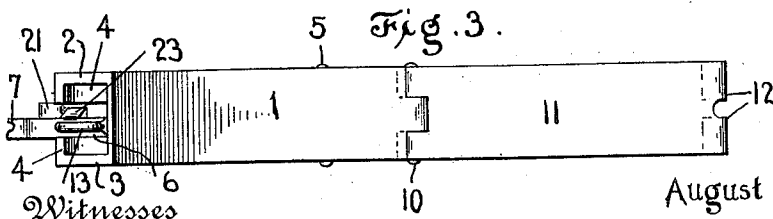
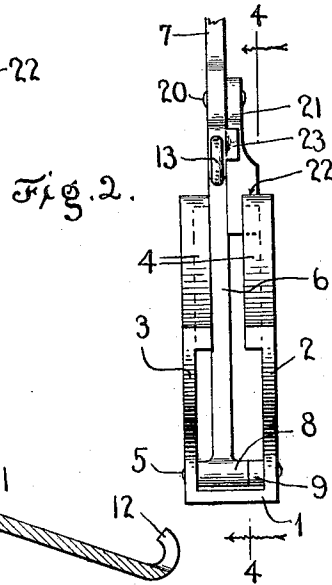
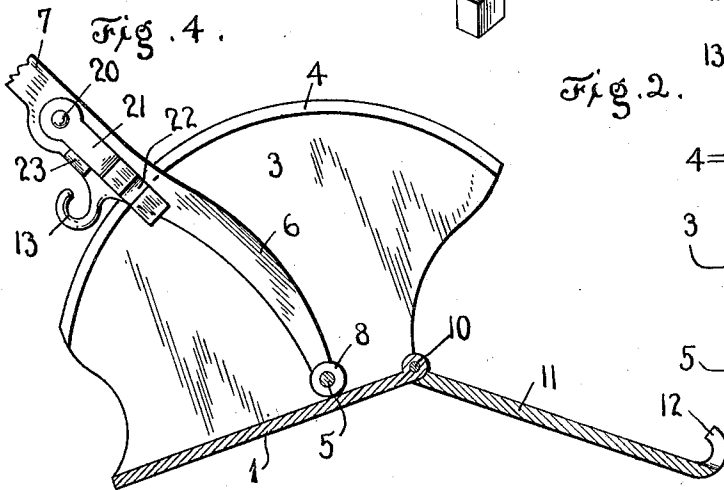
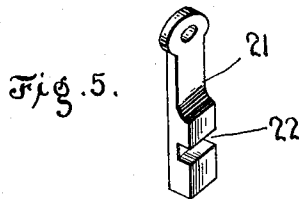
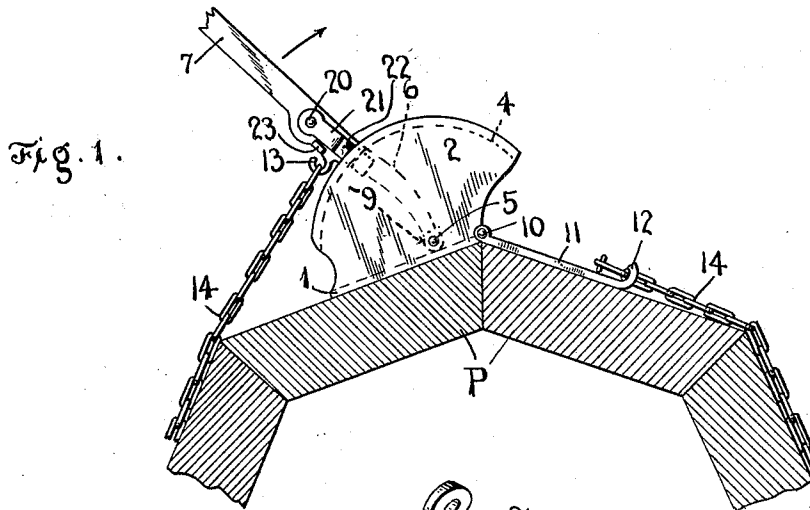


A. J. SCHULTE.
WOODWORKING CLAMP.
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1,029,471.

Patented June 11, 1912.



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UNITED STATES PATENT OFFICE.

AUGUST J. SCHULTE, OF TACOMA, WASHINGTON.

WOODWORKING-CLAMP.

1,029,471.

Specification of Letters Patent.

Patented June 11, 1912.

Application filed March 14, 1912. Serial No. 682,833.

To all whom it may concern:

Be it known that I, AUGUST J. SCHULTE, a citizen of the United States, residing at Tacoma, in the county of Pierce and State of Washington, have invented certain new and useful Improvements in Woodworking-Clamps; and I do 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 wood working, and more especially to portable clamps of that class having a pivoted lever; and the object of the same is to produce a clamp of this kind more particularly adapted for clamping the staves in an article like a staved up wooden column. This object is accomplished by constructing the clamp in the manner hereinafter more fully described and claimed, and as shown in the drawings wherein—

Figure 1 is a plan view of this clamp, showing it in the act of clamping the staves of such a column. Fig. 2 is an enlarged edge view of the clamp alone, and Fig. 3 an inside elevation thereof. Fig. 4 is an enlarged plan view of the clamp alone, showing the upper plate removed and the base plate cut about on the sectional line 4—4 in Fig. 2. Fig. 5 is a perspective detail of the dog.

In the drawings Fig. 1 shows several staves or panels of the work which this tool is intended to hold, such as a staved up post or column which is polygonal in cross section and which is therefore difficult to clamp in any kind of a vise because the beveled edges of the panels P must be forced into close contact so that the glue between them may set. This necessitates the use of some kind of a clamp that will press all of the panels radially inward toward a common axis with substantially equal force, and hold them there, and it is desirable that the capacity of the clamp may be adjustable in order that it can be adapted to work of different sizes.

Coming now more particularly to the present invention, the numeral 1 designates a base which is flat and straight, and from its edges project top and bottom plates 2 and 3 which stand at right angles to said base and are slightly spaced as best seen in Fig. 2 and have rims or flanges 4 around their peripheries projecting toward each

other and struck on an arc around a common center 5 which forms the main pivot for a lever 6 having a handle 7. The pivot is by preference a rivet as best seen in Fig. 2, and it passes through a boss 8 at the inner end of the lever, a washer 9 filling out the distance between the inner faces of the plates as shown. From said boss the lever 6 projects at right angles to the axis of the pivot 5, and it is of such thickness that it may swing between the inner edges of the two rims 4 and stand in contact with one but be disposed a little distance remote from the other as also best seen in Fig. 2.

Pivoted at 10 to one end of the base is a claw 11 having a hook 12 at its outer end, and secured to or formed integral with the lever is another hook 13. Engaged with said hooks is a chain 14 adapted to pass around the work P as shown in Fig. 1, one extremity of the chain being by preference engaged with one hook, and the other hook being removably engaged with such link of the chain as is necessary on account of the size of the work. It follows that when the lever is moved in the direction of the arrow shown in Fig. 1, the chain will be drawn tight around the work and the latter will be clamped. The base 1 then rests flat against the outer face of one panel P, and the claw 11 flat against the outer face of another with the pivot 10 standing over the angle between such faces, and by preference both the base and the claw are of such length that they will not project entirely across the narrowest panel which this clamp is intended to inclose.

Pivoted at 20 to the side of the lever 6 is a dog 21 having cut through its outer face a transverse notch 22 whose depth is such that it will engage the rim 4 while the remote face of the lever 6 rests against the opposite rim 4 as seen in Fig. 2; and the lever carries a stop 23 against which this dog rests as seen in Fig. 4 when its notch stands in such position with respect to the main pivot 5 that it will not bite the rim 4 as the lever is swung to and fro.

The operation of this improved clamp will now be understood. Placing the base 1 against one panel and the claw 11 over another, the operator leads the chain 14 around the piece of work and engages the proper link with the hook 12, and then grasping the handle 7 he moves the lever 6 in the direction of the arrow shown in

Fig. 1 so that the dog (now resting against the stop 23 as seen in Fig. 4) slides over the rim 4. When the desired tension has been imparted to the chain, the operator moves the handle 7 backward slightly so that the dog 21 is canted on its pivot 20 and its notch 22 bites the rim as shown in Fig. 1, and further movement of the lever 6 to the left in that view is prevented. The work is now permitted to rest until the glue dries. To release the clamp, the operator has but to again strain the lever to the right in the direction of the arrow, and, holding the dog 21 against the stop 23, move the lever and dog to the left until the tension is taken off the chain, after which the entire clamp can be removed from the work in a manner which will be clear. Thus it will be seen that I have produced a portable work-holding clamp composed of but few parts, simple in its operation, easy of manufacture and use, and yet which will reliably clamp and hold together the staves of a piece of work of the character described, providing its size is not beyond the limit of the capacity of the clamp which is governed only by the length of the chain. I consider the use of a biting dog which will engage the rim at any fraction of an inch better than the use of a pawl and toothed segment because the latter has only as many points of engagement as there are teeth and if the teeth are made fine to amplify the points of engagement they are easily worn or the tip of the pawl is likely to slip off of them.

The parts of this improved device may be of any desired materials and proportions, and changes in the exact details shown may be made at will.

40 What is claimed as new is:

1. In a work-holding clamp, the combination with a flat base, a claw pivoted at one end to one end of the base and having a hook at its other end, and a chain; of paral-

lel plates projecting at right angles from the edges of the base and having arcuate rims around their peripheries directed inward toward but spaced from each other, a main pivot through said plates at the center of the circle around which said rims are struck, a lever having a boss at its inner end journaled on said pivot and resting against the inner face of one of said plates when one side of the lever rests against the edge of the rim of said plate, a washer on the pivot between the inner face of the opposite plate and the other end of the boss, a dog movably connected with the lever and adapted to engage the rim of the last-named plate, and a hook on the lever adapted to engage said chain.

2. In a work-holding clamp, the combination with a flat base having parallel plates projecting from its edges and provided around their peripheries with arcuate rims projecting inward toward but spaced from each other, a hook connected with one end of said base, and a main pivot through said plates near the base at the center of the circle around which said rims are struck; of a lever mounted on said pivot and projecting between said rims and having a handle at its outer end, a hook on the lever beyond said rims, a stop on the lever adjacent said hook, a dog pivoted to the lever and projecting inward between said rims and having in its outer face a transverse notch struck on a line to slide over one of said rims when the dog rests against the stop, and a chain connecting said hooks.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

AUGUST J. SCHULTE.

Witnesses:

ADOLPH H. FISCHER,
CHARLES ARNT.