

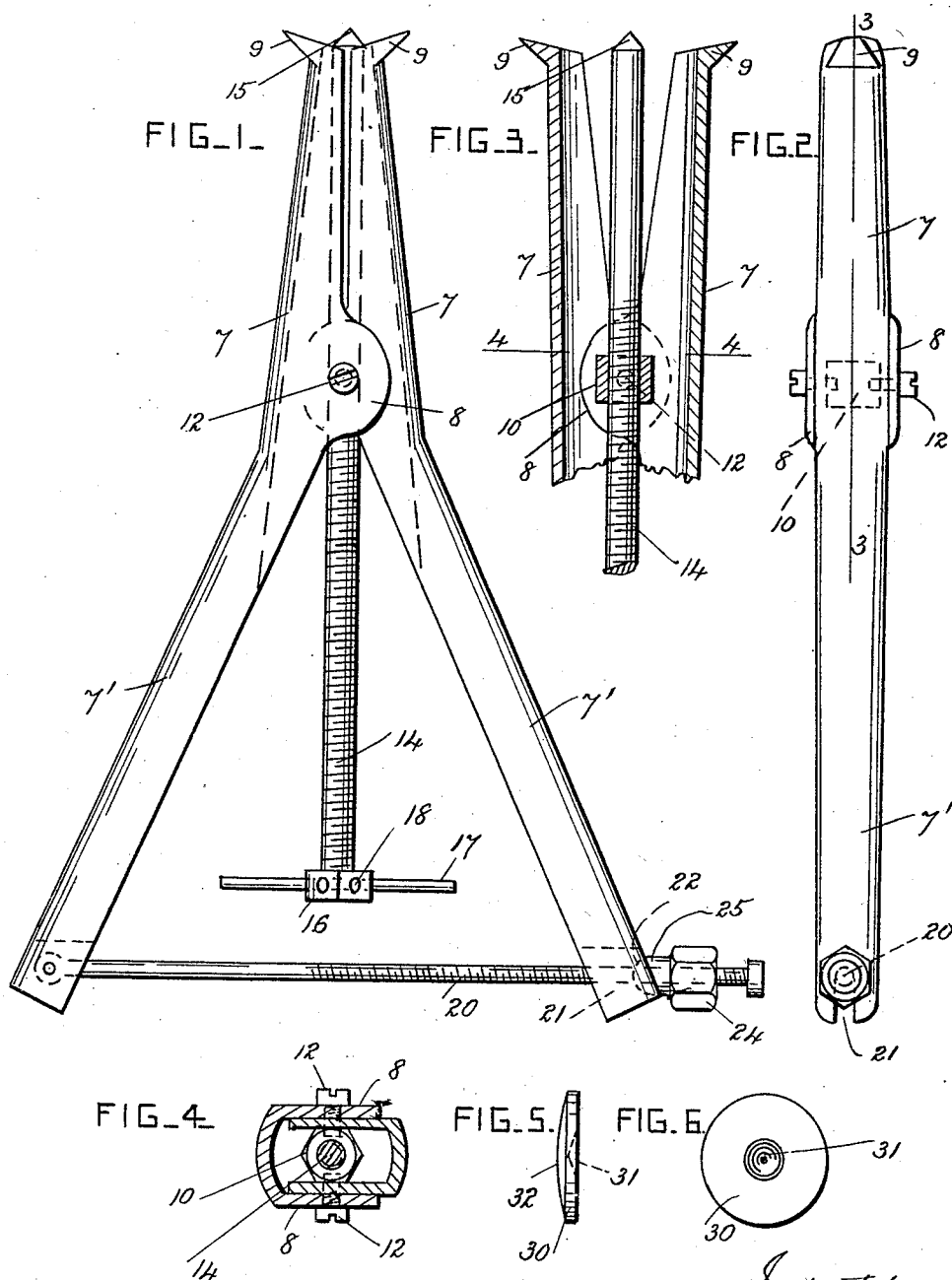
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R. E. LARKEY

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EXTRACTING TOOL

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UNITED STATES PATENT OFFICE.

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EXTRACTING TOOL.

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To all whom it may concern:

Be it known that I, RILEY E. LARKEY, a citizen of the United States, residing at Enid, in the county of Garfield and State of Oklahoma, have invented certain new and useful Improvements in Extracting Tools, of which the following is a specification.

This invention relates to tools specially adapted for extracting bearings, sleeves, bushes, and other similar articles from their sockets when the articles can only be reached from one end; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a front view of a tool constructed according to this invention. Fig. 2 is a side view of the same. Fig. 3 is a section through portions of the tool, taken on the line 3—3 in Fig. 2, and showing the jaws separated a little. Fig. 4 is a cross-section taken on the line 4—4 in Fig. 3. Fig. 5 is a side view, and Fig. 6 is a plan view, of an abutment plate used in connection with the tool.

Two levers 7 are provided, each having a handle portion 7'. Lugs 8 are provided at the middle portions of the levers, and the lugs of one lever are arranged to overlap or straddle the similar lugs of the other lever. Each handle portion 7' is arranged at an obtuse angle to the other or main end portion of the lever to which it pertains. When the tool is closed, as shown in Fig. 1, the handle portions 7' are widely separated, and the other end portions are substantially parallel to each other. These latter end portions are channel-shaped in cross-section, and terminate in outwardly projecting wedge-shaped jaws 9.

The lugs 8 are pivoted to a nut 10 by pivots or screws 12, and a longitudinal extracting screw 14 is provided which works in the nut 10 and is arranged between the channel-shaped portions of the arms. The outer end 15 of the screw is pointed and projects between the jaws. The other end of the screw has a head 16 for revolving it, and 17 is a short bar which is slidable in holes 18 in the head, and enables it to be turned so as to exercise considerable pressure.

A screwthreaded rod 20 is pivoted to one of the handles 7' and projects through a slot 21 in the other handle, and is arranged

crosswise of the screw 14. A spherical socket 22 is formed at the end of the slot 21, and a thumb-nut 24 is screwed on the rod 20, and has a spherical projection 25 which works in the socket 22. The slot 21 enables the rod to be slid out of engagement with the handle, when desirable, without removing the nut 24 from the rod.

In order to remove a bush, or similar article, from a socket when one end only of the bush is exposed, the tool is inserted in the open end of the bush, and the jaws 9 are forced apart by hand or by the screwthreaded rod 20 and thumb-nut 24 so that they project beyond the other end of the bush between it and the bottom of its socket, and engage with the bush. The extracting screw is then revolved so that its pointed end bears against the bottom of the socket, and moves the bush longitudinally. When the bush moves freely the handle portions are grasped, and the bush is pulled out. When the bottom of the socket has a hole in it so that a bearing for the screw cannot be had, an abutment plate 30 is placed over the hole, for the end of the screw to bear against. These abutment plates are of any convenient size and shape, and the plate 30 has a recess 31 for the pointed end of the screw to engage with, and a convex surface 32 which fits against the edge of the hole in the bottom of the socket.

What I claim is:

1. An extracting tool, comprising two arms having overlapping pivoted lugs at their middle portions, each arm having a handle portion arranged at an angle to its main portion and having a jaw at the free end of its main portion, a nut pivoted to and between the said lugs, and an extracting screw working in the nut and projecting between the main portions of the arms.

2. An extracting tool, comprising two pivoted arms having jaws at one end and diverging handle portions at the other, a nut pivoted between the arms, and an extracting tool working in the nut, one of the said handle portions having a slot in its free end and a spherical socket, a screwthreaded rod pivoted to the other handle portion and slidable in the said slot, and a nut screwed on the said rod and having a spherical projection which engages with the said spherical socket.

3. An extracting tool, comprising two arms having lugs at their middle portions which overlap each other, a nut, pivots for the said lugs secured to the said nut, and an extracting screw working in the said nut and projecting between the adjacent end portions of the arms, said end portions being channel-shaped in cross-section to clear the screw and having outwardly projecting jaws on their free ends.

In testimony whereof I have affixed my signature.

RILEY E. LARKEY.