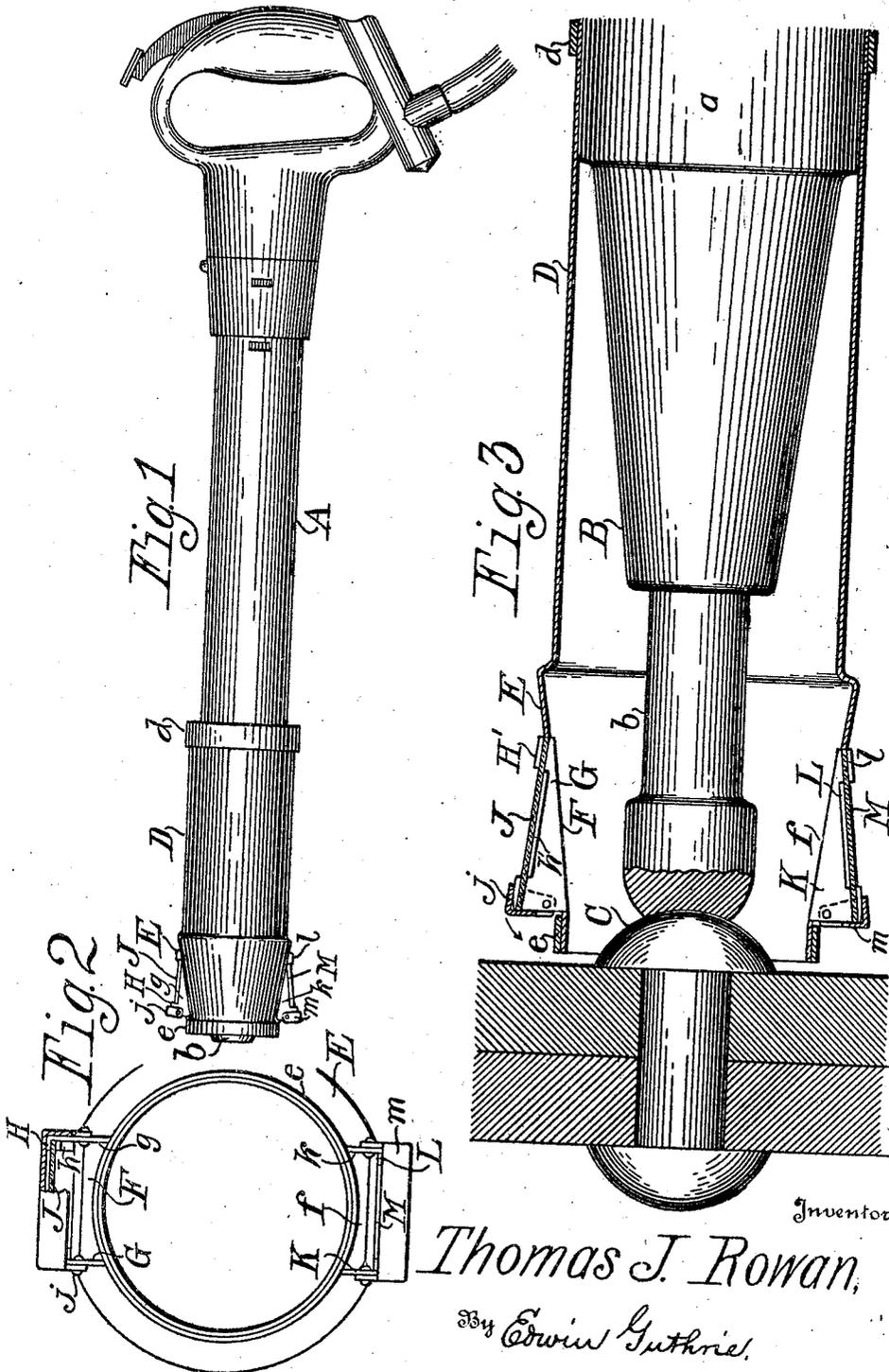


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T. J. ROWAN.
PROTECTOR FOR PERCUSSION TOOLS.
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PROTECTOR FOR PERCUSSION TOOLS.

Application filed August 22, 1921. Serial No. 494,272.

To all whom it may concern:

Be it known that I, THOMAS J. ROWAN, citizen of the United States, residing at New Castle, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Protectors for Percussion Tools, of which the following is a specification.

This invention relates to protectors for percussion tools, by which is meant appliances such as riveting hammers operated either by compressed air, steam or electricity.

The device is to catch and retain flying particles driven off during the operation of the hammer thereby protecting the eyes and hands of the operator, and consists usually in practice, of a metal sleeve, approximately eight to ten inches in length, diameter about two and one-half to three inches, tapering to about two and one-quarter inches at the forward end, and it may be made any size to fit over the point of any riveting hammer, so that the forward mouth of the sleeve touches or almost touches the surface to be riveted. Constructed in the tapering forward end of the sleeve, on opposite sides thereof, are two holders close to the end of the sleeve next to the surface to be riveted, the holders following sight openings in the sleeve. The upper holder contains a plate of isinglass or other transparent material, removably secured in the holder by means of a movable fastening, and the lower holder carries a reflecting plate, the purpose of the openings and plates being to afford means for observing both the upper and lower portions of the rivet head acted upon. It is believed that the use of this invention will obviate the necessity for the wearing of goggles and gloves by the operator, an inconvenient and troublesome essential in present practice, and that it is particularly useful and applicable to overhead work.

By the accompanying drawings the construction and arrangement of the various parts of this invention are illustrated. Of the drawings Fig. 1 represents a side view of a riveting hammer having this invention applied thereto. Fig. 2 is a front view of this invention detached. Fig. 3 is a longitudinal section of this invention applied to the point of a riveting hammer or tool holder. In Figs. 2 and 3 the scale of drawing is substantially full size.

Throughout the description and drawings, the same letter is used to refer to the same part.

Considering the drawings, the riveting hammer A has an enlargement or cylindrical head *a*, a point B, and a tool *b* projecting from the point and subjected to repeated blows by customary mechanism within the hammer. The tool acts upon the rivet C.

The body or sleeve D of this invention, may be made of No. 20 galvanized iron, and it has a re-enforcing band *d* at the open end which is slipped over and engages the head *a* of the hammer A. At the other end of the sleeve is formed a tapering portion E, the mouth of which is re-enforced by a band *e*. The tapering end E has two sight openings F and *f*. The upper opening F has the side walls G and *g*, which may be formed by turning up the sheet metal at the side of the opening, but this invention is in no sense limited to that particular construction. The upper edges of the side walls of the opening F are turned inwardly at right angles and marked H, *h*, H', *h'* and afford clamps or guides for the transparent plate J, which is kept in the guides by means of the pivoted clip or fastening *j*. The plate is easily removed and replaced or renewed.

The lower sight opening *f* also has side walls K and *k*, and as shown in Fig. 3 guide lugs L and *l* are formed to receive the plate M. This is a reflecting plate, and is held removably in the guides by the pivoted clamp *m* shown.

In explaining the operation of this invention it will be understood that it is not confined to the use of the particular tool illustrated in Fig. 3, and introduced only for the purposes of this description. The rivet C is expanded by the repeated blows in the usual manner, and is freely observable through the transparent plate J, while flying particles struck off during the hammering are caught in the sleeve D, from which they may be readily emptied by turning the hammer downwardly at intervals. The reflecting plate M enables the operator to scrutinize the lower part of the rivet head, and by suitably manipulating the whole the riveting may be accomplished without danger from the flying particles. In slanting the tool up or down to round a rivet head, the sleeve D slips back on the hammer, but is easily moved forward again. The sleeve D as

illustrated fits the head *a* closely to hold it in place, but any known and desirable means of holding the sleeve upon the head may be used.

5 Having now described this invention, and explained the mode of its operation, what I claim is:—

10 1. A protector for percussion tools, comprising a sleeve body constructed to engage the end of a tool holder, the said body having its forward end provided with a sight opening having a transparent closure through which the end of a tool in the tool holder may be observed.

15 2. A protector for percussion tools, comprising a sleeve body constructed to engage the end of a tool holder, the said body having at its forward end oppositely disposed sight openings, one of the said openings having a transparent closure through which the end of a tool in the said holder may be observed, and the other opening having a reflecting closure whereby the lower portion

of the head of a rivet operated upon may be examined.

25 3. A protector for percussion tools, comprising a sleeve body constructed to engage the end of a tool holder, the said body having a tapering, forwardly-extending portion provided with a sight opening having a transparent closure through which the end of a tool in the tool holder may be observed.

30 4. A protector for percussion tools, comprising a sleeve body constructed to engage the end of a tool holder, the said body having a tapering, forwardly-extending portion provided with oppositely disposed sight openings, one of the said openings having a transparent closure through which the end of a tool in the said holder may be observed, and the other opening having a reflecting closure whereby the lower portion of the head of a rivet operated upon may be examined.

45 In testimony whereof I affix my signature.
THOMAS JOHN ROWAN.