E. C. STEARNS.

SAW CLAMP.

APPLICATION FILED MAR. 20, 1909. RENEWED DEC. 22, 1910.

983,176. Patented Jan. 31, 1911.

Fig. 1.

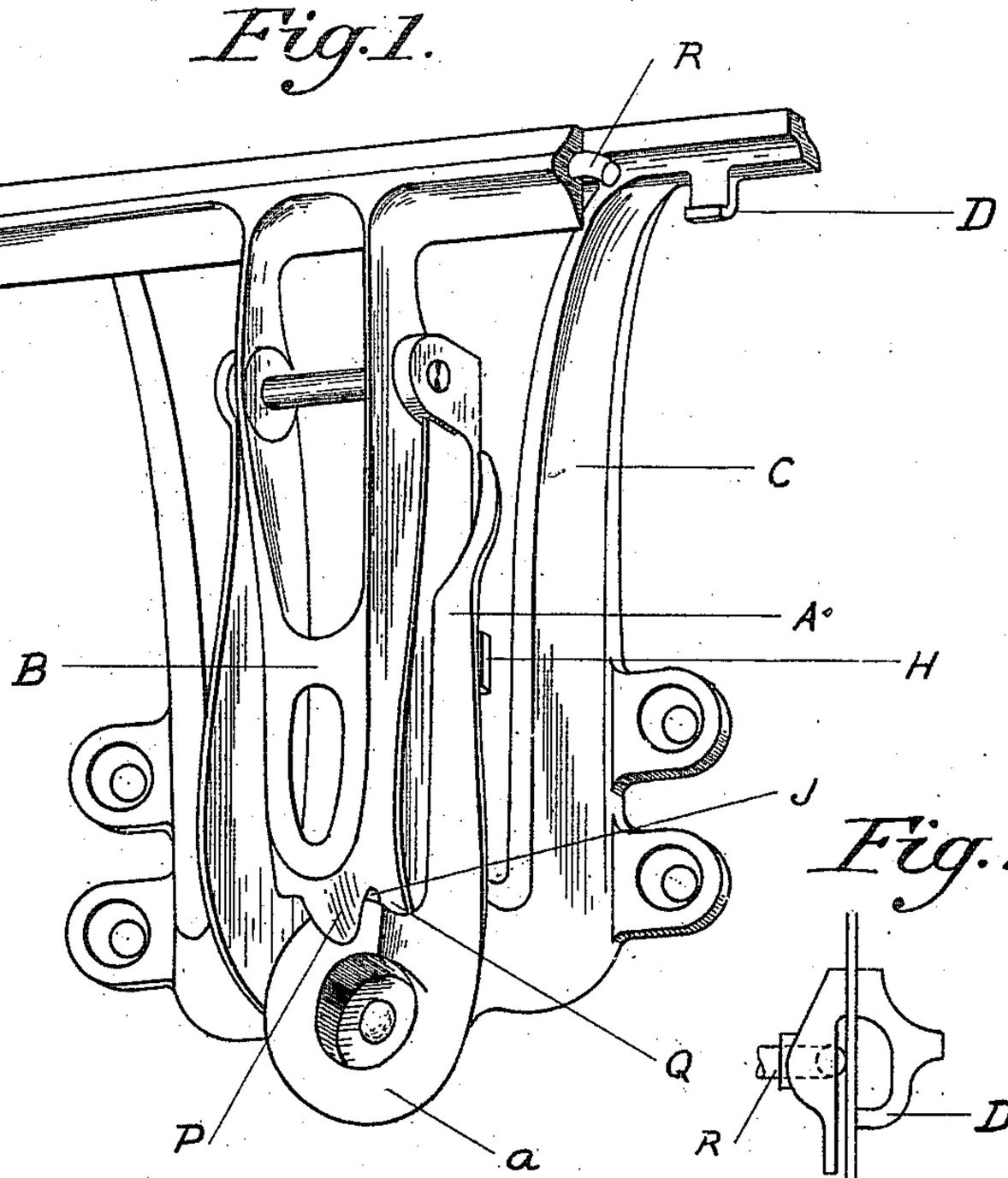
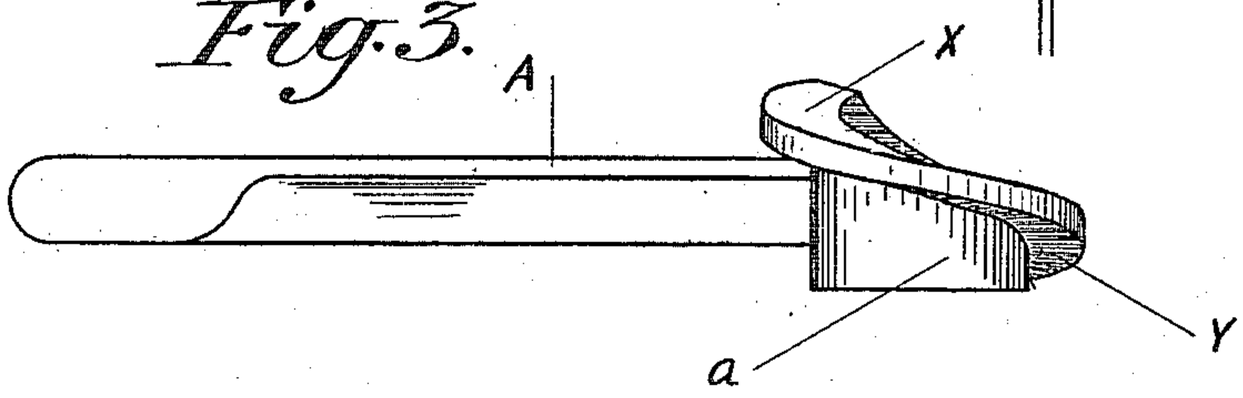


Fig. 2.

Fig. 3.



WITNESSES

W. M. Potter

Walter A. Papworth

Edward Earl Stearns.

INVENTOR

UNITED STATES PATENT OFFICE.

EDWARD CARL STEARNS, OF SYRACUSE, NEW YORK.

SAW-CLAMP.

983,176. Specification of Letters Patent. Patented Jan. 31, 1911.

Application filed March 20, 1909, Serial No. 484,828. Renewed December 22, 1910. Serial No. 593,811.

To all whom it may concern:

Be it known that I, EDWARD C. STEARNS, a citizen of the United States, residing in Syracuse, in the county of Onondaga, in the State of New York, have invented certain new and useful Improvements in Saw-Clamps, of which the following is a specification.

The objects of my invention are: I. To provide a strong, simple and cheap means of opening and closing the jaws. II. To provide a means and form of construction which will prevent the breakage of the clamping lever in packing, shipping and rough usage. III. To promote compactness. IV. To reduce the noise caused by filing. V. To provide means for holding the saw more rigidly with less strain on the jaws of the vise. VI. To provide means for holding the saw in a vertical plane in opposition to the deflecting action of the sound deadener.

In the accompanying drawing Figure I is a perspective view of the complete saw clamp with the right hand end of the front jaw broken away in order to more clearly show the rubber sound deadener, R, and the lug D. The saw clamp is shown in its closed position. Fig. II is an end view of the jaws showing a saw in place for the purpose of clearly explaining the function of the lug D in relation to the other parts of the jaws. Fig. III is a side view of the lever and cam showing the upper and lower cam faces X and Y and the general simplicity of the member.

The main frame C is comprised of the rear jaw with the lugs D together with the two U shaped vertical members united at their lower ends by a transverse flat-topped portion to which the lever A is pivoted. One of said U shaped members has a small lug or rib H which will be described later.

The front or moving jaw, B is pivoted to C and compelled to open and close by moving the lever A, the lower end of B being bifurcated so as to have a bearing surface on each of the cam surfaces *x* and *y*. Jaw B is also provided with a rubber sound deadener R.

The lever A consists of a substantially straight handle attached to a cylindrical portion upon which is formed a two faced cam of helical shape. The upper end of the handle is curved outwardly or upwardly to provide a convenient thumb-hold for opening. As shown, the lever A can be cast complete and finished with its rivet hole without the use of cores or other artifices. This feature constitutes one of the most important advantages of the invention. The lever A is so shaped that when closed as in Fig. I it lies tightly against the frame C and also rests on lug H being thus thoroughly protected from breakage in packing in the tool chest or by rough usage. This feature also minimizes the space taken up by the lever.

In operation, the saw clamp having been fastened in some convenient place by the means provided for that purpose, the lever A is thrown down placing the lowest part of the cam under the jaw B causing the upper end of said jaw to move away from jaw C. The saw is then placed between the jaws and the lever A swung upward in an anti-clock-wise direction until the saw is firmly gripped. Referring to Fig. II it will be seen that the lug D keeps the saw in a vertical position and prevents its being bent to one side as would be the case if D were not provided. It is apparent that lug D permits forcing the front jaw up tighter by providing a broader, firmer bearing on the rear jaw to force up against. With a given amount of pressure on the jaws the saw will be held more firmly in a saw clamp provided with lugs like D than in one not so provided because more frictional surface is placed against the saw and the rubber flattened out more and because of the peculiar bending action secured by having two bearings spread apart on one side of a thin object and another bearing pressing on the opposite side of said object midway between the afore-mentioned bearings. This construction also greatly promotes noiselessness by absolutely keeping a large area of the saw from vibrating.

Although the drawings show the preferred embodiment of my invention, the spirit of the invention is not changed by putting the lugs on the front jaw and the rubber on the rear jaw, or by putting the rubber lower down than the lugs.

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

1. In a saw vise means for holding the saw consisting of a supporting jaw, a clamping jaw opposed thereto, a secondary support beneath the supporting jaw, and a secondary support below the clamping jaw

but above the aforementioned secondary support.

2. In a saw vise means for holding the saw consisting of a supporting jaw, a clamping jaw, and a secondary support on each side of the saw, one being lower than the other.

3. In a saw vise means for holding the saw consisting of a supporting jaw, a clamping jaw, lugs on the lower side of the supporting jaw, and a rubber sound deadener on the clamping jaw above the lugs.

4. In a saw vise means for holding the saw consisting of a supporting jaw, a clamping jaw, lug or lugs on either jaw, and a secondary supporting or clamping member on the other jaw bearing on the saw either above or below said lugs.

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

EDWARD CARL STEARNS.

Witnesses:

W. M. POTTER,

WALTER A. PAPWORTH.