

No. 647,497.

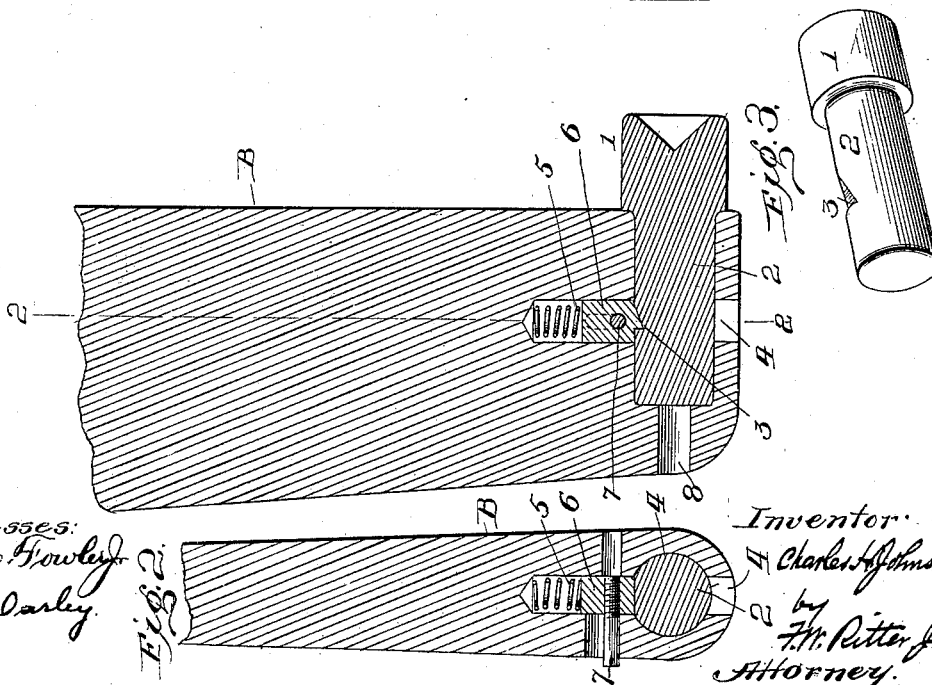
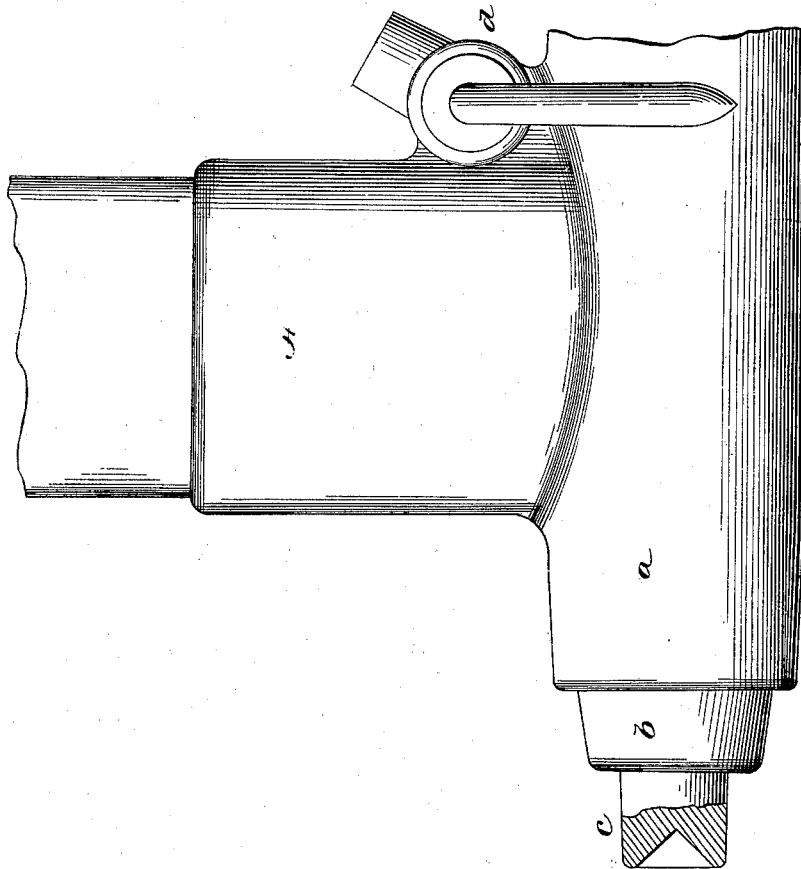
Patented Apr. 17, 1900.

C. H. JOHNSON.

DIE FOR RIVETING MACHINES:

(Application filed Dec. 18, 1899.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## DIE FOR RIVETING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 647,497, dated April 17, 1900.

Original application filed August 5, 1899, Serial No. 726,263. Divided and this application filed December 16, 1899.  
Serial No. 740,539. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES HARRIS JOHNSON, a citizen of the United States, residing at Chicago Heights, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Dies for Riveting-Machines; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, wherein—

Figure 1 is a view, partly in section, of the arms of a yoke or other suitable support for a riveter and its "hold-on" or "snap-die," the arch of the yoke or center of the support broken out. Fig. 2 is a sectional view of the arm which carries the hold-on, taken on the line 2 2, Fig. 1; and Fig. 3 is a detached perspective view of the hold-on or snap-die of the riveter.

Like symbols refer to like parts wherever they occur.

My invention relates to that class of tools for riveting and like purposes wherein there are combined with a suitable support a riveting-tool and a snap-die, hold-on, or button-set, and has for its object such a construction of the snap-die, hold-on, or button-set and combination of the same with its support as will facilitate the withdrawal of the snap-die when necessary for repair or replacement.

To this end the invention, generally stated, embraces the combination, with a support having a socket for the reception of the die-stem, of a die, button-set, or hold-on having a stem rotatable in the socket of its support, said stem provided with a catch-notch and a catch yieldingly mounted in the support and adapted to recede when the die-stem is rotated, whereby upon rotation of the die-stem the same may be withdrawn from the support.

There are other minor features of invention, all as will hereinafter more fully appear.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

In the drawings, A and B indicate the two arms of a yoke or other suitable support for the riveting-tool and its hold-on or snap-die,

the one arm, A, of which will carry the riveting-tool and the other, B, the hold-on.

In this class of devices in order to bring the riveting-tool and the hold-on in proper relation to the plates or article to be riveted, either one or the other, and sometimes both, the hold-on and riveting-tool are made automatically adjustable to and from each other by means of a cylinder and piston or plunger, and in the present instance the riveting-tool is shown as the adjustable device, the same consisting of an outer fixed casing or cylinder *a*, secured to the arm A of the support, within which and longitudinally movable therein is the hammer-cylinder *b*, which carries the riveting-die *c* and within which movable hammer-cylinder reciprocates the usual piston or hammer which imparts the blow to the riveting-die *c* when the same has been advanced to its work by the admission through throttle-valve *d* of the fluid-pressure which simultaneously advances the hammer-cylinder and operates the piston or hammer within said hammer-cylinder. As, however, the construction of the riveting-tool is the subject-matter of a separate application, Serial No. 726,263, filed August 5, 1899, of which this is a divisional application, and inasmuch as the same is not hereinafter claimed, further description thereof will not be required.

1 indicates the hold-on or snap-die, the subject-matter of the present invention, said die being provided with a cylindrical stem 2 and having a catch-notch 3.

In the arm B of the support (or its equivalent, which may be the piston of a cylinder carried by said arm) and in line with the riveting-tool carried by the arm A of the yoke or support is a socket 4 for the reception of the die-stem 2 and within which the die-stem may be rotated, and within said arm B, at right angles to and intersecting the socket 4, is a pocket 5, within which is arranged a yielding or spring-pressed catch 6, adapted to engage in the catch-notch 3 of the die-stem 2 when the hold-on is in place within the socket 4.

At one side of the catch-pocket 5 and ex-

tending laterally therefrom through the arm B is an elongated slot for the reception of a pin 7 on the catch 6, which pin serves as a guide for catch 6 and if made of sufficient length to project may, if desired, be used to retract the catch 6 in case the die-stem should become wedged from any cause.

8 indicates a bore formed in the axis of the stem-socket 4 and extending from the exterior of the arm into said socket, into which a tool may be inserted for driving out the hold-on in case the same should become wedged against rotation, as hereinbefore noted.

The construction of the devices being substantially such as hereinbefore set forth, their operation will be as follows: The stem 2 of the hold-on 1 will be inserted in the socket 4 with the catch-notch 3 in line with the yielding catch 6 and will be then forced home until the catch 6 drops into the catch-notch 3, whereupon the hold-on 1 or button-set will be securely held in operative position. When, however, it is desired to remove the hold-on, the same is seized and its stem 2 rotated within the socket, which owing to the segmental form of the catch-notch 3 will cause the stem to act on the catch as a cam, causing the catch to recede or yield, or, in other words, the form of the stem and its notch allows the catch to ride up on the stem as the same is rotated, so that when the catch is clear of the notch the stem may be readily withdrawn. If, however, the hold-on from any cause should become wedged against rotation, the catch 6 can be raised by means of pin 7 and the hold-on driven out by a suitable tool introduced into the axial bore 8.

Among the advantages incident to the invention hereinbefore set forth is the facility

with which the die may be removed and replaced by a single operator and without material loss of time when the device is in use.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with a suitable support having a socket for the reception of a die-stem, of a die having a stem rotatable in said support and provided with a catch-notch, and a yielding catch adapted to recede when the die-stem is rotated to permit the withdrawal of the die-stem from the support, substantially as and for the purposes specified.

2. The combination with a suitable support having a socket for the reception of a die-stem, of a spring-pressed catch arranged in said support and adapted to project into the die-stem socket, and a die having a round die-stem provided with a segmental notch for the reception of the spring-pressed catch, substantially as and for the purposes specified.

3. The combination with a support having a socket for the reception of a die-stem said socket having an axial opening or bore, of a die-stem rotatable in said socket and provided with a catch-notch, a yielding catch adapted to recede when the die-stem is rotated, and means for retracting said yielding catch, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 13th day of December, 1899.

CHARLES HARRIS JOHNSON.

Witnesses:

FRED KIRGIS,  
J. H. McELDOWNEY.