

May 24, 1927.

F. FOOTE

1,629,953

COTTER PIN AND STAPLE PULLER

Filed Sept. 16, 1926

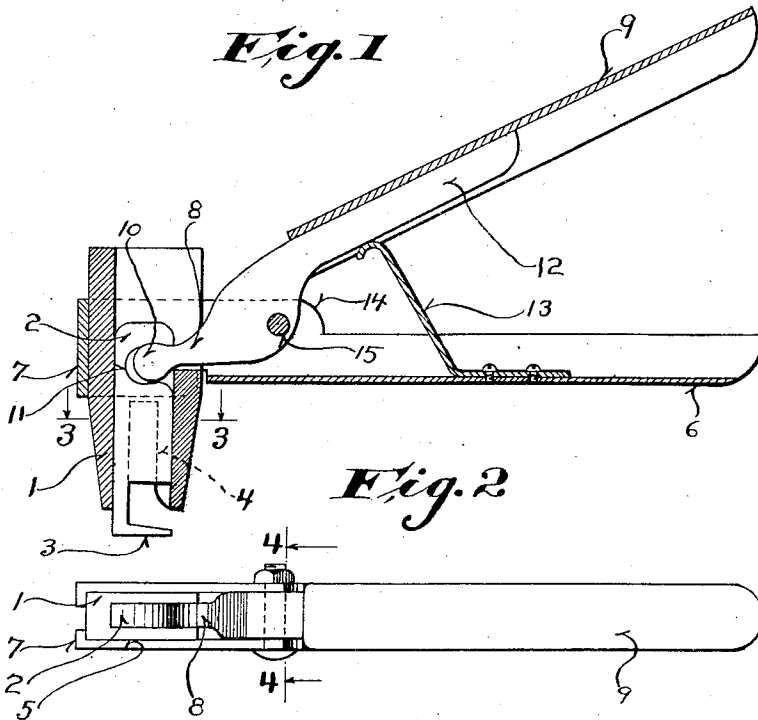


Fig. 3.

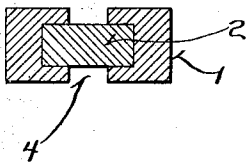
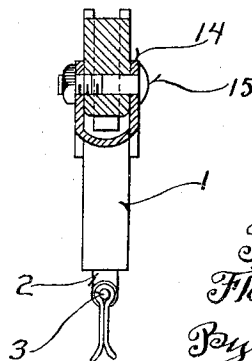


Fig. 4



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UNITED STATES PATENT OFFICE.

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COTTER-PIN AND STAPLE PULLER.

Application filed September 16, 1926. Serial No. 135,842.

This invention relates to a cotter-pin and staple puller.

Objects of this invention are to provide a novel form of cotter-pin and staple puller which is so constructed that it may be operated in the manner of a pair of pliers with the head of the device resting against the object from which the pin is to be extracted, and with the slidable crosshead engaging the eye of the pin so that by a simple closing movement of the levers the pin may be extracted and temporarily held in the device until the handles are released.

Further objects are to provide a cotter-pin and staple puller which is of sturdy and reliable construction, which may be cheaply manufactured and readily assembled, and which is very easy to operate.

An embodiment of the invention is shown in the accompanying drawings in which:

Fig. 1 is a longitudinal sectional view through the device;

Fig. 2 is a plan view of the structure shown in Fig. 1;

Fig. 3 is an enlarged transverse section on the line 3—3 of Fig. 1; and

Fig. 4 is a sectional view on the line 4—4 of Fig. 2.

Referring to the drawings, it will be seen that the device comprises a slotted head 1 which may be tapered towards its lower end, if desired, as shown in Fig. 1. This slotted head receives the slidable crosshead 2 which is provided with a laterally projecting bottom finger 3 adapted to be passed through the eye of the cotter-pin or staple, as shown in Fig. 4, for instance. The head 1, it will be noted, is provided with a cutout or slotted portion 4 on opposite sides, so as to provide room for the cotter pin or staple when the pin 3 of the crosshead slides upwardly.

The head 1 is carried between the arms 5 of the bottom handle 6. These arms 5 are provided with inturned portions 7 which engage over the outer end of the head 1, as shown in Figs. 1 and 2. Further, it is to be noted, that the head 1 is cut away on its inner upper side, so that the projecting lever 8 of the upper handle 9 may freely engage the crosshead. This lever 8 is provided with a rounded end 10 which engages in the recess 11 of the crosshead. Preferably, the lever 8 is formed of a different piece of material from the sheet metal handle 9, and is rigidly secured thereto. For example, the lever 8 may be provided with an exten-

sion 12, welded or otherwise secured within the handle 9. Similarly, the head 1 may be welded to the arms 5 of the lower handle 6. These handles 6 and 9 are rounded and stamped from sheet metal, so that they may be comfortably manipulated by the operator and at the same time may be cheaply manufactured. Preferably, the lower handle 6 carries a spring 13 which bears against the upper handle, for example, against the extension 12.

It is to be noted that the sides of the handle 6 are extended upwardly, as indicated at 14 in Figs. 1 and 4, and provide a suitable bearing for the pivot pin 15, such pivot pin being either a rivet, bolt, or other member of this type.

In using the device, the handles are allowed to separate, as shown in Fig. 1, and the pin or finger 3 of the crosshead is slipped into the eye of the cotter pin or staple. Thereafter, the upper handle is pressed towards the lower handle, thus raising the crosshead, the head 1 resting against the object from which the cotter pin or staple is being withdrawn. The crosshead has a material length of travel upwardly into the head 1 and the cutout 4 provides a space for the sides of the cotter pin or staple. This permits the complete withdrawal of the staple or cotter-pin by a single operation of the instrument, and it is to be noted that as long as the handles are held closed, the staple or cotter-pin can not fall from the device.

Thus, it will be seen that a very simple, serviceable, and strong device has been provided, which may be very readily manipulated and which may be cheaply manufactured.

Although the invention has been described in considerable detail, such description is intended as illustrative rather than limiting as the invention may be variously embodied and as the scope of such invention is to be determined as claimed.

I claim:

1. A device for withdrawing staples, cotter-pins, or similar members, comprising a main head having a longitudinally extending aperture therethrough, a crosshead slidably mounted within said aperture and having a lower finger adapted to engage the eye of the staple or cotter-pin, a lever rigidly secured to said main head, a second lever pivoted to said first-mentioned lever and

4 having a projecting end, said cross-head hav-
ing a recess in its upper portion for the
reception of said projecting end, said finger
being adapted to be withdrawn into said
5 main head when said levers are caused to
approach each other.

2. A device for withdrawing staples, cot-
ter-pins, or similar members, comprising a
main head having a longitudinally extend-
10 ing aperture therethrough, a cross-head slid-
ably mounted within said aperture and hav-
ing a lower finger adapted to engage the
eye of the staple or cotter-pin, a lever rigid-
ly secured to said main head, a second lever

pivoted to said first-mentioned lever and 15
having a rounded end, said cross-head hav-
ing a recess in its upper portion for the
reception of said rounded end, said finger
being adapted to be withdrawn into said
main head when said levers are caused to 20
approach each other, and a spring for sep-
arating said handles.

In testimony that I claim the foregoing
I have hereunto set my hand at Milwaukee,
in the county of Milwaukee and State of 25
Wisconsin.

FLORIAN FOOTE.