March 9, 1948. H. S. FORSBERG 2,437,296

TOOL

Filed Aug. 13, 1946

Fig. 1.

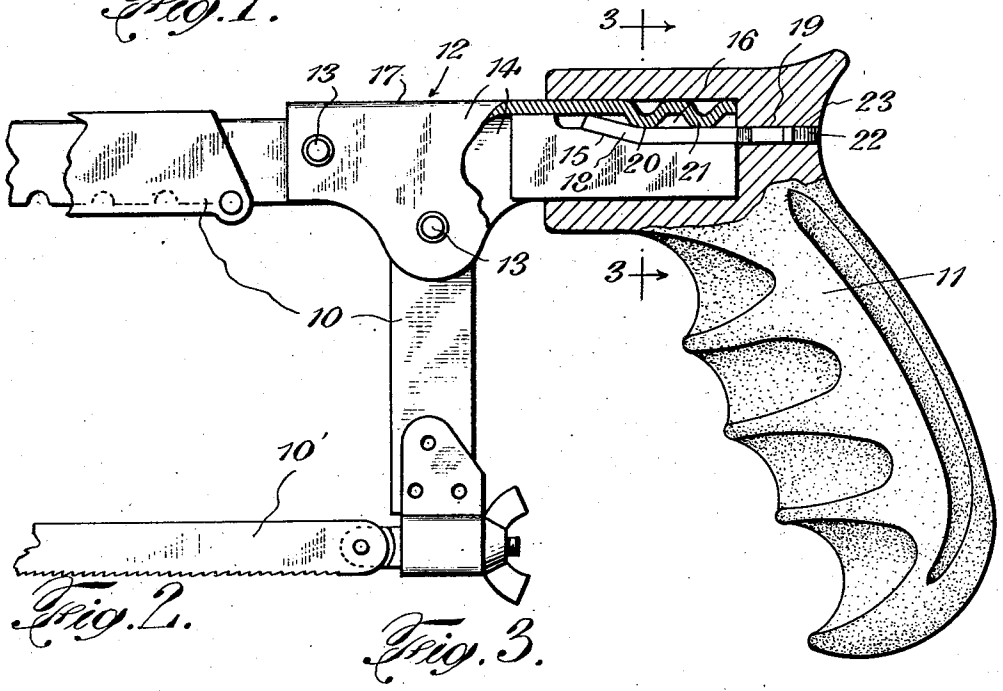


Fig. 2.

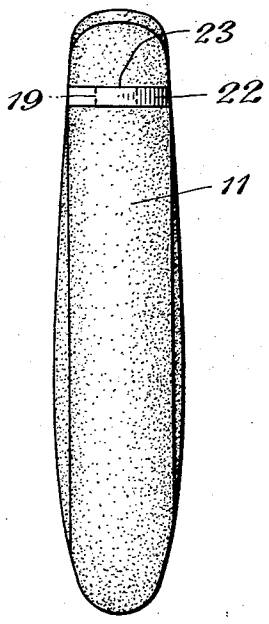


Fig. 3.

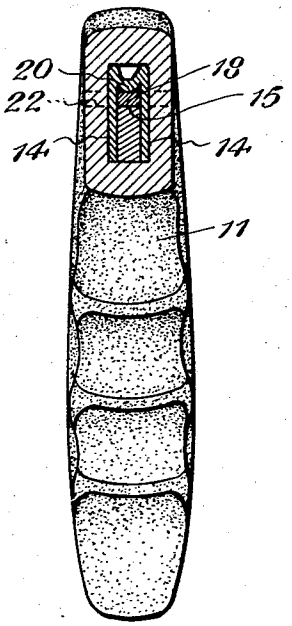
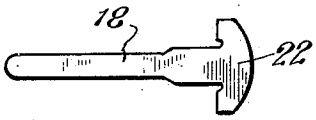


Fig. 4.



INVENTOR
HAROLD S. FORSBERG
BY
Emery, Tenney, Williamson & Dix
ATTORNEYS

Patented Mar. 9, 1948 2,437,296

UNITED STATES PATENT OFFICE

2,437,296

TOOL

Harold S. Forsberg, Shelton, Conn.

Application August 13, 1946, Serial No. 690,269

4 Claims. (Cl. 306—1)

1

My invention relates to improvements in attaching handles to tools or to tool-supporting frames such, for example, as hacksaw frames, and is particularly applicable to cases where handles of a phenolic resin or other plastic composition are to be rigidly attached to such frames. In the accompanying drawings illustrating my invention as applied to the attachment of a handle to a hacksaw frame, Fig. 1 is a side elevation of the frame and handle assembled, a part of the handle being broken away to show the interior construction; Fig. 2 is an elevation thereof as viewed from the handle end; Fig. 3 is a sectional view taken on a plane indicated by the line 3—3 in Fig. 1; and Fig. 4 is a detailed view of a pin constituting part of the means for locking the parts together.

The numeral 10 denotes the hacksaw frame to which a saw 10' may be attached in the usual manner; and the handle 11 is secured thereto by means denoted as a whole by the numeral 12 and which I shall refer to throughout as a locking member. To one end of this member 12 I secure the frame 10, as by rivets 13, while its other end enters and is embraced by the handle. For receiving and holding the locking member, the handle is slotted as shown and the locking member preferably made channel-shape and slightly wider than the width of the slot in the handle so that, when it is inserted in the slot by compressing its sides 14, the locking member will not only closely fit the slot but when seated in the slot its sides will tend to spring apart thereby causing the locking member to fit the slot tightly.

Embraced by the sides 14 of the locking member is a cam 15 which is desirably formed as a separate piece and welded or otherwise secured to the sides 14 in such position as to leave a space 16 between said piece and the closed edge 17 of the locking member channel. This space 16 is provided for the insertion of a locking pin 18 of inelastic material, such as wrought iron or soft steel, and having an enlarged head 22; and the pin is introduced into said space in a direction opposite to that in which the locking member is inserted in the handle; and for the introduction of the pin a hole 19 is provided in the handle registering with the space 16 in the locking member.

The shank of the pin 18 is preferably made flat, as shown, so that when the pin is driven in, in assembling the parts, and its forward end reaches the cam 15, that end will be readily deflected or bent by the cam as indicated in Fig. 1.

2

Moreover, the space 16 is preferably restricted by a lug 20 or, if desired, by two lugs 20 and 21, formed for example by exterior depressions in the edge 17 of the locking member 12, so as to leave just enough room in the space 16 to drive in the pin. When the latter is completely driven in and its forward end deflected or bent by the cam, it will overlie the cam and be rigidly held from withdrawal by the engagement of its bent end by the adjacent lug 20, while its enlarged head will lie in a recess 23 provided therefor in the handle. Thus the handle will be prevented from loosening its firm grip on the locking member 12. It will be obvious that, if desired, the locking member 12 may be integral with the frame 10 instead of being formed as a separate part and then attached thereto.

The word "tool" in the claims which follow is used to denote either the tool itself or a frame for holding the tool inasmuch as it is immaterial, so far as my invention is concerned, whether the tool is held in a frame or not, or, in other words, whether a tool-frame is used to provide for the substitution of a fresh tool or for the interchange of tools generally.

I claim as my invention:

1. The combination of a tool, a handle therefor, a locking member for rigidly attaching the tool to the handle, one end of the locking member being secured to the tool and its other end entering the handle in one direction and having a cam and a lug, and a pin entering the handle in the opposite direction and the head of which engages the handle and the forward end of which is bent and lies between the cam and the lug.

2. The combination defined in claim 1 and wherein the handle is slotted at one end thereof to receive and closely fit the locking member and recessed at the opposite end to receive the head of the pin.

3. The combination defined in claim 1 and where the locking member is channel-shape and the cam comprises a separate piece which is embraced by the sides of the locking member and forms with the closed edge of the locking member a space to receive the pin.

4. The combination of a tool, a handle therefor, a locking member for rigidly attaching the tool to the handle, one end of the locking member being secured to the tool and the other end embraced by the handle and having a cam, a locking pin the enlarged head of which engages the handle and the forward end of which is bent and overlies the cam, and means on the locking

member adjacent to the bent end of the pin to resist withdrawal of the pin.

HAROLD S. FORSBERG.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,442,609	Greig	Jan. 16, 1923
1,954,062	Walter	Apr. 10, 1934
2,075,409	Storch	Mar. 30, 1937

FOREIGN PATENTS

Number	Country	Date
174,159	Switzerland	Dec. 31, 1934