Aug. 28, 1945. R. L. COX 2,383,591

WELDER'S CLAMP

Filed Dec. 29, 1943 2 Sheets-Sheet 1

Fig. 1

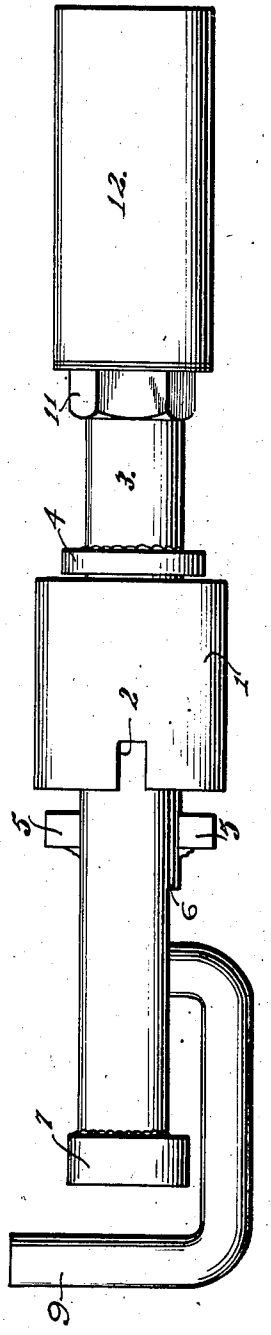


Fig. 2

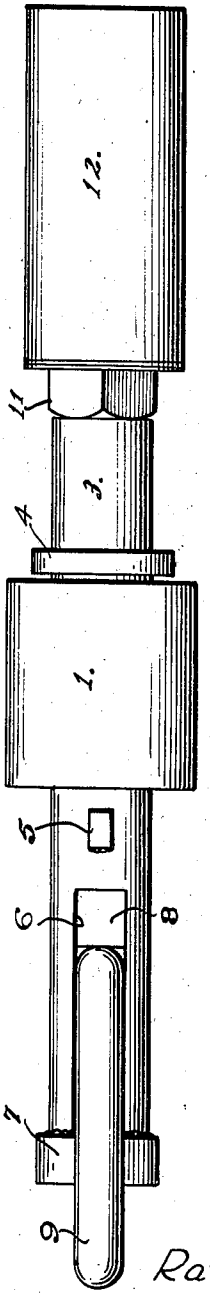
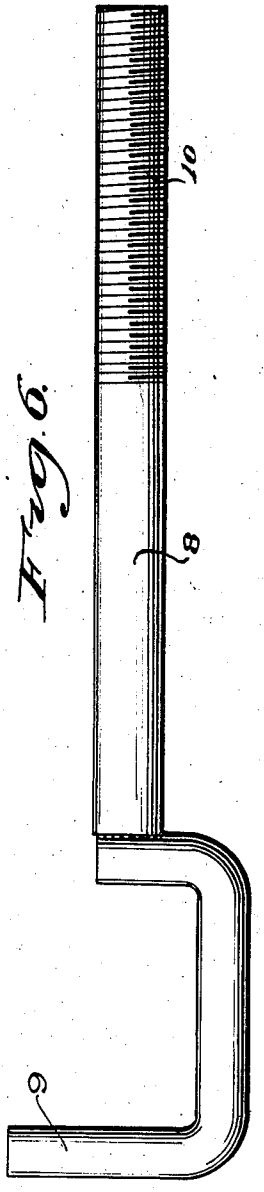


Fig. 6.



Inventor

Ray L. Cox

By Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

Aug. 28, 1945. R. L. COX 2,383,591

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Filed Dec. 29, 1943 2 Sheets-Sheet 2

Fig. 3.

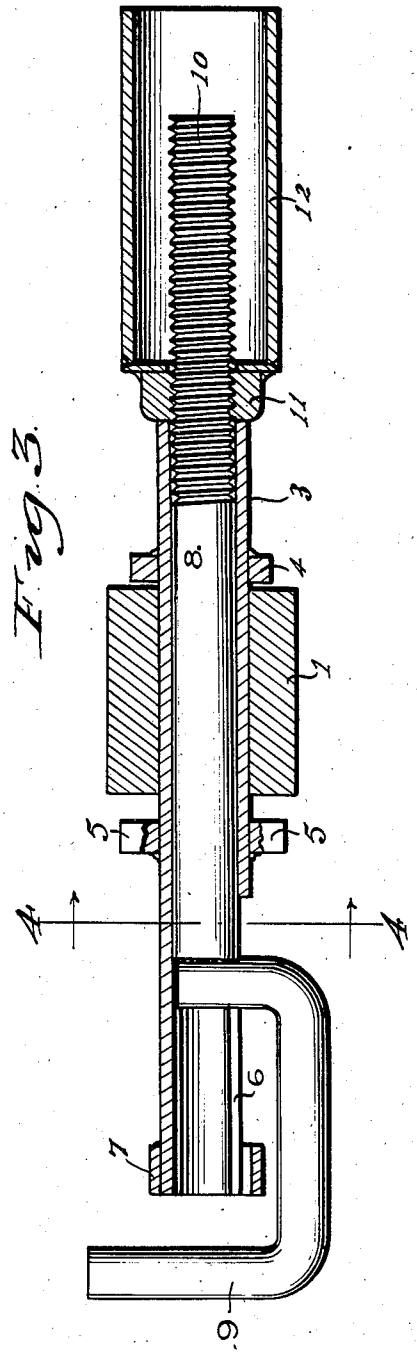


Fig. 5.

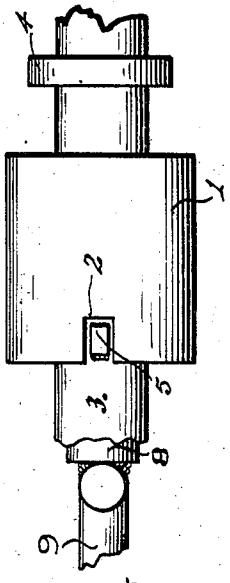
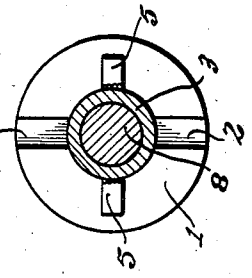


Fig. 4.



Inventor

Ray L. Cox

By Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

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UNITED STATES PATENT OFFICE

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WELDER'S CLAMP

Ray L. Cox, Mesa, Ariz.

Application December 29, 1943, Serial No. 516,111

4 Claims. (Cl. 113—99)

The present invention relates to new and useful improvements in clamps for use particularly by welders, and has for its primary object to provide novel means for firmly holding various sizes of rings and permitting said rings to be readily turned while welding.

Other objects of the invention are to provide an adjustable welder's ring holding and rotating clamp of the aforementioned character which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation of a clamp constructed in accordance with the present invention.

Figure 2 is a plan view of the device.

Figure 3 is a view in vertical longitudinal section through the device.

Figure 4 is a cross sectional view, taken substantially on the line 4—4 of Figure 3.

Figure 5 is a plan view of an intermediate portion of the device.

Figure 6 is a view in side elevation of the slidably adjustable rod and the outer jaw which is fixed thereon.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a sleeve 1 of suitable metal. The sleeve 1 is adapted to be firmly clamped in a conventional vise, said sleeve being stationary. The sleeve 1 has formed in its forward end portion diametrically opposite notches 2, the purpose of which will be presently set forth.

Rotatably and slidably mounted in the sleeve 1 is a tubular housing 3 which projects beyond both ends of said sleeve. A collar 4 on the tube 3 is engageable with one end of the sleeve 1. Diametrically opposite lugs 5 on the tubular housing 3 are engageable with the other end of the sleeve 1 and in the notches 2. The elements 4 and 5 limit the sliding movement of the tubular housing 3 in the sleeve 1. Further, with the elements 5 engaged in the notches 2, rotation of the tubular housing 3 in the sleeve 1 is positively prevented.

One end portion of the tubular housing 3 has formed therein a longitudinal slot 6. Fixed on this end portion of the tubular housing 3 is a substantially oval ring constituting what may be considered a stationary inner jaw 7.

Mounted for longitudinal sliding adjustment in the tubular housing 3 is a metallic rod 8. Fixed on one end of the rod 8 and operable in the slot 6 is a substantially U-shaped adjustable outer jaw 9 which is cooperable with the jaw 7 for receiving and clamping therebetween the ring to be welded.

The rod 8 includes a threaded end portion 10 which projects beyond the corresponding end of the tubular housing 3. Threaded on the portion 10 of the rod 8 is a nut 11 for abutting engagement with the opposed end of the tubular housing 3. A tubular handle 12 is fixed on the nut 11 and projects longitudinally therefrom in spaced, concentric relation to the threaded end portion 10 of the rod 8.

It is thought that the operation of the device will be readily apparent from a consideration of the foregoing. Briefly, the sleeve 1 is firmly clamped between the jaws of a vise and the lugs 5 are engaged in the notches 2. Thus, the assembly is held against rotating or turning. The work is then inserted in the device and the nut 11 is turned through the medium of the handle 12 for pulling the rod 8 through the tubular housing 3, the nut 11 abutting one end of said housing. In this manner the jaw 9 is moved toward the jaw 7 and the work is firmly clamped therebetween. To turn or rotate the work during the welding operation, the tubular housing 3 is moved longitudinally in the sleeve 1 to disengage the lugs 5 from the notches 2. Then, with one hand gripping the handle 12, the housing 3 may be rotated in the sleeve 1.

It is believed that the many advantages of a welder's clamp constructed in accordance with the present invention will be readily understood, and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. A welder's clamp comprising a stationary sleeve, a tubular housing rotatably and slidably mounted in said sleeve, coacting means on the housing and sleeve for releasably securing the former against rotation relative to said sleeve, a stationary inner jaw on one end portion of the housing, a rod mounted for longitudinal sliding adjustment in the housing, an adjustable outer

jaw fixed on said rod and cooperable with the first-named jaw, said jaws for the reception of work therebetween, and means for longitudinally adjusting the rod relative to the housing to move the second-named jaw for clamping the work between the jaws.

2. A welder's clamp comprising a stationary sleeve, a tubular housing rotatably and slidably mounted in said sleeve, coacting means on the housing and sleeve for releasably securing the former against rotation relative to said sleeve, a stationary inner jaw on one end portion of the housing, a rod mounted for longitudinal sliding adjustment in the housing, an adjustable outer jaw fixed on said rod and cooperable with the first-named jaw, said jaws for the reception of work therebetween, and means for longitudinally adjusting the rod relative to the housing to move the second-named jaw for clamping the work between the jaws, said means including a nut threadedly mounted on the rod and engaged with one end of the housing, and a tubular handle fixed on said nut for rotating the latter.

3. A welder's clamp comprising a stationary sleeve, a tubular housing rotatably and slidably mounted in said sleeve, means for releasably securing the housing against rotation in the sleeve, said housing having a longitudinal slot in one end portion, a stationary inner jaw on said one end portion of the housing, a rod slidable in the housing, a substantially U-shaped adjustable outer jaw fixed on one end of the rod and operable in the slot, the outer jaw being cooperable with the first-named jaw for receiving and clamping a piece of work therebetween, and means for adjusting the rod in the housing.

4. A welder's clamp of the character described comprising a stationary sleeve having notches in one end portion, a tubular housing rotatably and slidably mounted in said sleeve, a collar fixed on the housing and engageable with the other end of the sleeve, lugs on the housing engageable with said one end of the sleeve and in the notches, the collar and the lugs constituting means for limiting sliding movement of the housing in the sleeve in opposite directions, said lugs, in conjunction with the notches, further constituting means for releasably securing the housing against rotation in the sleeve, said housing having a longitudinal slot in one end portion, a stationary inner jaw fixed on said one end portion of the housing, a rod slidable in the housing, a substantially U-shaped, adjustable outer jaw fixed on one end of the rod and operable in the slot, said outer jaw being cooperable with the inner jaw for receiving and securing a piece of work therebetween, a nut threadedly mounted on the rod and engaged with the other end of the housing, and a tubular handle fixed on the nut.

RAY L. COX.