Jan. 9, 1923. 1,441,464

J. WATSON.
CLAMP.
FILED JULY 20, 1921.

Fig. 1.

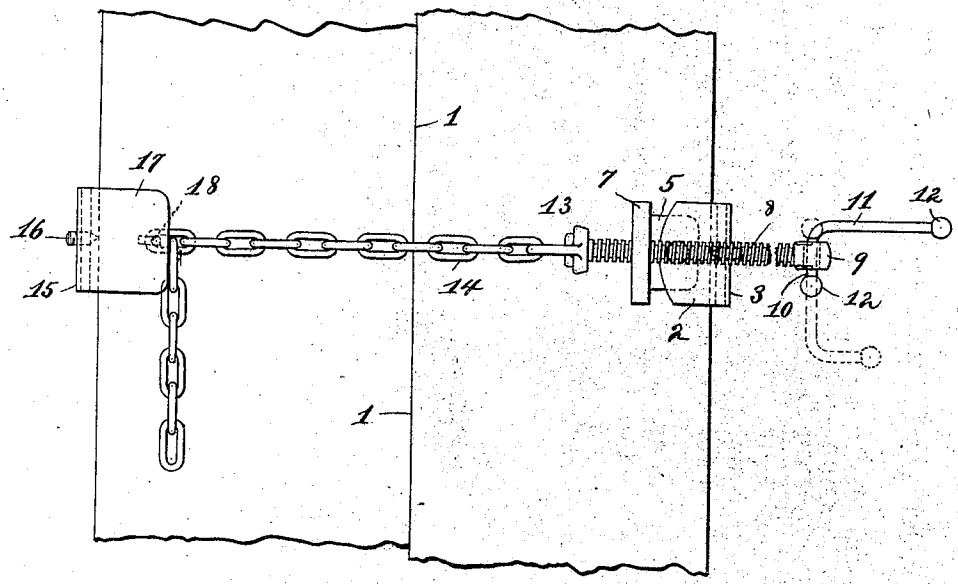


Fig. 2.

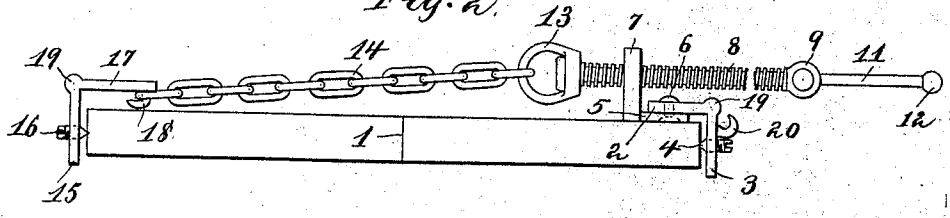
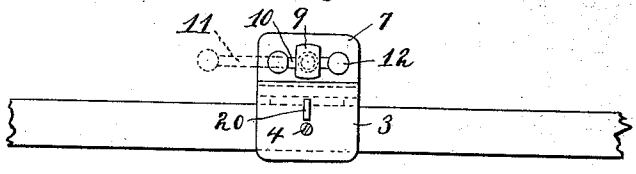


Fig. 3.



Inventor:
John Watson,
by his attorney
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UNITED STATES PATENT OFFICE.

JOHN WATSON, OF NORTHPORT, NEW YORK.

CLAMP.

Application filed July 20, 1921. Serial No. 486,232.

To all whom it may concern:

Be it known that I, JOHN WATSON, a citizen of the United States, residing at Northport, in the county of Suffolk and State of New York, have invented a certain new and useful Improvement in Clamps, of which the following is a specification.

The invention relates to clamps in which the jaws are connected by a chain, and the object of the invention is to provide a simple, easily adjusted tool of this character which will serve efficiently for great varieties of work and occupy but little space when not in use.

The invention consists in certain novel features and details of construction and arrangement by which the above objects are attained, to be hereinafter described and claimed.

The accompanying drawings form a part of this specification and show an approved form of the invention.

Figure 1 is a plan view showing the clamp in position on two boards to be drawn together.

Figure 2 is a corresponding side elevation.

Figure 3 is a elevation showing the outer face of the jaw through which the pressure is applied.

Similar reference numerals indicate the same parts in all the figures.

In the drawings the object or work clamp is shown as two boards to be strongly compressed as in forming a glued joint at 1 along their abutting edges.

The jaw shown in Figure 3 has a flange 2 and lip 3 arranged at a right angle to each other, the lip 3 is adapted to engage the vertical face or edge at one side of the work and carries a pointed screw 4 by which such engagement is insured, and the flange 2 arranged to extend above the horizontal marginal face of the work. Beneath the flange 2 is an arm 5 pivotally connected thereto at 6, and the arm carries a vertical lug 7 drilled and tapped to receive a screw 8, preferably with left-handed square threads, as shown.

On the outer end of the screw is a head 9 pierced transversely and receiving a rod or handle bent at a right angle to form the two arms 10 and 11, either of which may be disposed in the head 9, and both having knobs 12 to prevent escape from the head.

On the inner end the screw carries a swiveled loop 13 to which is attached one end of a chain 14.

The jaw adapted to engage the opposite edge of the work is similar to the jaw described and has a lip 15 presented parallel with the vertical face of such object, equipped with a pointed screw 16 engaging such face, and a flange 17 extending above the upper face of the work and at a right angle to the lip 15. On the under face of the flange 17 is a hook 18 adapted to engage in either of the links of the chain 14 presented thereto.

Thus arranged and engaged, the two jaws may be drawn strongly toward each other by turning the screw 8, the strain being transmitted through the chain 14, correspondingly compressing the boards shown or any other object held between the jaws.

The angles at the junctions of the lips and their flanges are reinforced as at 19 to maintain their form under the strains. Such reinforcement is shown as an outward swell along the line of junction but the desired result may be attained by other means.

On the outer face of the lip 3 is a hook 20 adapted to engage a link of the chain 14 presented thereto when the latter is detached from the opposite jaw and passed around an object of cylindrical or irregular form, thus adapting the tool for service with such objects when required.

The pointed screws 4 and 16 in the jaws may be withdrawn and the plane faces of the lips 3 and 15 applied directly against the plane faces of the work; the pivot at 6 and the flexibility of the chain serving to allow the lips to adjust themselves automatically to such faces if the latter be not exactly parallel.

The angular shape of the arms 10 and 11 of the rod or handle and its freedom of movement in the head 9 is important for the reason that when disposed as shown by the dotted lines in Figure 1 the short arm 10 is presented to serve as a convenient crank handle for turning the screw 8, and when disposed as shown in the full lines, the long arm 11 may be manipulated to turn the screw when the clamp is applied in a corner or other close quarters.

The clamp is adaptable for service in many situations in which the usual bar-clamp cannot be applied, and with or without the jaw 15, 17 may be employed in va-

rious operations in which two separated objects are to be strongly drawn toward each other.

I claim:—

1. A jaw having a horizontally disposed flange and a lip extended at an angle therefrom, a lug pivotally connected with said flange and extended in a direction substantially opposite to that of the lip, a screw engageable in said lug, and a chain carried by the screw and engageable with resistance means for the compression of the object acted upon.

2. A jaw having a horizontally disposed flange and a lip extending downwardly at a right angle therefrom, a lug pivotally connected to said flange, a hook on the outer face of said lip, a screw engaged in said lug, and a chain joined at one end to said screw and adapted to be attached by either of its links to said hook and encircle an object to be compressed.

In testimony that I claim the invention above set forth I affix my signature.

JOHN WATSON.