Sept. 14, 1948. J. H. KROLL 2,449,487

PICKUP CLAW

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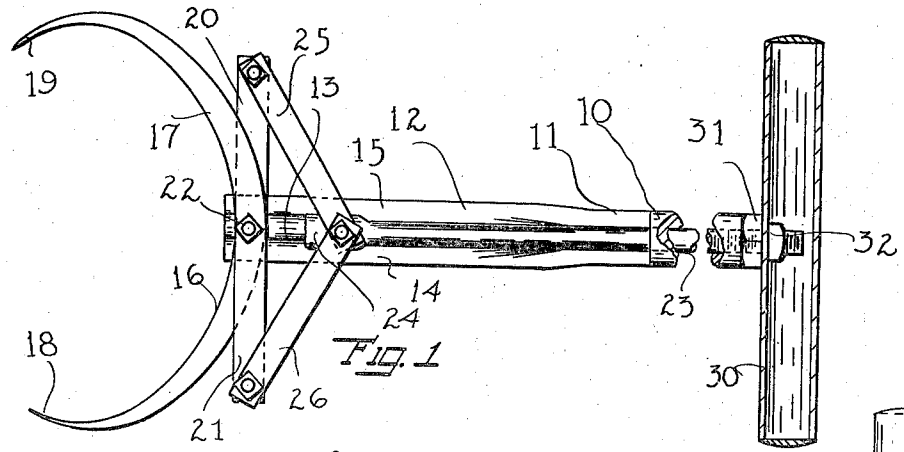


Fig. 1

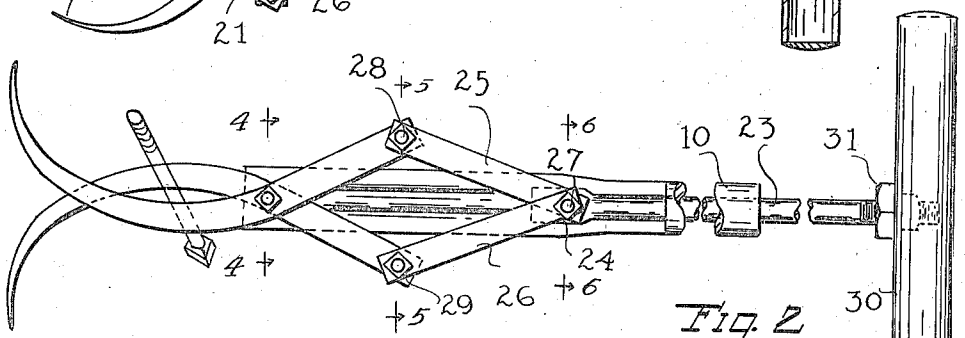


Fig. 2

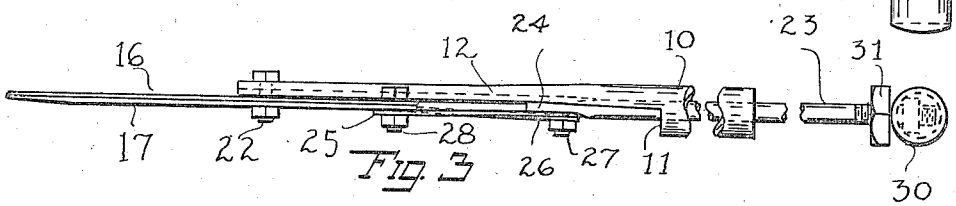


Fig. 3

Fig. 4

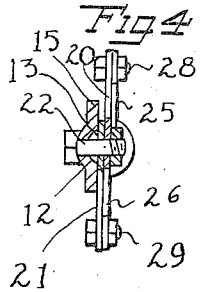


Fig. 5

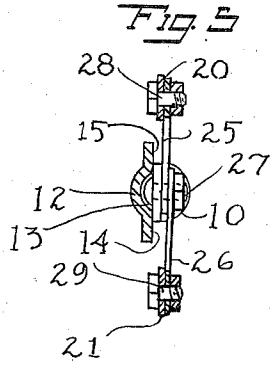
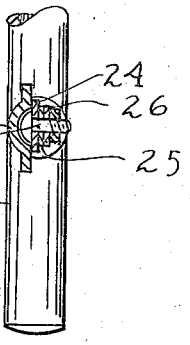


Fig. 6



INVENTOR.
JOHN H. KROLL
BY Smith & Wells
ATTORNEYS.

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PICKUP CLAW

John H. Kroll, Spokane, Wash.

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1 Claim. (Cl. 294—115)

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My invention relates to improvements in pick up claws.

In the pouring of concrete into forms, particularly in small and medium sized building foundations, wooden spacer elements are used at various levels to maintain the proper spacing of the walls of the form. It is quite a problem to remove these spacing elements, particularly where reinforcing bars and other metal shapes are used because the passageway for a removing tool is always quite narrow. The depth to which it is necessary to reach is also often-times quite great. A tool to remove the spacer elements should also be usable to recover other small articles that may drop into the space within the forms. It is the purpose of my invention to provide a tool in the nature of a pair of pick up claws which can be closed upon and made to grip a large variety of articles and which claws may also be moved if between the various obstacles within the forms and then expanded to grip the articles and afterwards closed upon the articles for removing it.

It is also an object of my invention to provide a device of this character which is particularly constructed to present a very narrow thickness in one plane and a relatively narrow thickness in the other plane at right angles thereto, so as to facilitate passage of the implement into and out of the narrow spaces within a concrete form.

A further object of the invention is to provide a tool of this character wherein the operating means is of a simple nature embodying a tubular handle member which may be of any desired length and a shaft through the tubular handle member, the shaft being guided along the flattened extension at the claw end of the handle member. Links connect the shaft to a pair of flat curved claws that are pivoted on the free end of the flattened extension.

The nature and advantages of my invention will appear more fully from the following description and the accompanying drawings wherein a preferred form of the invention is disclosed. It should be understood, however, that the drawings and description are illustrative only and are not to be taken as limiting the invention except insofar as it is limited by the claim.

In the drawings:

Figure 1 is a view in side elevation of the pick up claws, showing them opened to receive an article, the handle portion being broken away and the hand grip member being shown in section;

Figure 2 is a view similar to Figure 1 but showing the pick up claws closed to grip a small article such as a bolt;

Figure 3 is a view taken at right angles to Figure 2;

Figure 4 is a sectional view on the line 4—4 of Figure 2;

Figure 5 is a sectional view on the line 5—5 of Figure 2; and

Figure 6 is a sectional view on the line 6—6 of Figure 2.

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Referring now to the drawings, my invention is embodied in a device of the character hereinbefore referred to. The device uses a tubular member 10 which may be a length of pipe. This tubular member is cut in half at one end as indicated at 11, one-half being removed and the other half 12 being flattened so as to leave a groove 13 with flat faces 14 and 15 along the opposite sides thereof. The flattened portion 12 at its free end serves as a mounting for two claws 16 and 17 and these claw members comprise flat bars which are curved and tapered throughout the greater portion of their length, the curvature and the taper both being in the plane of greatest width of the bars so as to provide pointed tips 18 and 19 on the claws, the tips being adapted to move toward each other from the position shown in Figure 1 to grasp an article and then to pass over each other after the fashion of a pair of shears to grip the article as shown in Figure 2. The claws 16 and 17 have straight portions 20 and 21 respectively extending from the pivot point in the opposite direction from the curved portions. A bolt 22 pivots the claws to the flattened portion 12.

In order to manipulate the claws, I provide a shaft 23 in the pipe 10. This shaft has a flattened end 24 which overlies the flattened portion 12 of the handle member. Two links 25 and 26 are overlapped on the flattened portion 24 and pivoted thereto by bolt 27. The head of the bolt fits in the channel 13 of the flattened portion 12. The links 25 and 26 are pivoted to the portions 20 and 21 of the claws by bolts 28 and 29. A suitable hand piece 30 is fashioned to the end of the shaft 23 by threading the end of the shaft and providing two nuts 31 and 32 to secure the hand piece on the shaft. The hand piece is shown as a hollow piece of tubing but, of course, any other suitable end piece may be used.

This device is particularly advantageous because of the flat nature of its construction. It will be noted from Figure 3 that the thickness of the device in a plane parallel to the planes of the claws 16 and 17 is very slight. When the de-

vice is in article gripping position, as shown in Figure 2, the claws and the links 25 and 26 are drawn in so that the width of the device is kept quite small. The two claws being flat bars, tend to swing a long article caught therebetween toward a plane parallel to the plane of the claws. This further aids in getting the tool out of the forms. The operating mechanism being made entirely of the tubular handle 10 and the shaft 23, is not damaged by swinging it around against upper bars or spacers that may be present in the form. In fact, the tubular member 10 can be rested upon a cross member in order to hold it where the length is great and the claws may be operated without danger of entangling the operating mechanism with any of the obstacles that the member 10 may come in contact with. Thus, the only part of the device that the operator need be concerned about in removing the articles picked up is that small part comprising the claws 16 and 17 and their associated links 25 and 26. If he can keep these elements from becoming entangled in the obstacle, he will encounter no difficulty in removing the article from the forms.

Having thus described my invention, I claim:

A tool for use in picking out spacer elements and small articles from between the walls of concrete forms, comprising a tube having an end portion of substantial length composed of a half

section of said tube flattened along the sides to provide a rounded groove and two flat faces on opposite sides thereof, a shaft slidably mounted in said tube, and having a flattened end riding on the flat faces of said end portion, the other end of said shaft having a hand piece thereon, a pair of claw members comprising thin flat bars curved and tapered throughout the greater portion of their length to one end, means pivotally connecting the bars together between their ends and to the extremity of said flattened end portion of the tube, links pivotally secured to the uncurved end of said bars, and a bolt pivotally connecting said links to the flattened end of the shaft, the bolt having its head seated in and slidable along the groove in said end portion.

JOHN H. KROLL.

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