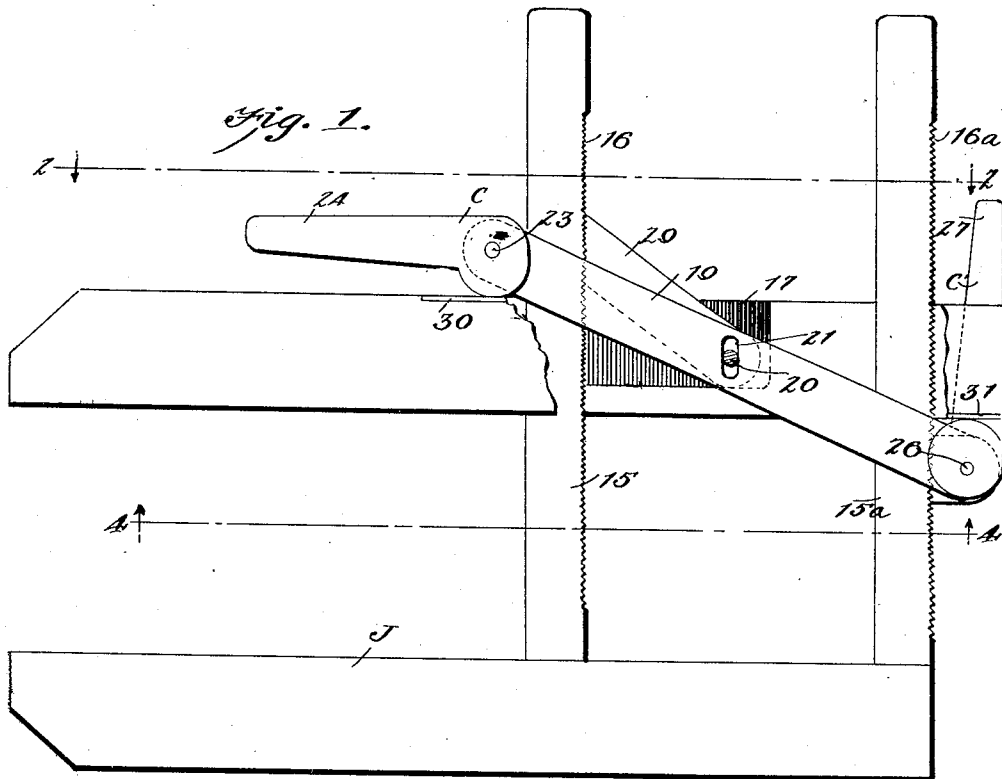
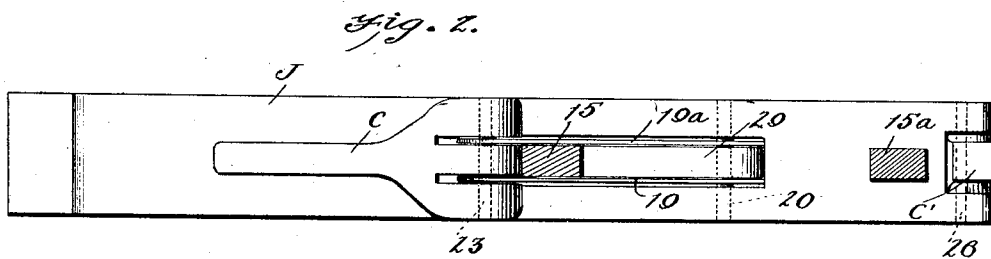
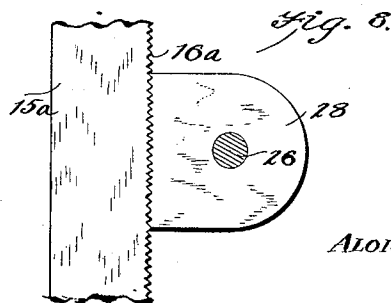


A. ANTHONY.
PORTABLE CLAMP.
APPLICATION FILED DEC. 11, 1919.

2 SHEETS—SHEET 1.



WITNESSES

F. O. Hankin.

ALOIS ANTHONY, INVENTOR

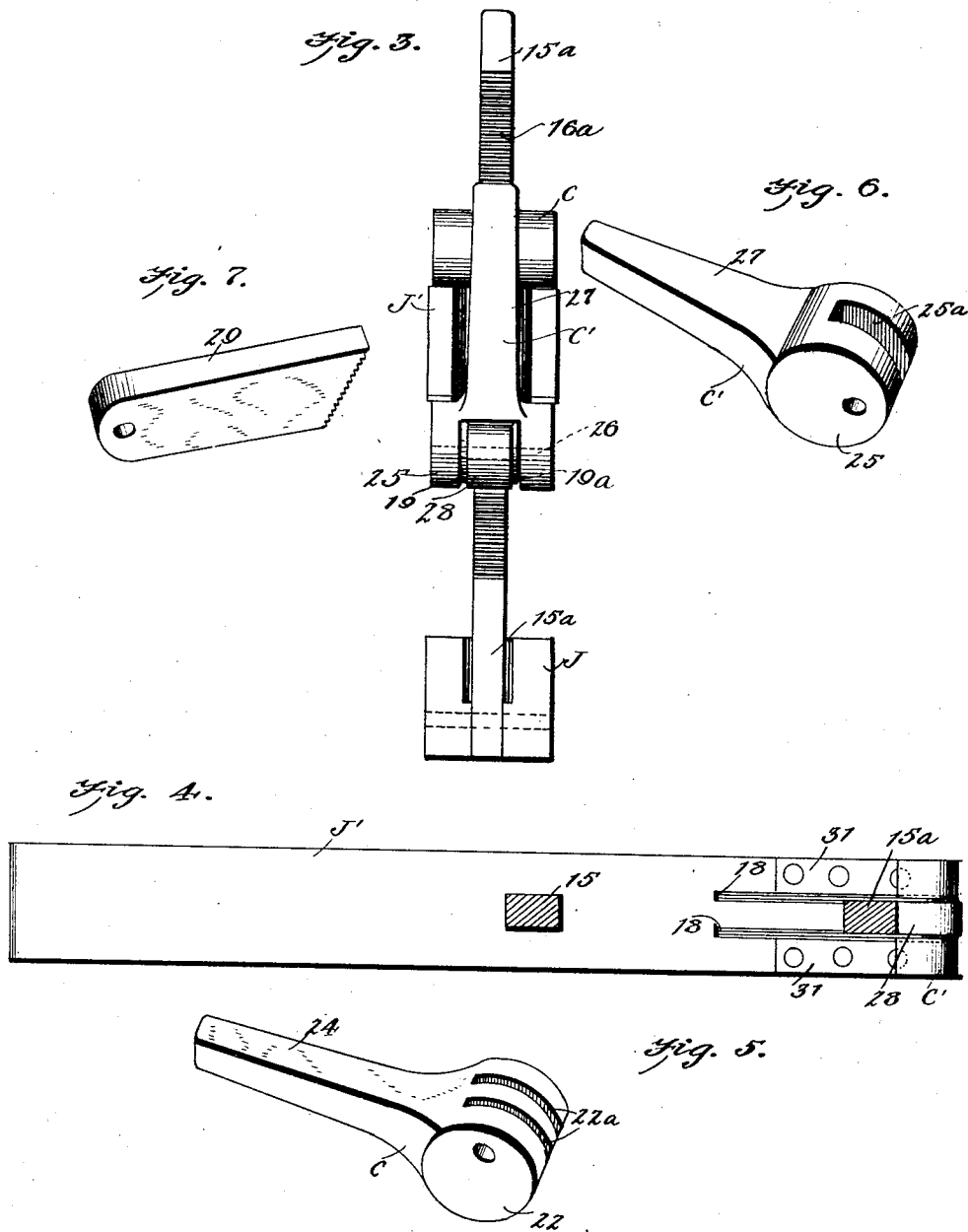
BY *Minnie Ho.*

ATTORNEYS

1,347,360.

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2 SHEETS—SHEET 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

ALOIS ANTHONY, OF BALTIMORE, MARYLAND.

PORTABLE CLAMP.

1,347,360.

Specification of Letters Patent.

Patented July 20, 1920.

Application filed December 11, 1919. Serial No. 344,069.

To all whom it may concern:

Be it known that I, ALOIS ANTHONY, a citizen of the United States, and a resident of the city of Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Portable Clamps, of which the following is a specification.

My invention relates to portable clamps used in wood working, and a purpose of my invention is the provision of a simple and efficient clamp of the type comprising a stationary jaw and a movable jaw, and cam actuating means for securing the movable jaw in any adjusted position.

It is also a purpose of my invention to provide a clamp of this character in which one of the cams effects a depression of one end of the movable jaw while the other cam effects an elevation of the opposite end, whereby the movable jaw is caused to securely clamp a piece of work.

I will describe one form of clamp embodying my invention, and will then point out the novel features thereof in claims.

In the accompanying drawings:

Figure 1 is a view, showing in side elevation, with parts broken away, one form of clamp embodying my invention;

Fig. 2 is a longitudinal sectional view, taken on the line 2—2 of Fig. 1;

Fig. 3 is a view, showing in elevation the rear end of the clamp shown in the preceding views;

Fig. 4 is a longitudinal sectional view, taken on the line 4—4 of Fig. 1, and looking in the direction of the arrows;

Figs. 5, 6, 7 and 8, are detail views of certain parts of the clamp shown in the preceding views.

Similar reference characters refer to similar parts in each of the several views.

Referring specifically to the drawings, and particularly to Fig. 1, J designates a stationary jaw and J' a movable jaw, each of which is formed of wood in the present instance and have the general outline of the jaws of a conventional form of clamp of this type. The stationary jaw J is provided with a pair of beams 15 and 15^a which are disposed in spaced parallel relation to each other, with their rear sides formed with serrations 16 and 16^a respectively. These beams 15 and 15^a may be formed of wood and are preferably of rectangular formation in cross section, as clearly shown in Fig. 2.

The movable jaw J' is provided with suit-

able openings to slidably receive the beams 15 and 15^a, whereby the jaw as a unit is capable of adjustment toward and away from the stationary jaw J. Formed in the outer side of the movable jaw J' at a point between the openings for the beams 15 and 15^a is a pocket 17 which communicates with the opening for the beam 15 at one end and with a pair of diagonally disposed slots 18 (Fig. 4) and effect a communication between a pocket and the opening for the beam 15^a. Extending through the slots 18 and the pocket 17 are a pair of links 19 and 19^a which are fulcrumed intermediate their ends by a pin 20 that extends transversely through the jaws J' and the pocket 17. The links 19 and 19^a are provided with registering slots 21, through which the pin 20 loosely extends. It will be noted that these slots are of sufficient length to allow of a limited amount of lateral and longitudinal play of the links for the purpose of permitting the latter to properly function in clamping of the movable jaw J', as will be more fully explained hereinafter.

As shown in Fig. 1, the opposite ends of the links 19 and 19^a extend to the opposite sides of the jaw J' in a manner to embrace the beams 15 and 15^a at a point adjacent the jaw. The outer or upper ends of the links 19 and 19^a are connected by a cam lever C, while the lower ends of the links are connected by a cam lever C'. As illustrated to advantage in Fig. 5, the lever C comprises a head 22 eccentrically mounted upon the links 19 and 19^a by a pin 23, such head being slotted, as at 22^a to receive the beam ends. The head 22 is provided with a handle 24 by means of which rotation of the head is effected for moving the cam into active or inactive position. The cam lever C' is similar in construction to the lever C in that it comprises a head 25 eccentrically mounted upon a pin 26 which extends through the lower ends of the links 19 and 19^a. As shown in Fig. 6, the head 25 is provided with a handle 27 for rotating the head about the pin 26 as a center. The head 25 is provided with a slot 25^a which is adapted to receive a locking dog 28, as clearly shown in Fig. 3, such dog being provided with serrations adapted to engage the serrations 16^a of the beam 15^a.

Pivoted upon the pin 20 and disposed within the pocket 17 is a pawl 29, the free end of which is serrated for engagement

with the serrations 16 of the beam 15. All of the elements of the clamp herein described are preferably formed of wood with the exception of the links 19 and 19^a and the pins 20, 23 and 26. With this construction, it is obviously necessary to provide some means for preventing indentation of the wood at points at which the cam levers engage the jaw J' when in the active position. In the present instance I provide plates 30 and 31 secured in recessed portions formed in the jaw, as clearly shown in Figs. 1 and 4.

In the operation of the clamp, the jaw J' is free to slide upon the beams 15 and 15^a when the cam levers C and C' are in inactive positions. As shown in Fig. 1, the cam levers are in the active position, wherein the heads 22 and 25 bear against the plates 30 and 31, respectively in such manner that the head 22 forces the forward end of the jaw J' in the direction of the jaw J while the head 25 forces the rear end of the jaw J' upwardly and away from the jaw J. The head 22 also bears against the forward side of the beam 15 thus exerting a rearward pressure on the beam and causing the same to engage the forward end of the pawl 29. The length and position of the pawl 29 is such that it functions as a brace for the beam 15 to prevent rearward movement of the latter which in effect causes a forward movement of the jaws J and J'. Under this movement, the links 19 and 19^a are drawn forwardly and upwardly, thereby throwing the dog 28 into engagement with the serrated surface of the beam 15^a, it being understood that the slots 21 provide for this movement of the links. This position of the links is maintained so long as the cam lever C occupies the active position, and because of the disposition of the pawl 29 and the dog 28, it will be evident that the serrations 16 of the beam 15 coact with the serrations of the pawl 29 to prevent upward movement of the jaw J', while the serrations 16^a of the beam 15^a coact with the serrations of the dog 28 which prevent downward movement of the jaw J'. As a result of these functions, the cam levers C and C' are caused to rock the movable jaw J' in the manner previously described and to thereby force the jaw into firm engagement with any piece of work which is interposed between the two jaws.

To effect a release of the clamp from a piece of work, it is obvious that by moving the handle 24 in a vertical position and the handle 27 downwardly to a vertical position opposite to that which it occupies in Fig. 1, the heads 22 and 25 are moved to disengage the jaw J' and the beam 15 thereby allow-

ing the links 19 and 19^a to return to their normal positions wherein the dog and pawl no longer serve to lock the jaws so that the latter may be moved out of engagement with the work.

It will be manifest from the foregoing description that I have provided a wood working clamp of simple and efficient construction which eliminates the employment of screws, and in their place cam levers are substituted which permit of the quick adjustment of the movable jaw to a piece of work and a secure clamping of the same in active position.

Although I have herein shown and described only one form of clamp embodying my invention, it is to be understood that various changes and modifications may be made herein without departing from the spirit of the invention and the spirit and scope of the appended claims.

Having thus described my invention, I claim:

1. A wood working clamp comprising a stationary jaw, beams carried by said jaw, a movable jaw slidable on said beams, links pivoted on the movable jaw, and cam levers carried by said links and engageable with the opposite sides of the movable jaw for effecting when operated a movement on the forward end of the movable jaw toward the stationary jaw, and a rearward movement of the opposite end of the movable jaw away from the stationary jaw.

2. A wood working clamp comprising a stationary jaw, beams carried by the stationary jaw, a movable jaw slidable on said beams, links carried by the movable jaw and extending to the opposite side thereof, cams pivoted on said links at the opposite sides of the movable jaw, a pawl pivoted to the movable jaw and adapted to engage one of the beams, and a dog carried by one of the ends of said links and adapted to engage the other beam for the purpose described.

3. A wood working clamp comprising a stationary jaw, beams carried by the jaw, a movable jaw slidable on said beams, links movably mounted on the movable jaw and extending to the opposite sides thereof, cams pivoted to the opposite ends of said links, a pawl pivoted on the movable jaw and engageable with one of the beams, a dog mounted on one of the ends of said links and engageable with the other beam, and serrations formed on said pawl, dog and beams in a manner to prevent movement of the movable jaw upon said beams when the pawl and dog are in active position.

ALOIS ANTHONY.