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TOGGLE LINK OPERATED HAND CLAMP

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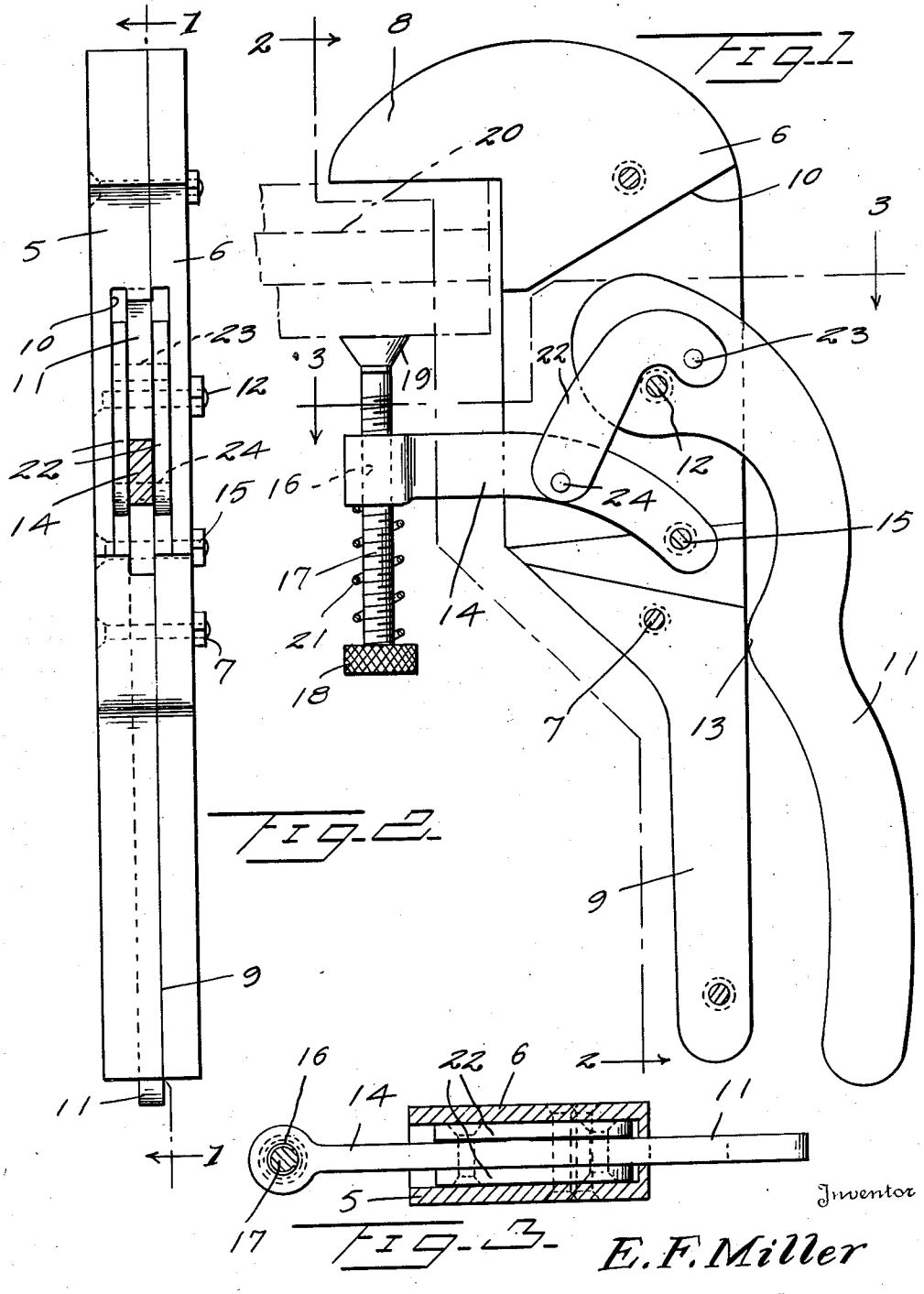


Fig. 1

Fig. 2

Fig. 3

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TOGGLE LINK OPERATED HAND CLAMP

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1 Claim. (Cl. 144—297)

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The present invention relates to new and useful improvements in clamps designed primarily for use on bench work to clamp sheet iron patterns onto material to be marked for cutting and for other purposes, and the invention has for its primary object to provide a manually operated pivoted clamping jaw for movement into and out of clamping engagement with the work.

A further object of the invention is to provide a clamp of this character of simple and practical construction, which is efficient and reliable in use, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view with one of the side plates removed.

Figure 2 is a vertical sectional view taken substantially on a line 2—2 of Figure 1, and

Figure 3 is a transverse sectional view taken substantially on a line 3—3 of Figure 1.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numerals 5 and 6 designate a pair of elongated plates secured together in facing contact by means of bolts 7, one end of the plates being formed with a stationary or fixed jaw 8 while the other end of the plates are shaped to form a handle 9.

Recesses 10 are formed in the opposed faces of the plates at an intermediate portion thereof and within which one end of a pivoted handle 11 is received for pivotally attaching to the plates by means of a pin 12, the handle 11 being positioned rearwardly of the handle 9 and maintained in spaced relation therefrom by means of an offset 13 formed on the inner edge of the handle 11 whereby to afford finger grips for the two handles.

An arm 14 also has one end pivoted in the recess 10 by means of a pin 15, the outer end of the arm having a threaded bore 16 extending therethrough for threadedly receiving a screw 17

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having a manipulating head 18 at one end and a swivelly mounted head 19 at its upper end which constitutes the movable jaw adapted for movement toward and away from the stationary jaw 8 for clamping the work 20 therebetween. A coil spring 21 surrounds the screw 17 and is positioned between the outer end of the arm 14 and the head 18 to exert longitudinal pressure on the screw and thus to prevent idle rotation of the screw in the arm so as to secure the head 19 in its adjusted position.

A pair of substantially L-shaped links 22 are positioned at opposite sides of the pivoted ends of the handle 11 and the arm 14, one of the links being pivoted to the handle 11 by means of a pin 23 while the other end of the links is pivoted to the arm by means of a pin 24.

The L-shaped construction of the links 22 enables the pivots 23 and 24 to be moved into a position below the pivot 12 of the handle 11 so as to lock the handle against the handle 9 when the movable jaw 19 is moved into its closed position to thus prevent accidental releasing of the jaw.

In the operation of the device upon a movement of the handle 11 in a direction toward the handle 9 the links 22 will pull the arm 14 upwardly in a direction to close the jaw 19 against the work whereas a movement of the handle 11 in an opposite direction, or away from the handle 9 the arm 14 will be moved downwardly so as to release the movable jaw 19 from the work.

It is believed that the details of construction and manner of use of the device will be readily understood from the foregoing without further detailed explanation.

Having thus described the invention, what I claim is:

A clamp of the class described comprising a pair of elongated plates, means for securing the plates in facing contact with each other, one end of the plates being shaped to form a stationary laterally projecting jaw and the other end of the plates being formed to constitute a handle, said plates having complemental recesses in the opposed faces thereof, an arm pivoted at one end in said recesses, an adjustable jaw at the other end of said arm and adapted for movement into and out of clamping relation with the stationary jaw, a second handle pivoted at one end in said

recesses, and an L-shaped link pivotally connecting the arm to said second-named handle, the pivot of said second-handle being located in the recesses at a point intermediate the pivots of said link when said second-handle is in a closed position whereby the line joining the pivots of said link will move across the axis of the pivot point of the second-handle when the latter is swung toward the first mentioned handle to lock the arm in an operative position.

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