable jaw members each having a shank adapted to engage the related socket member, and having a slot in their shanks below their heads; and auxiliary clamping members attached to the shanks of the jaw members in said slots, and below the heads of said jaw members, substantially as described.

In testimony that we claim the foregoing as our own, we affix our signatures in presence of two witnesses.

JOHN W. CODDING.
FRANK H. PUTNAM.

Witnesses:
For John W. Codding:
C. D. RANDALL,
B. B. ADAMS.
For Frank H. Putnam:
J. W. UPDEGRAFF,
LEWIS his × mark ALVERS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."