No. 820,073. PATENTED MAY 8, 1906.

H. H. SPANOGLE.

RIVET CUTTER.

APPLICATION FILED APR. 3, 1905.

Fig. 1.

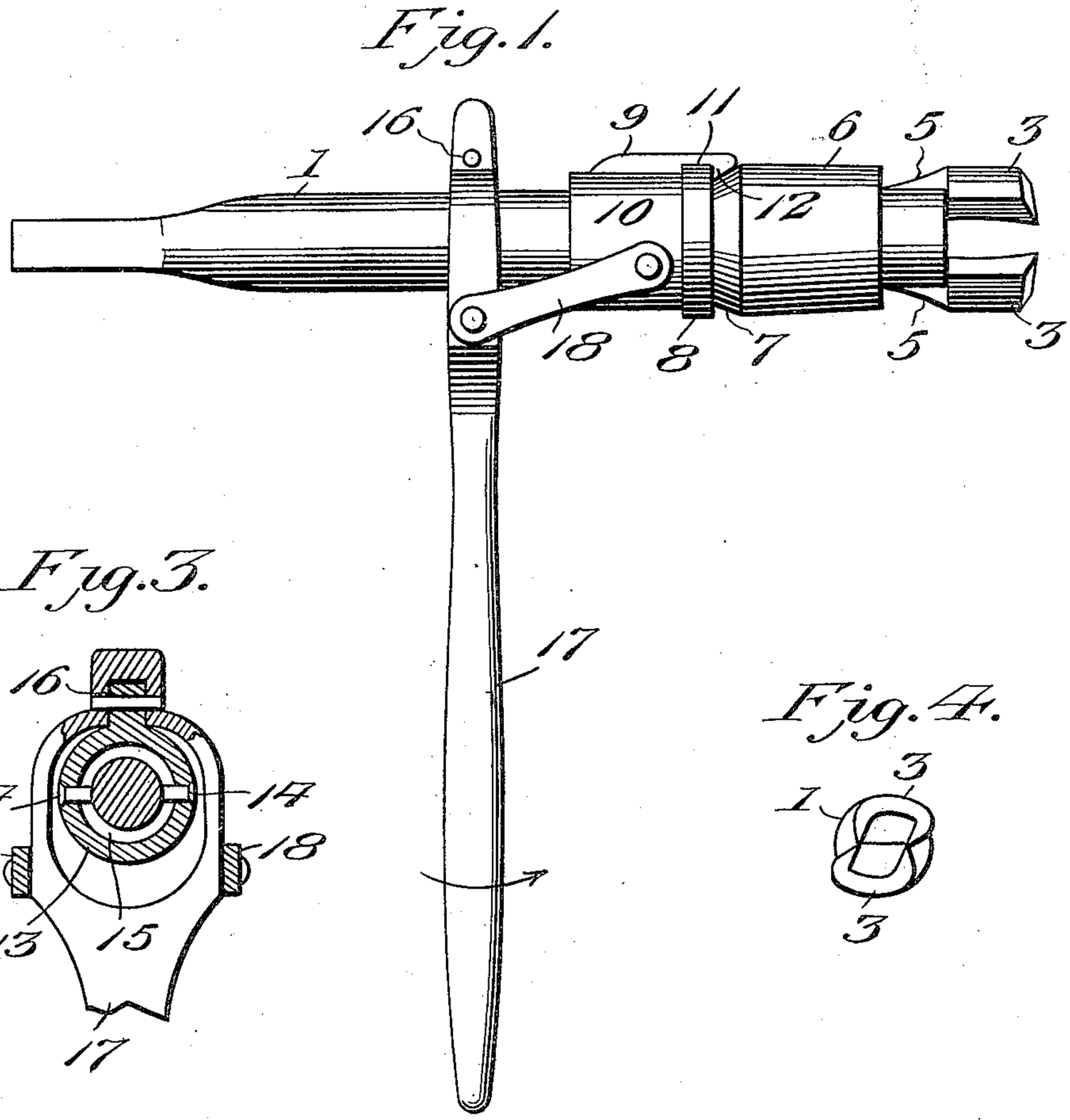
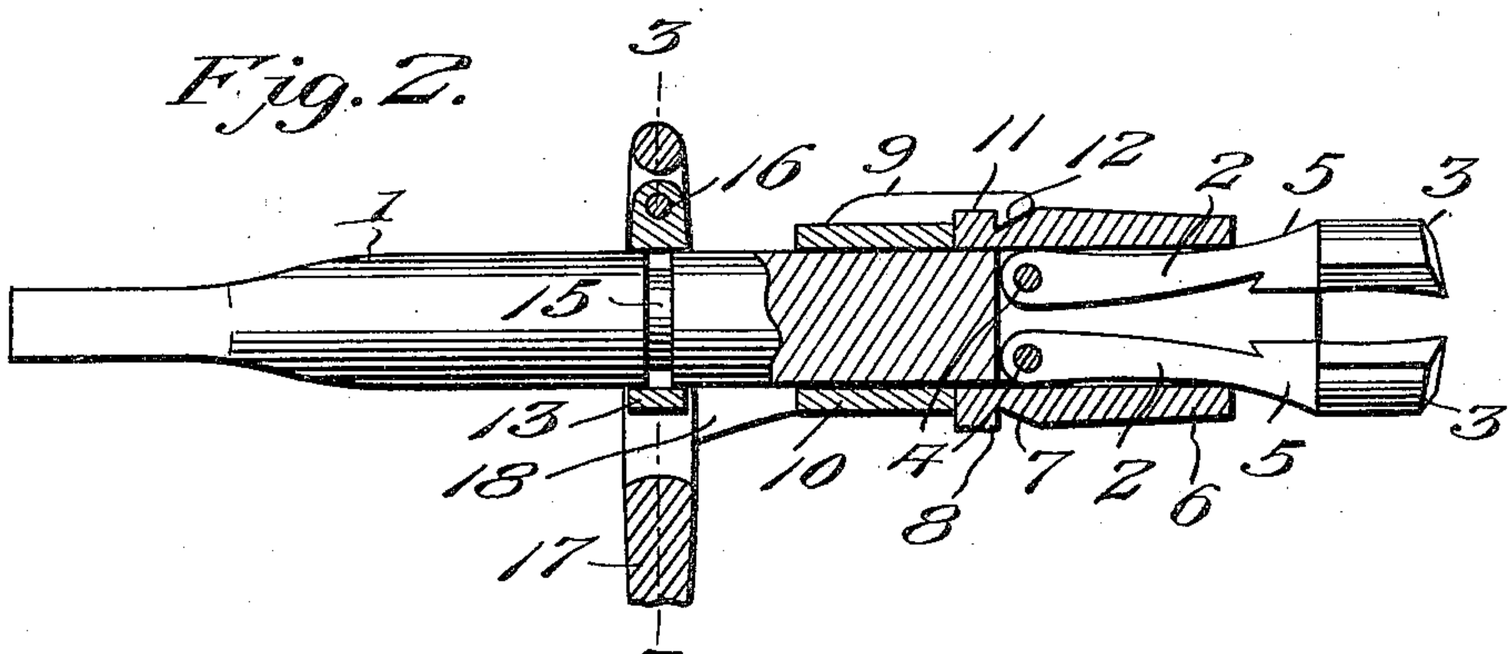


Fig. 3.

Fig. 4.

Fig. 2.



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HARRY HOWARD SPANOGLE, OF ALTOONA, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO FRANK C. KEITH, OF ALTOONA, PENNSYLVANIA.

RIVET-CUTTER.

No. 820,073. Specification of Letters Patent. Patented May 8, 1906.

Application filed April 3, 1905. Serial No. 253,535.

To all whom it may concern:

Be it known that I, HARRY HOWARD SPANOGLE, a citizen of the United States of America, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented new and useful Improvements in Rivet-Cutters, of which the following is a specification.

This invention relates to rivet-cutters of the type employed for removing the head of a rivet to permit of its extraction, and has for its object to produce a comparatively simple inexpensive device of this character in which the cutter-carrying shank may be freely rotated in action relative to the compression devices and one wherein the cutters will be gradually and positively compressed for proper action upon the rivet-head.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of a cutter embodying the invention. Fig. 2 is a similar view, partly in central longitudinal section. Fig. 3 is a transverse sectional elevation, the section being taken on the line 3 3 of Fig. 2. Fig. 4 is an end view of the cutters.

Referring to the drawings, 1 designates a rotary mandrel or shank slotted at its forward end for the reception of arms or extensions 2, provided on the cutting members 3, said arms being pivotally connected with the mandrel by means of pintles 4, whereby the cutters are arranged for relative movement toward and from each other, the arms 2 having their outer edge faces outwardly inclined, as at 5, for a purpose which will hereinafter appear.

Slidably disposed upon the shank 1 is a primary compression member of sleeve 6, provided adjacent its inner end with a groove 7 and a peripheral rib or projection 8, adapted for engagement by a coupling member or hook 9, fixed upon an auxiliary sleeve 10, also slidably disposed on the shank 1, the coupling member being provided with a recess 11, in which the rib 8 fits, and with a terminal engaging portion or hook 12, designed to fit the groove 7.

Mounted for rotation upon the shank 1 at a point in rear of and suitably remote from the sleeve 10 is a collar 13, carrying diametrically-opposed members or pins 14, adapted for engagement with a groove 15, formed in the shank, there being pivoted to an extension 16 on the collar an operating member or lever 17, connected with the auxiliary sleeve 10 by connecting members or links 18, pivoted at their ends, respectively, to the lever and sleeve.

In practice the shank 1 is rotated in any suitable manner for operating the cutters 3, and the latter are positioned over the head of a rivet to be acted upon, the sleeves 10 and 6 being initially retracted upon the shank to permit proper relative movement of the cutters for engagement with the rivet-head. As the shank and cutters rotate the lever 17 is swung forwardly in the direction indicated by the arrow in Fig. 1, thereby imparting a forward movement to the sleeves through the medium of the links 18. During this movement of the lever the main sleeve 6 acts upon the inclined or cam faces 5 of the cutters for gradually moving the latter toward each other, thus causing them to act properly upon and remove the head of the rivet to permit extraction of the latter. It is to be observed in this connection that the shank 1 may rotate freely within the collar 13 when the latter is held at rest by the lever 17 and that a similar free rotation of the main sleeve 6 relative to the sleeve 10 is insured, due to the peculiar form of coupling employed between the sleeves.

From the foregoing it is apparent that I provide a simple inexpensive device which will admirably perform its functions to the attainment of the ends in view and one wherein the cutters will in action be moved gradually and positively toward each other to effect cutting of the rivet, it being understood that in attaining these ends minor changes in the details herein set forth may be resorted to without departing from the spirit of the invention.

Having thus described my invention, what I claim is—

In a device of the class described, a rotary shank, a plurality of relatively movable cooperating cutters carried thereby and having cam-faces, a sleeve slidably disposed upon the shank and adapted to act upon said cam-faces for moving the cutters toward each other, a collar fixed against longitudinal

movement upon and adapted for free rotation on the shank, an operating-lever pivotally engaged with the collar, a second sleeve slidably and rotatively mounted on the shank and operatively engaged with the first-named sleeve, and links connecting the lever and second sleeve.

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

HARRY HOWARD SPANOGLE.

Witnesses:
FRANK C. KEITH,
A. F. HITE.