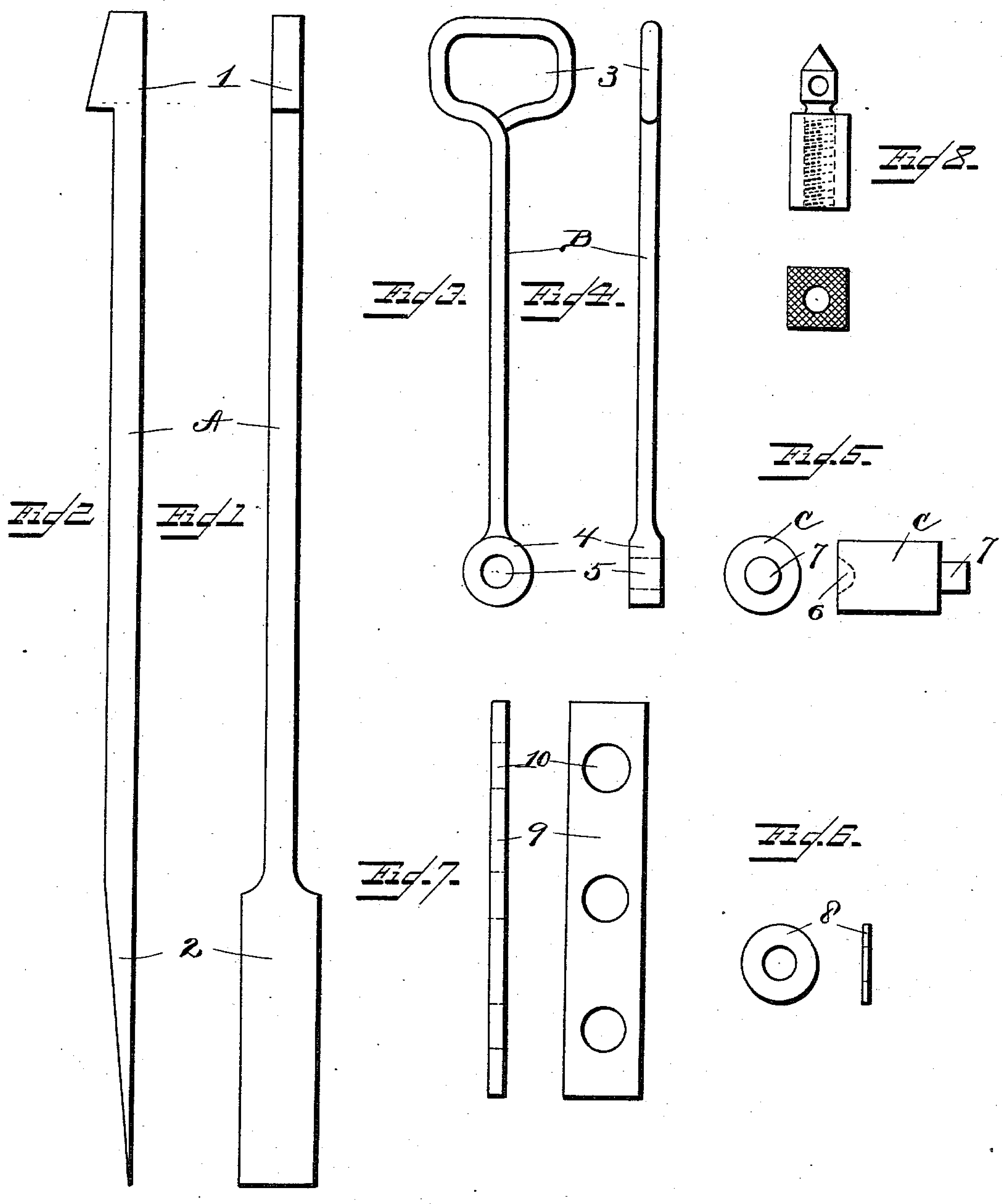
(No Model.) 2 Sheets—Sheet 1.

J. BARDSLEY.

RIVET HOLDING DEVICE.

No. 379,204. Patented Mar. 13, 1888.



WITNESSES

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 11

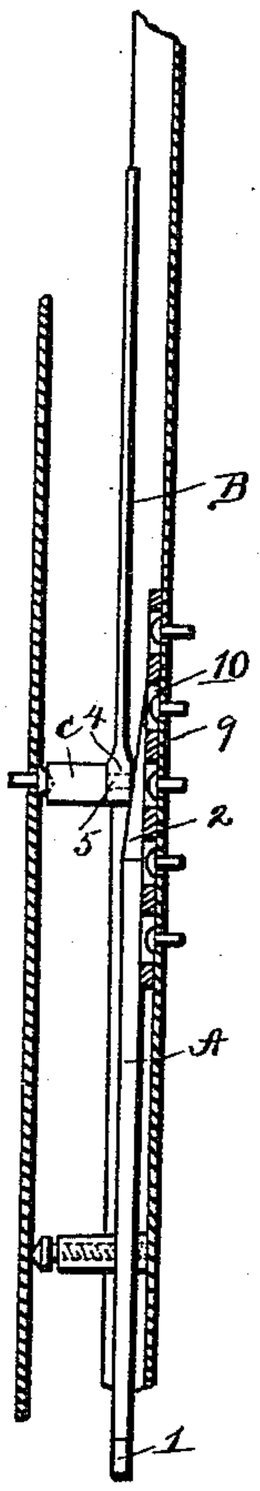


Fig. 11

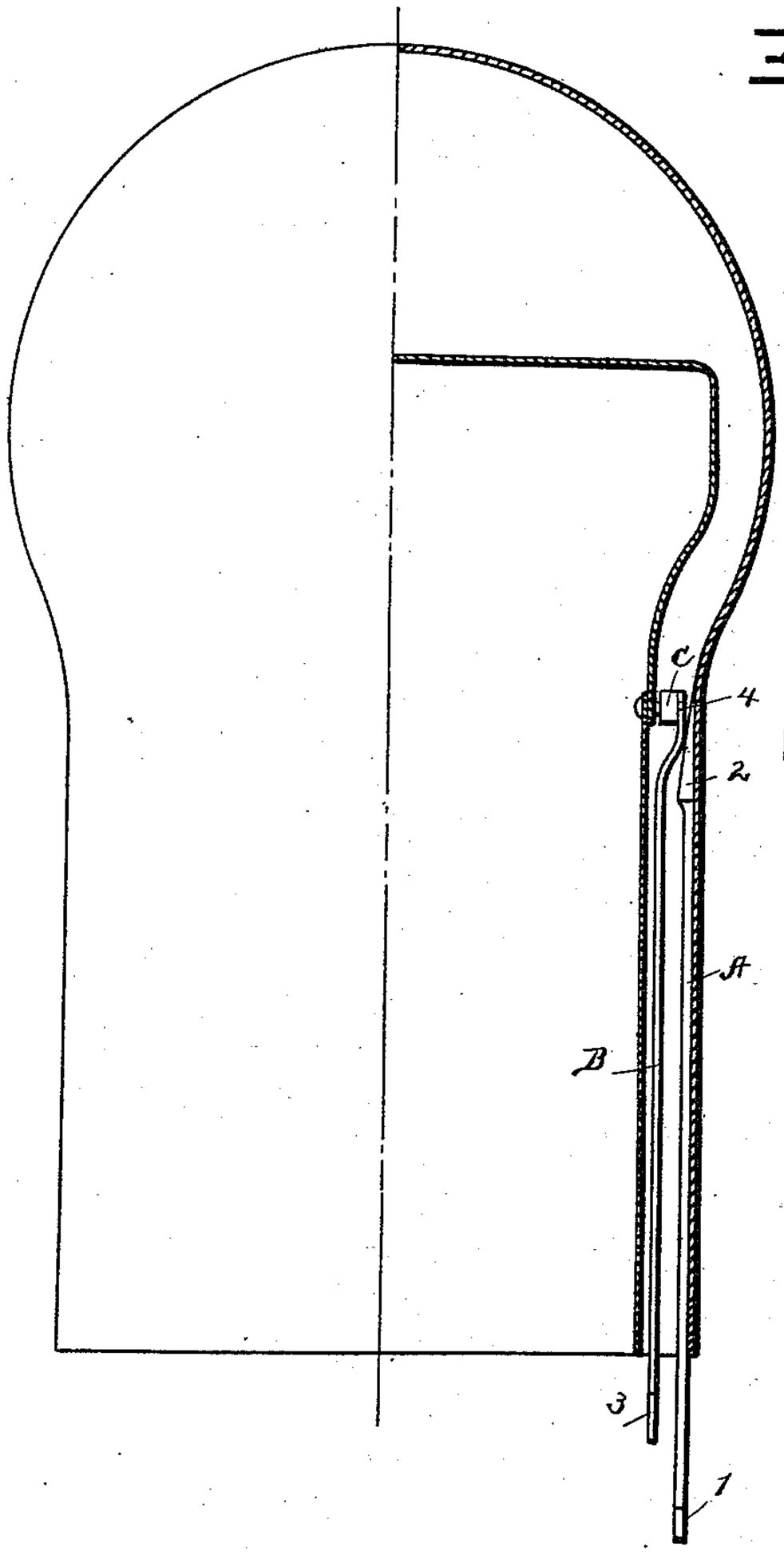
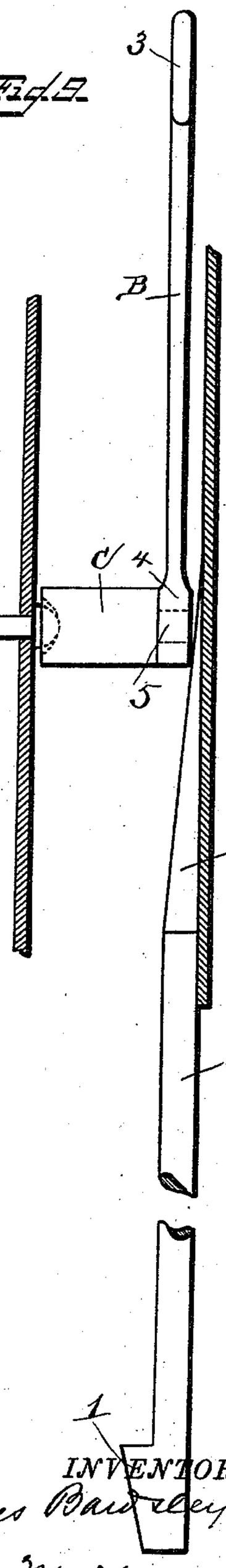


Fig. 9.



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UNITED STATES PATENT OFFICE.

JAMES BARDSLEY, OF TERRE HAUTE, INDIANA.

RIVET-HOLDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 379,204, dated March 13, 1888.

Application filed September 19, 1887. Serial No. 250,090. (No model.)

To all whom it may concern:

Be it known that I, JAMES BARDSLEY, a citizen of the United States of America, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Rivet-Holding Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention has relation to means for holding rivets in place while the head is being formed on the opposite side of a plate with the proper tool prepared for that purpose.

The object of my invention is to provide improved means for holding and forcing a rivet in its seat while the head is being formed on the opposite side to hold the materials together; and it consists in the novel construction of parts and their combination, as will be hereinafter fully described, and specially pointed out in the claims made hereto.

I have fully and clearly illustrated my invention in the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a plan view of the wedge-bar. Fig. 2 is a side view of the same. Fig. 3 is a plan view of the cup-holder. Fig. 4 is a side view of the same. Fig. 5 is a side view in elevation and an end view of the cup or rivet-set. Fig. 6 is an edge and plan view of the washer to adjust the tool to varying thicknesses of size of rivet-heads. Fig. 7 is a view of an auxiliary plate for use when the implement is set on a surface having rivet-heads projecting therefrom. Fig. 8 is the jack-screw used when the plate shown in Fig. 7 is needed. Fig. 9 is a view showing the parts aggrouped in operative position. Fig. 10 is a view showing the implement applied to hold rivets in the flanges of channel-irons, &c.; and Fig. 11 is a view showing it applied to inside boiler-work.

In the drawings the same parts shown in different figures are designated by the same reference-notations.

Reference being had to the drawings, A designates the wedge-bar, which consists of a substantial metal bar formed with a head, 1, substantially of the shape shown, by which to drive the wedge under the cup-holder and remove it when required, and having the other end, 2, formed wedge-shaped to put under the cup and cup-holder.

B designates the cup-holder, consisting of a metal bar formed with a hand-grasp, 3, and at the other end has a circular seat, 4, provided with a hole, 5, to take the stud on the end of the cup or rivet-set.

C designates the rivet-set or cup, in one end face of which is formed a seat or countersink, 6, to receive and hold a rivet-head, and having the other end formed with a central stud or projection, 7, to set in the hole 5 of the cup-holder.

In order that the cup may be conveniently applied to heads of different sizes or to places of different measurements, I provide a number of cups, C, advancing by one-fourth of an inch to the required distance, that no time will be lost in making changes, using washer D for different thicknesses of rivet-heads.

It may happen that the implement is to be used on surfaces having rivet-heads projecting from it, which would interfere with the entrance and progress of the wedge-bar under the cup-holder. I therefore provide means for overcoming this by a plate, 9, formed with apertures 10, to set over the projecting rivet-heads and give the wedge-bar a smooth plane surface to travel upon. The plate 9 is placed over the projecting rivet-heads, as seen in Fig. 10 of the drawings, and then the other elements assembled thereon, as shown in said figure. To hold the plate in position while the work is being done and during the changes of the other parts from one rivet to another, I use a small jack-screw, as shown, or other suitable means for fastening it temporarily in position.

In Fig. 10 I have shown the device applied to hold a rivet in the flange of a channel-iron, and in Fig. 11 it is illustrated as applied to repairing a flue-sheet, crown-sheet, side sheet, and all boiler-work where you are limited for space.

The parts are assembled for operation by putting the rivet in the hole made in the parts to be united, then bringing the cup under the head arranged in the cup-holder, and then inserting the wedge-bar and driving the wedge-bar under the cup-holder during the swaging of the stub of the rivet. As indicated hereto-

fore, the plate 9 is not essential unless the surface on which the wedge-bar moves is studded with rivet-heads, in which case the plate is arranged with its apertures over the rivet-heads and held in place by a jack-screw, as shown. The implement or apparatus is equally well adapted for repairing boilers, as it may be applied wherever a rivet can be inserted.

In driving the wedge-bar I usually use a six-pound hammer and drive until the rivet-head is completed on the opposite plate. The wedge-bar is removed by striking the shoulder of the head of the bar from the opposite direction, and when loose it may be withdrawn and the other parts then readily removed.

What I claim is—

1. A rivet-holder comprising a cup, C, formed with a countersink in one end to receive and hold a rivet-head, and having the other end formed with a stud, a cup-holder, B, consisting of a metal bar formed with a seat having an aperture to take the stud on the cup, and a wedge-bar, A, adapted to set under the end of the cup-holder, all substantially as described, and for the purpose stated.

2. A rivet-holder comprising a cup, C, formed with a countersink in one end to receive and hold a rivet-head and having the other end formed with a stud, a cup-holder, B, consisting of a metal bar formed with a seat having an aperture to take the stud of the cup, a base plate, 9, having holes to set over rivet-heads, and a wedge-bar, A, to enter between said base-plate and the cup-holder, substantially as described, and for the purpose stated.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES BARDSLEY.

Witnesses:

W. H. MILLER,

C. E. FULLER, Jr.