Apr. 24, 1923. 1,453,082

H. ROSENBERG

TOOL HANDLE

Filed Dec. 17, 1921

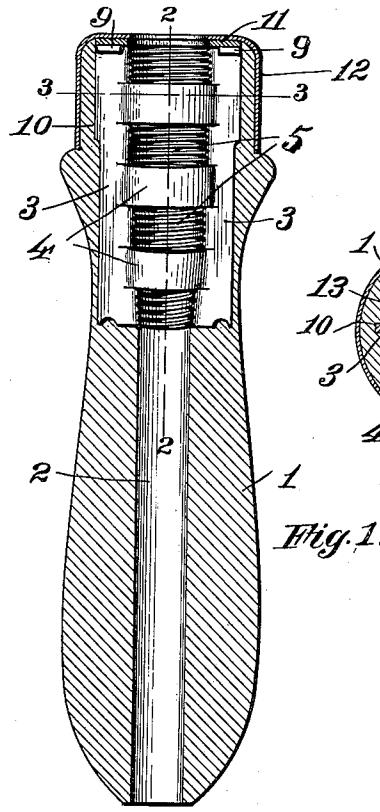


Fig. 1.

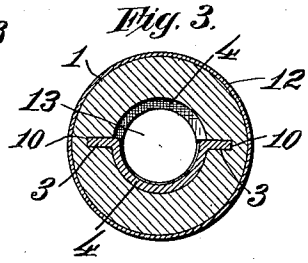


Fig. 3.

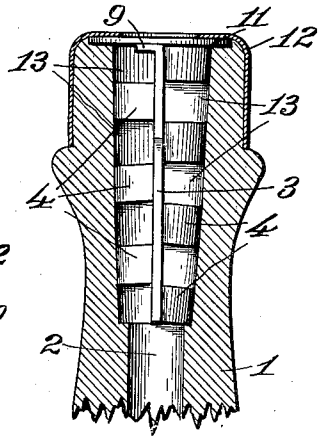


Fig. 2.

Fig. 6.

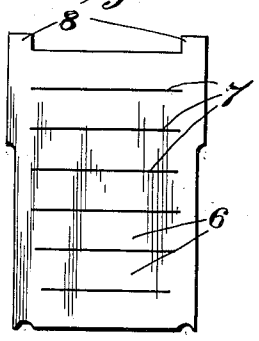


Fig. 4.

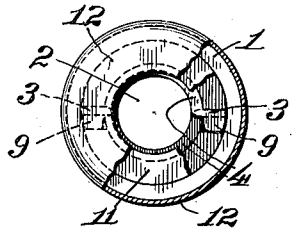
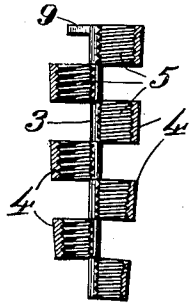


Fig. 5.



Inventor

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UNITED STATES PATENT OFFICE.

HEYMAN ROSENBERG, OF NEW YORK, N. Y.

TOOL HANDLE.

Application filed December 17, 1921. Serial No. 522,995.

To all whom it may concern:

Be it known that I, HEYMAN ROSENBERG, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Tool Handles; and I do hereby 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.

This invention relates to improvements in tool handles, and more particularly to such as are especially adapted to be applied to the tang of a tool, such as that of a soldering iron or a file.

The object in view is the production of an inexpensive but exceptionally strong and stable handle capable of easy and quick application to a tool in such a manner as to insure against accidental detachment and yet permit removal of the handle and replacement when desired.

With this and further objects in view as will in part hereinafter become apparent and in part be stated, the invention comprises certain novel constructions, combinations and arrangements of parts as subsequently specified and claimed.

In the accompanying drawing,—

Figure 1 is a longitudinal, vertical, central section through a handle embodying the features of the present invention, the anchoring sleeve being seen in elevation.

Figure 2 is a similar view of the same taken on the plane indicated by line 2—2 of Figure 1, parts of the handle being broken away.

Figure 3 is a transverse section taken on the plane indicated by line 3—3 of Figure 1.

Figure 4 is an end view of the structure seen in Figure 1, parts being broken away for disclosing interior features.

Figure 5 is a longitudinal, vertical section through the anchoring sleeve detached.

Figure 6 is a plan view of a blank such as is employed for the construction of an anchoring sleeve.

Referring to the drawing by numerals, 1 indicated the main body portion, which may be made of wood, or any other appropriate material and which is formed with an axial open passage 2 extending throughout its length for the circulation of cooling air. Near one end portion, the passage 2 is enlarged, at 13, to accommodate the anchoring sleeve. The anchoring sleeve consists of a pair of longitudinally extending, laterally projecting flanges 3, 3, connected by loops of substantially semi-circular strips 4, 4, arranged to outstand alternately laterally from the planes of the faces of the flanges 3, so as to form substantially the equivalent of a cylindrical sleeve, the inner faces of the strips 4 being formed with a thread 5 that is matched, as, for instance, by the passing of a threading tap down through the sleeve so that the thread 5 is continuous, the terminal portion of the thread on one strip 4 registering with and blending into the adjacent terminus of the thread 5 of the next strip 4. Each of the strips 4 is not only arched to form a semi-cylindrical or semi-circular portion, but is tilted slightly axially so that each strip extends at a slight incline to the planes of the faces of flanges 3, as clearly seen in Figures 2 and 5, whereby the tube-like portion formed by all of the strips 4 possesses a contour equivalent of being tapered from the exposed end downward, as seen in the drawing. In producing the anchoring sleeve thus formed, a blank such as seen at 6 in Figure 6 is employed, and is stamped by the use of dies to the shape seen in Figures 1, 2 and 5. The blank 6 is an ordinary sheet of material, preferably steel of heavy gauge, say about twelve United States gauge, and the blank in being formed up to provide the sleeve is first formed with a series of slits 7, 7, to provide the strips 4 therebetween, and the strips are then caused to outstand in the form of semi-circular portions by the action of the die. The die may, in practice, be constructed with cutting edges to form the slits 7 in one operation with the stamping of the strips 4 into their final position and the die may also be formed with threads for stamping the threads 5 in lieu of having them formed by a tap. The flanges 3 are produced by merely leaving the edge portions of the blank or strip itself unaltered when the strips 4 are stamped to their alternately, oppositely outstanding positions, and in the same stamping operation tabs 8, 8 which appear on the blank 6 are bent to form lateral projections

9 on the anchoring sleeve. The main body of the handle 1 in addition to being formed with the bore 2, which is enlarged at the inner portion of handle 1 for accommodating the outstanding strips 4 is also formed with laterally extending longitudinal grooves 10, 10, shaped and located to snugly accommodate the flanges 3, and the projections 9 overlie the material of the handle portion 1 at the inner end thereof. A washer 11, preferably of metal, is inset in the material of the handle portion 1 to rest against the projections 9 and to form a continuous binding strip surrounding the axis of the opening formed by the laterally extending curved strips 4. An appropriate ferrule 12 is forced frictionally onto the inner end of the handle portion 1 so as to effectively bind the parts in the given position stated. Preferably the slits 10 and the enlarged portion 3 of bore 2 are sufficiently small to cause the material of handle portion 1 to grip firmly the parts of the anchoring sleeve when the latter is forced into the position seen in Figure 1, the enlarged portion 13 being tapered to correspond with the taper of the anchoring sleeve produced by the incline of the several strips 4.

The parts being assembled as indicated in Figure 1, to apply the handle it is only necessary either to thrust the tang or shank of the tool longitudinally into the anchoring sleeve or to thrust the handle onto the tang until the threads 5 begin to bight into the tang and thus interrupt further longitudinal movement. Thereupon the handle and tangs are relatively rotated in opposite directions and the thread is accordingly cut in the tang meshing with the thread 5. The retaining sleeve is preferably case-hardened after being shaped and before being introduced into the handle portion 1, so that the threads 5 are hard enough to effectively cut the material of the tang of an ordinary tool so as to form threads thereon and thereby insure a permanent, rigid engagement of the handle on the tool for so long as the operator desires to retain the handle in this position. However, when it becomes necessary to remove the handle from the tool, it is only necessary to rotate the handle relative to the tool in a direction opposite from that of the formation of the threads, and the handle will thereby be loosened and rendered easy to withdraw.

What is claimed is:—

1. A tool handle comprising a body and an anchoring sleeve engaging the body and formed from oppositely disposed outstanding strips of a single sheet of material, the strips being curved for jointly forming substantially the equivalent of a sleeve and being inclined at an angle to the planes of the faces of the sheet of material for giving a taper to the sleeve.

2. A tool handle comprising a body portion and an anchoring sleeve arranged therein, the sleeve being formed from oppositely directed loops of a sheet of flat material with flanges of such sheet outstanding laterally from the sleeve and serving as anchoring means for the sleeve in the body portion.

3. An anchoring sleeve for a tool handle comprising a flat sheet of metal having strips severed and stamped into oppositely outstanding loops with portions of the initial sheet remaining for joining the loops and serving as an anchor.

4. A tool handle comprising a body portion and an anchoring sleeve arranged therein, the sleeve being formed from a sheet of material with flanges of the original sheet in the initial position and condition outstanding laterally from the sleeve and serving as anchoring means for the sleeve in the body portion, the sleeve being tapered to correspond to the taper of a tang to be engaged.

5. A tool handle comprising a body portion and an anchoring sleeve fixed therein and formed of a single sheet of flat material divided into strips and having the strips alternately stamped in opposite directions in the form of outstanding semi-circles and shaped to receive the shank of a tool within the areas enclosed by said strips, portions of the sheet of material at the ends of the strips being left in their initial condition for forming longitudinally extending, laterally projecting anchoring flanges.

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

HEYMAN ROSENBERG.

Witnesses:
ALBERT TEETS,
H. O. KOPP.