W. STARK.

ATTACHMENT FOR PNEUMATIC MACHINE RIVETERS.

APPLICATION FILED JAN. 14, 1915.

1,166,723. Patented Jan. 4, 1916.

Fig. 1.

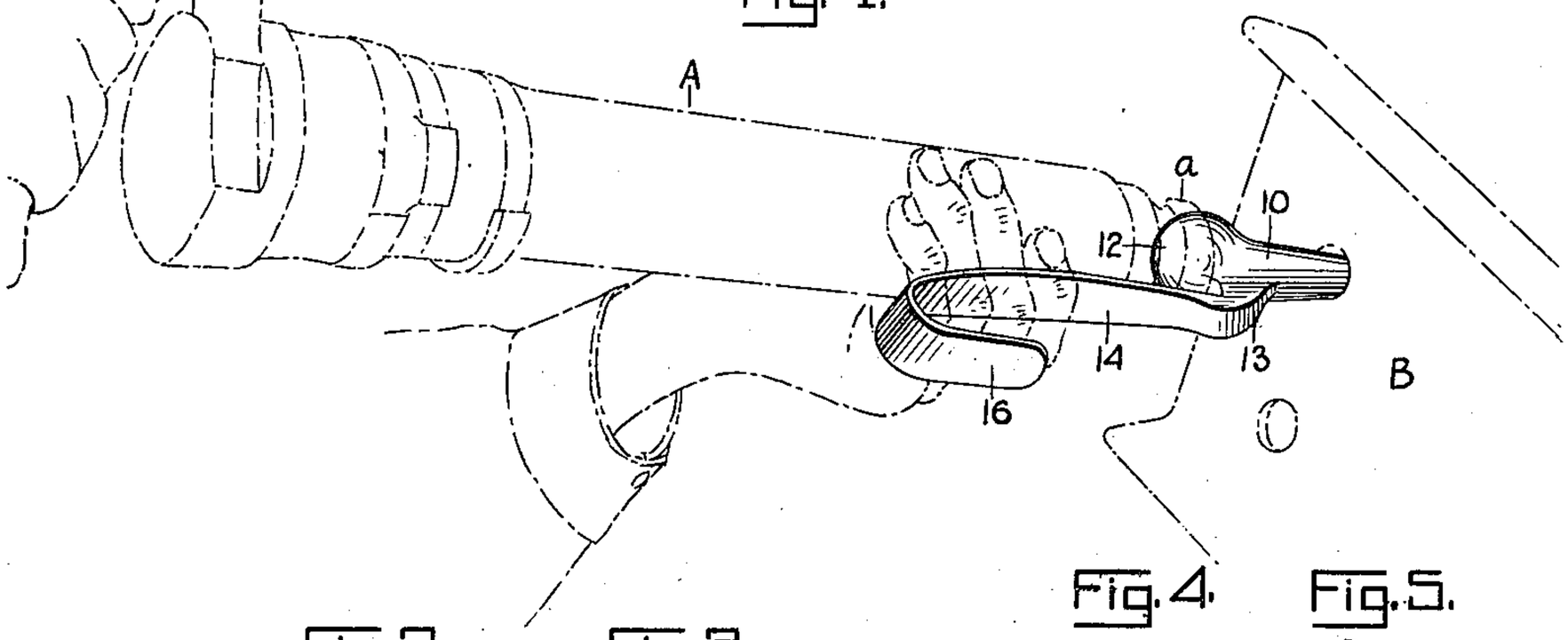


Fig. 2.

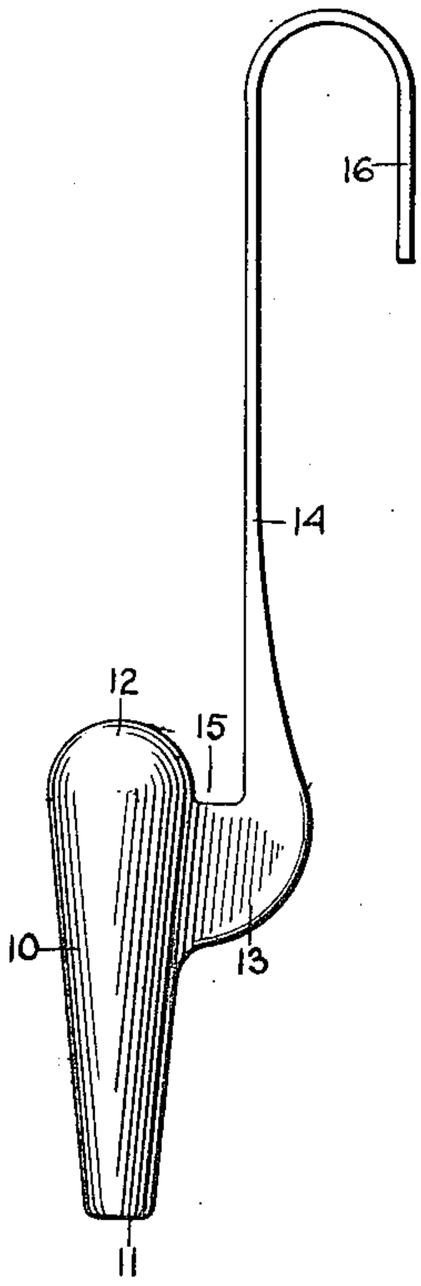


Fig. 3.

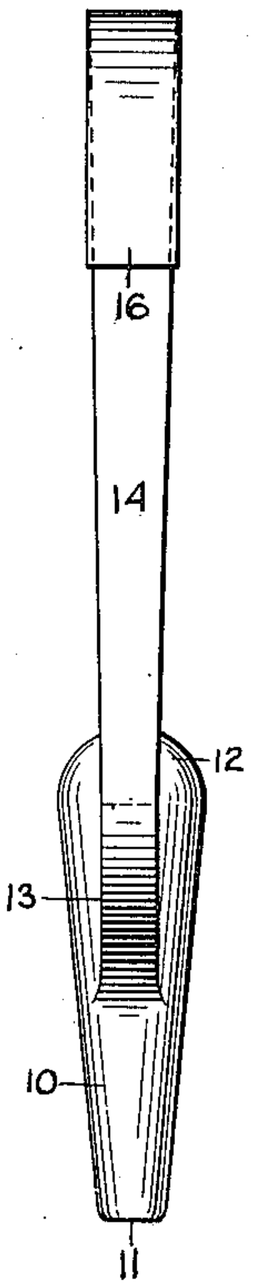


Fig. 4.

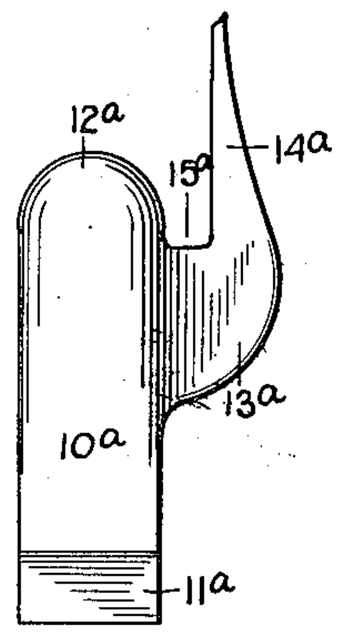


Fig. 5.

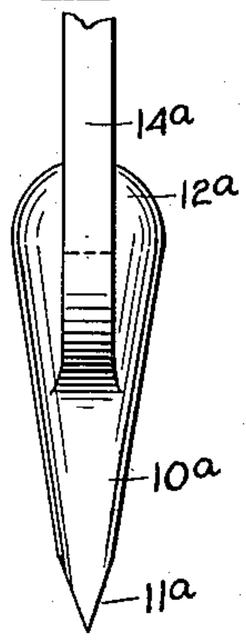
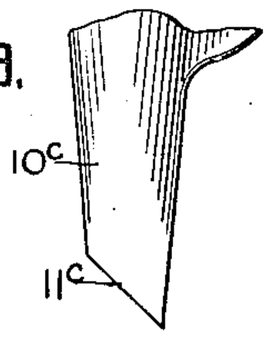
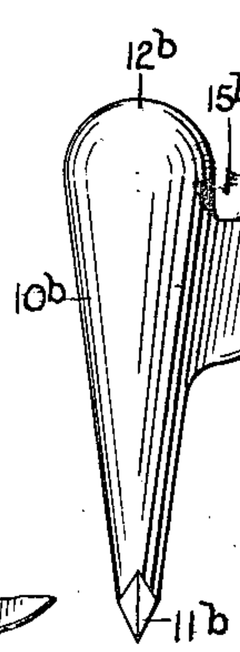


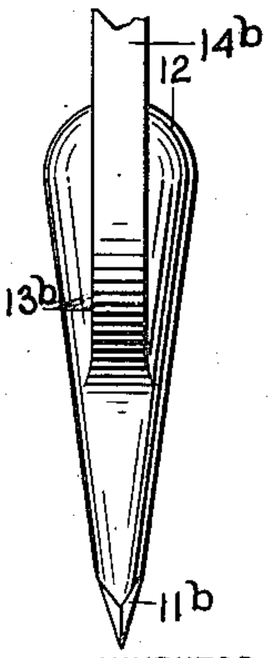
Fig. 6.

Fig. 7.

Fig. 8.







WITNESSES

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ATTACHMENT FOR PNEUMATIC MACHINE-RIVETERS.

1,166,723. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed January 14, 1915. Serial No. 2,236.

To all whom it may concern:

Be it known that I, WILEY STARK, a citizen of the United States, and a resident of Devils Slide, in the county of Morgan and State of Utah, have invented a new and Improved Attachment for Pneumatic Machine-Riveters, of which the following is a full, clear, and exact description.

My invention relates to an attachment to be applied to a pneumatic machine riveter for doing field riveting, shop riveting, and riveting generally.

The prime object of my invention is to provide an attachment for application to the front end of the riveter set and to be manually held thereto to constitute a forward extension of the riveter, whereby to perform with convenience and despatch, general work now performed by separate and less efficient machines, such as the work of a backing out punch, a cold cutter, a gouge, or a diamond point generally used in cutting boiler plates or like sheet metal. The nature, the modes of use, and the advantages of the invention will appear from the following description.

Reference is had to the accompanying drawings forming part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which:

Figure 1 is a perspective view of an attachment embodying my invention, and indicating the application of the tool to a pneumatic machine riveter indicated in dotted lines the view including, in dotted lines also, a piece of work to be operated upon; Fig. 2 is an elevation of the attachment; Fig. 3 is an elevation, the view being taken at right angles to Fig. 2; Fig. 4 is a broken front view showing a modified form of the device; Fig. 5 is a view of the attachment shown in Fig. 4, but taken at right angles to said figure; Fig. 6 is a view similar to Fig. 4, but showing a further modification; Fig. 7 is a view at right angles to Fig. 6; and Fig. 8 is a fragmentary side view showing the front end of a gouge embodying the invention.

Referring particularly to Figs. 1 to 3, the practical embodiment of the invention therein illustrated comprises a tool 10, the front end 11 of which is formed to adapt the tool for use as a backing out punch, that is to say, for forcing out a rivet by exerting pressure against the forward end thereof. At the rear end of the tool 10 and in axial alinement with the working face 11, a head 12 is formed, which in practice may be given a formation to correspond with the working face of the set *a* of a pneumatic machine riveter A, according to the particular type of rivet the said set is intended to operate upon, that is to say, whether a cone button head rivet or a steeple or other character of rivet.

In order to manually hold the attachment firmly in proper position on the riveter A, and against the working face of the set *a*, the tool 10 is provided with a handle 14 integral as at 13 with the tool 10 at a side thereof adjacent to the head 12. The handle 14 is elongated and extends rearwardly beyond the head 12 a considerable distance, so as to afford ample room to be grasped by the hand of the operator. The handle lies essentially parallel with the longitudinal axis of the tool 10, and a depression 15 is presented between the base of the handle at the offset portion 13 and the head 12, to accommodate the set *a*. The position of the handle 14 therefore is such that said handle will range along side of the riveter A.

The rear end of the handle 14 is given such formation that pressure may be exerted by the hand in a rearward direction and against a forward surface of the handle to properly position and sustain the attachment, so that the set *a* will have a firm bearing against the head 12. In the preferred form the handle is return bent as at 16 at the outer side, thereby presenting at the bend a forward surface against which the hand of the operator may exert a rearward pressure as the fingers of the operator grasp the riveter A and handle 14, as indicated in Fig. 1. It will be seen that the operation of the riveter A will exert its blows on the attachment, and if the latter be of a form to constitute, for instance, a backing out punch, as in Figs. 1 to 3, a rivet may be expeditiously driven out by the operation of the said riveter.

In a similar manner the invention is employed in a kit of tools presenting various conformations as to the working front end, whereby workmen, by using the riveting machine A may perform the operation of cutting off a rivet by a cold cutter while eliminating the use of a maul; or by employing a diamond point, perform the operation of cutting boiler plates and other sheet

metal; and likewise, perform the work of a gouge for gouging and matching holes in plate steel, or other structural steel elements, where there has been a defect in drilling, and rivet holes are not found to be in exact register, or for other reasons not permitting the free entrance of a rivet.

In Figs. 4 and 5 the tool 10^a is given at the front end the formation of a cold cutter 11^a. The other elements of the tool are essentially as previously described, there being a head 12^a to receive the face of the set *a*, and a handle 14^a integral as at 13^a with a tool to prevent a depression 15^a.

In Figs. 6 and 7 the tool 10^b at the front end is given the form of a diamond point, as indicated by the character 11^b. The elements 12^b, 13^b, 14^b and 15^b are the same with the other devices, Figs. 1 to 5. By the use of a tool with the diamond point, the cutting of sheet metal or other structural steel elements may be effected with greater rapidity and more efficiency because of utilizing the power of a pneumatic machine riveter, than by the methods usually employed, which involve the use of smaller, less efficient and less convenient expedients.

In Fig. 8 I have illustrated a portion of a tool 10^c which is given, at the front 11^c, the form of a gouge for gouging and matching holes in steel plates, or other like elements.

It is to be noted that the tools of the kit can be employed on the riveter A without removing the set *a* thereof.

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

1. As an article of manufacture, a tool for use on machine riveters, the tool presenting a head to be introduced between the riveter set and the work, and means independent of the said riveter set whereby said head may be held in position on the riveter in position for use.

2. An attachment for pneumatic machine riveters, comprising a tool having a front working face and formed at the rear end to receive the front end of a riveter set, and an elongated handle on the tool, said handle being offset from the tool and ranging rearwardly therefrom to lie alongside a riveter, the said handle having a lateral member presenting a forward face against which the hand of the operator may bear in gripping the handle and riveter set.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILEY STARK.

Witnesses:

JAMES YOUNG,

FREDRICK W. NEWBOLD.