

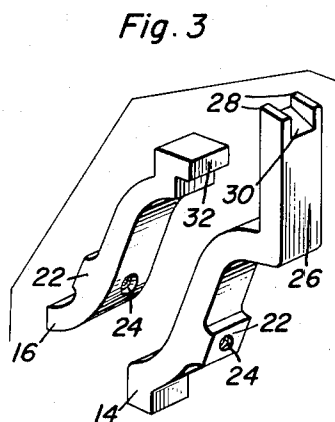
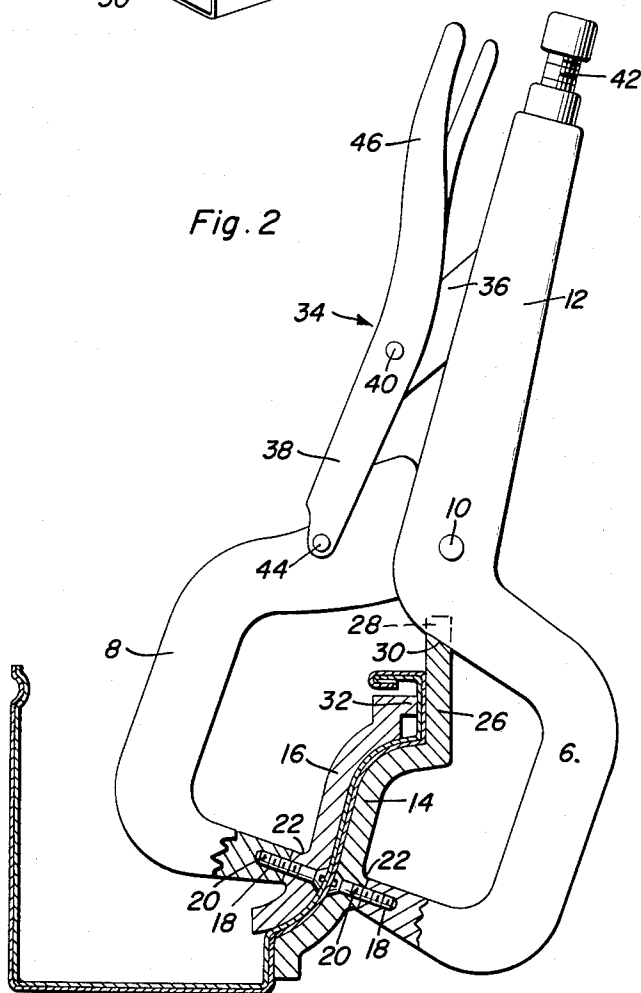
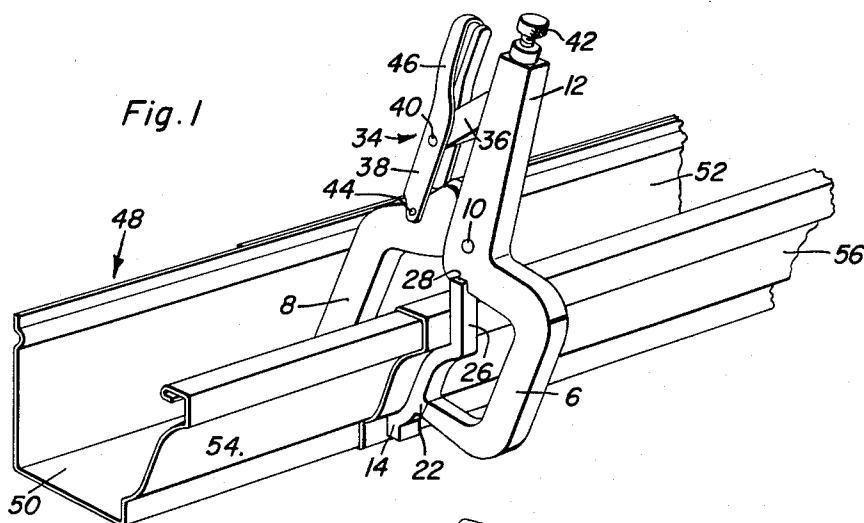
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GUTTER CLAMP

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GUTTER CLAMP

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5 Claims. (Cl. 81-421)

This invention relates to new and useful improvements in vice-grip pliers and has for its primary object to provide an improved tool of this character which is especially adapted to firmly clamp together the lapped end portions of a pair of eaves trough or gutter sections of the box type having a front wall of ogee cross-section, in a manner to facilitate the soldering thereof and ensure a strong, leakproof joint.

Another highly important object of the present invention is to provide a hand clamp of the aforementioned character comprising opposed, coacting jaws which substantially conform to the cross sectional shape of the front wall of the gutter to be gripped therebetween.

Still another important object of the invention is to provide, in a manner as hereinafter set forth a clamp of the character set forth comprising novel means for mounting the jaws on the arms in a manner to provide maximum strength while permitting quick removal and replacement for gutters of various sizes and shapes.

Other objects are to provide an improved gutter or eaves trough clamp of the character described which is comparatively simple in construction, strong, durable, compact, of light weight and which may be manufactured at low cost.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawing forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view showing an improved clamp constructed in accordance with the present invention in use;

FIGURE 2 is a view in transverse section through the gutter with the clamp of the present invention applied thereto, said clamp being shown in side elevation with the jaws broken away in section; and

FIGURE 3 is a perspective view of the jaws.

Referring now to the drawing in detail, it will be seen that the embodiment of the present invention which has been illustrated comprises a pair of opposed, generally U-shaped inner and outer arms 6 and 8, respectively, of suitable metal. The arms 6 and 8 have one end portion pivotally connected as indicated at 10 whereby said arm 8 is swivable on the arm 6. Thus, the arm 6 is stationary. Formed integrally with the inner end of the arm 6 is a handle 12.

Elongated front and rear jaws 14 and 16, respectively, are firmly but removably secured on the forward or free ends of the arms 6 and 8, respectively. Toward this end, the free end portions of the arms 6 and 8 have formed therein threaded bores or sockets 18 for the reception of countersunk screws 20. The jaws 14 and 16 comprise on their lower portions flat base portions 22 which abut the free ends of the arms 6 and 8 and which are provided with openings 24 extending through said jaws and which accommodate the countersunk screws 20.

The front jaw 14 further includes a straight, essentially longitudinally extending upper end portion 26 comprising furcations 28 which straddle the inner end portion of the arm 6 and which, further, define a beveled notch or recess 30 which seats on said arm. The relatively short rear jaw 16 terminates in a right angularly extending upper end portion 32 which is cooperable with

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the end portion 26 of the front jaw 14 for clamping the upper portion of the gutter therebetween.

The pivoted arm 8 with the rear jaw 16 thereon is actuated through the medium of a toggle device 34. The toggle 34 comprises links or sections 36 and 38 having one end pivotally connected at 40. The link 36 of the toggle extends into the handle 12 and is operable on the longitudinally adjustable threaded fulcrum member 42. The other end of the toggle link or section 38 is pivotally connected at 44 to the inner end portion of the arm 8. An operating handle or lever 46 is provided on the rear end of the link or section 38.

A portion of a gutter or eaves trough to be soldered is indicated at 48. The gutter 48 is of the box-type and comprises a pair of sections 50 and 52 the adjacent end portions of which are lapped in the usual manner to be soldered. The sections 50 and 52 of the gutter 48 comprise the usual front walls 54 and 56, respectively, of ogee cross-section.

It is thought that the use of the tool will be readily apparent. Briefly, the jaws 14 and 16 are opened to receive the front wall of the gutter therebetween. Through the medium of the toggle 34 the jaws 14 and 16 are then closed for firmly clamping the lapped end portions of the front wall of the gutter therebetween in an obvious manner. As shown to advantage in FIGURE 2 of the drawing, the elongated jaws 14 and 16 conform substantially to the cross-sectional shape of the front wall of the gutter. Thus, complete contact is had at substantially all points, the soldering operation greatly facilitated and a smooth, strong point is attained. The forward projection or lug 32 on the upper end of the rear jaw 16 firmly clamps the upper portion of the front wall of the gutter against the end portion 26 of the front jaw 14. The upper end or notch 30 of the relatively long front jaw 14 bears directly on the inner end portion of the arm 6 and is positively supported thereby. Further, the furcations 28, straddling the arm 6, laterally stabilize the jaw 14. This constitutes an important and highly desirable feature of the invention. The construction and arrangement is such that the gutter may be soldered from either side of the tool and through the openings or passages defined by the generally U-shaped arms 6 and 8.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A gutter clamp comprising a pair of opposed, generally U-shaped arms pivotally connected at one end and having threaded bores in their free ends, a pair of opposed, coacting, elongated, generally longitudinal jaws on said free ends of the arms for receiving and clamping a gutter wall therebetween and substantially conforming to the cross-sectional shape thereof, said jaws including flat, intermediate base portions abutting the free ends of the arms and having openings therein aligned with the bores, screws engaged in the openings and the bores for removably securing the jaws on the arms, and means for actuating the arms for opening and closing said jaws, one of said jaws further including a flat, generally longitudinally extending inner end portion, the other of said jaws further including a right-angular inner end portion extending toward said flat end portion and terminating in opposed relation thereto and cooperable therewith for receiving and clamping the upper portion of the gutter wall therebetween, said flat inner end portion of said

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one jaw terminating in furcations receiving the pivoted end portion of the respective arm therebetween.

2. A gutter clamp in accordance with claim 1, said furcations defining a beveled notch seatingly receiving said respective arm.

3. A gutter clamp comprising a pair of opposed, generally U-shaped arms opening toward each other and pivotally connected at a first pair of corresponding ends thereof, a pair of opposed, coacting, and complementary elongated jaws removably secured, at corresponding points spaced from the opposite ends thereof to the second pair of corresponding ends of said arms for receiving and clamping a gutter wall therebetween and substantially conforming to the cross-sectional shape thereof, said jaws including one pair of end portions projecting outwardly from said second pair of ends of said arms in one direction and toward said first pair of corresponding ends of said arms and generally along lines extending between the opposite ends of the corresponding U-shaped arms, the other end portions of said jaws projecting outwardly from said second pair of ends of said arms in the opposite direction, means for actuating said arms for opening and closing said jaws, the free terminal end portion of one of the first-mentioned end portions of said jaws and said first end of the corresponding arm including coacting abutment means preventing movement of said

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free terminal end portion relative to the last-mentioned arm away from the opposing arm.

4. The combination of claim 3 wherein said free terminal end portion defines a flat, generally longitudinally extending inner end portion, the corresponding terminal end portion of the other jaw defining a right angular end portion extending toward said flat end portion and terminating in opposed relation thereto and co-operable therewith for receiving and clamping another portion of the gutter wall therebetween.

5. The combination of claim 3 wherein the first-mentioned terminal end portion is bifurcated and embracingly engages the corresponding arm from opposite sides of the medial plane thereof.

References Cited by the Examiner

UNITED STATES PATENTS

2,704,528	3/55	Julian	-----	113—101
2,743,873	5/56	Burke.		
2,945,463	7/60	Kucklinsky et al.	-----	113—101

FOREIGN PATENTS

515,205	11/20	France.
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