Sept. 5, 1950 M. D. PATTERSON 2,521,086

V-BLOCK ALIGNING ATTACHMENT

Filed April 19, 1948

Fig. 1.

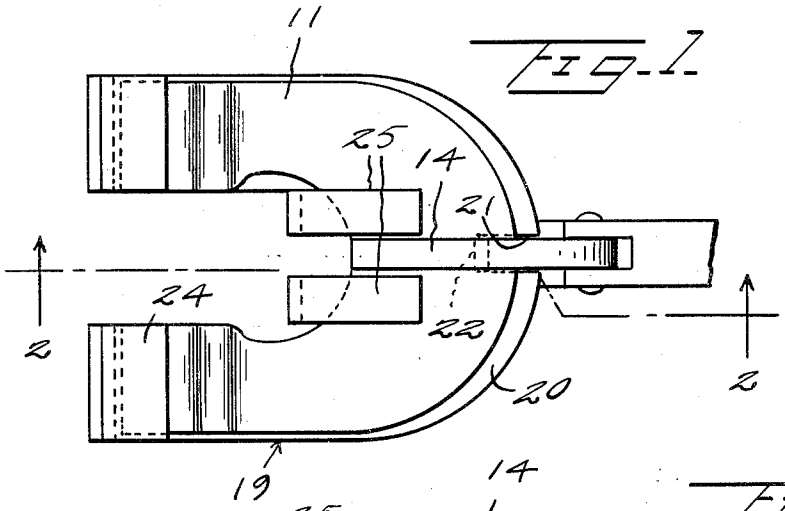


Fig. 2.

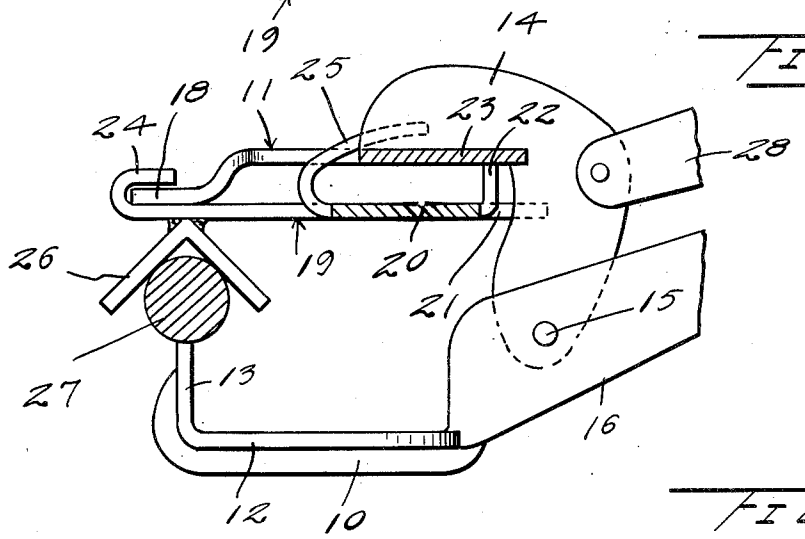


Fig. 3.

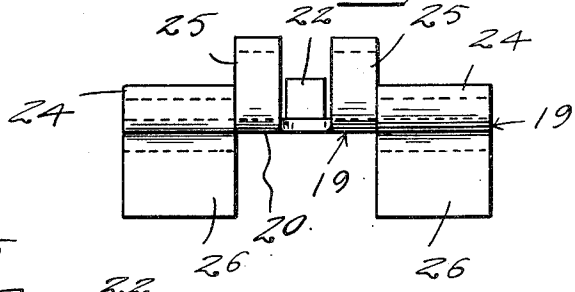
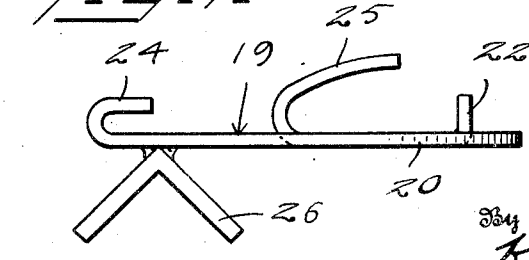


Fig. 4.



Inventor

M. D. Patterson

By Kimmel & Crowell Attorneys

Patented Sept. 5, 1950 2,521,086

UNITED STATES PATENT OFFICE

2,521,086

V-BLOCK ALIGNING ATTACHMENT

Max D. Patterson, Highmore, S. Dak.

Application April 19, 1948, Serial No. 21,895

2 Claims. (Cl. 113—99)

1

This invention relates to welding clamps.

An object of this invention is to provide in a welding clamp embodying a pair of horseshoe-shaped jaws, an attachment for one of the jaws whereby articles of different cross-sectional configuration can be gripped between the jaws, and firmly held so that the abutting ends of the articles can be welded.

Another object of this invention is to provide an attachment in the form of a plate of horseshoe-shape having means extending from one side thereof for detachably securing the plate to a welding clamp jaw, and also having a pair of V-shaped jaws extending from the other side thereof which are adapted to confront the other jaw of the clamp.

A further object of this invention is to provide an attachment of this kind which includes means whereby the device may be secured onto the clamp without changing the clamp, the device being readily detachable so that the clamp may be used to hold flat, round, polygonal or other shaped articles for welding.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawing and specification, and then more particularly pointed out in the appended claims.

In the drawing:

Figure 1 is a fragmentary plan view, partly in section, of a welding clamp having an attachment mounted thereon constructed according to an embodiment of my invention,

Figure 2 is a fragmentary sectional view taken on the line 2—2 of Figure 1,

Figure 3 is a detailed front elevation of the attachment, and

Figure 4 is a detailed side elevation of the device.

Referring to the drawing, the numerals 10 and 11 designate generally a pair of clamping jaws forming a conventional welding clamp. The jaw 10 is of U-shape in plan and at the forward end thereof the legs 12 of the jaw 10 are upturned at right angles, as indicated at 13. The jaw 11 is fixed to a bellcrank 14 pivotally secured as at 15 to a handle 16 extending from the rear of the jaw 10.

The jaw 11 is U-shaped in plan and the forward end of the jaw 11 is downwardly offset as indicated at 18 and the forward ends 18 of the jaw 11 are adapted to overlie the upturned jaw members 13 of the jaw 10.

In order to provide a means whereby round, polygonal or other shaped rods or members may

2

be clamped between the jaws 10 and 11, I have provided an attachment for the upper jaw 11. This attachment comprises a U-shaped member 19 conforming substantially to the shape of the upper jaw 11 with the exception that the bight or rear portion 20 of the U-shaped member 19 is substantially wider than the bight portion of the U-shaped member 11. The bight portion 20 is formed with a slot 21 within which a portion of the bellcrank 14 is adapted to loosely engage, and an upwardly bent lug 22 is carried by the bight portion 20 at the forward end of the slot 21 and is adapted to bear against the lower side of the bight portion 23 of the upper jaw 11 as shown in Figure 2 so as to maintain member 19 parallel with jaw 11. The forward ends of the parallel legs of the U-shaped member 19 are formed with returned clamping members 24 adapted to engage over the flat portion 18 of the jaw 11.

The attachment also includes a pair of upwardly bent and longitudinally curved resilient clamping fingers 25 extending from the forward edge of the bight 20 and the fingers 25 are adapted to engage over the bight 23 of the jaw 11. The parallel legs of the U-shaped member 19 also have fixed thereto V-shaped jaws 26 which are adapted to confront the jaw member 13. A round or other shaped rod 27 is adapted to engage the inside of the angles formed by the V-shaped jaws 26, as shown in Figure 2, so that when the handles 16 and 28 of the jaws 10 and 11 are pressed together, the work pieces 27 will be tightly gripped between the jaw members 13 and 26. It will, of course, be understood that there are two of these rods or work pieces 27 engaged with the device and the abutting ends of the rods or work pieces will be disposed between the parallel legs of the clamping jaws so that these abutting ends may be welded together.

The attachment hereinbefore described can be easily and quickly mounted on the upper jaw 11 by moving the attachment inwardly from the outer end of the jaw 11 with the lug 22 sliding beneath the jaw 11 and the resilient holding fingers 25 riding upwardly over the bight 23 of jaw 11. When the lug 22 is at the rear portion of the bight 23 the resilient fingers 25 will snap the lug 22 upwardly and at this time the returned forward clamping members 24 will be engaged over the front or flat ends 18 of the jaw 11. With an attachment of this kind the conventional welding clamp which has been designed particularly for use in holding relatively flat work pieces in a position for welding adja-

cent edges thereof, can be used also for clamping rods or other like pieces together so that such pieces can be welded together at their abutting ends.

I do not mean to confine myself to the exact details of construction herein disclosed but claim all variations falling within the purview of the appended claims.

What I claim is:

1. A detachable jaw for a welding clamp having a pair of U-shaped clamping jaws, said detachable jaw comprising a U-shaped plate, returned clamping members carried by the outer ends of the legs of said plate engageable over the outer ends of the legs of one of said pair of clamping jaws, a pair of resilient fingers extending from the bight of said plate and engageable over the bight of said one jaw, a struck out lug carried by the bight portion of said plate and engageable under the bight of said one clamping jaw, and a pair of V-shaped jaws fixed to the legs of said plate and adapted to confront the outer ends of the legs of said other clamping jaw.

2. In a welding clamp including a pair of U-shaped clamping jaws, one of said clamping jaws being formed with the outer ends thereof offset in the direction of the other of said clamping jaws, and a bell crank having one arm thereof extending over and secured to the bight of said one clamping jaw and the other arm pivotally connected to said other clamping jaw; a detachable jaw comprising a U-shaped plate adapted to underlie said one clamping jaw, reverted members carried by the outer ends of the legs of said plate adapted to overlie said offset outer ends of said one clamping jaw, a pair of spaced apart resilient fingers carried by the inside of the bight portion of said plate and adapted to resiliently engage over the bight of said one clamping jaw on opposite sides of said one arm of said bell crank for urging said plate and said one clamping jaw together, a struck out lug on the outer edge of said plate bight portion adapted to engage against the underside of said one clamping jaw for spacing said one clamping jaw and said plate bight portions apart, the outwardly opening slot formed by striking out said lug being adapted to receive said other bell crank arm, and a pair of V-shaped transversely extending jaws secured to the legs of said plate and adapted to confront the outer ends of said other clamping jaw.

MAX D. PATTERSON.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,781,419	Wallace	Nov. 11, 1930
1,900,314	Strom	Mar. 7, 1933

OTHER REFERENCES

Mag. "Amer. Mach.," May 11, 1944.
Mag. "Amer. Mach.," Feb. 15, 1945.