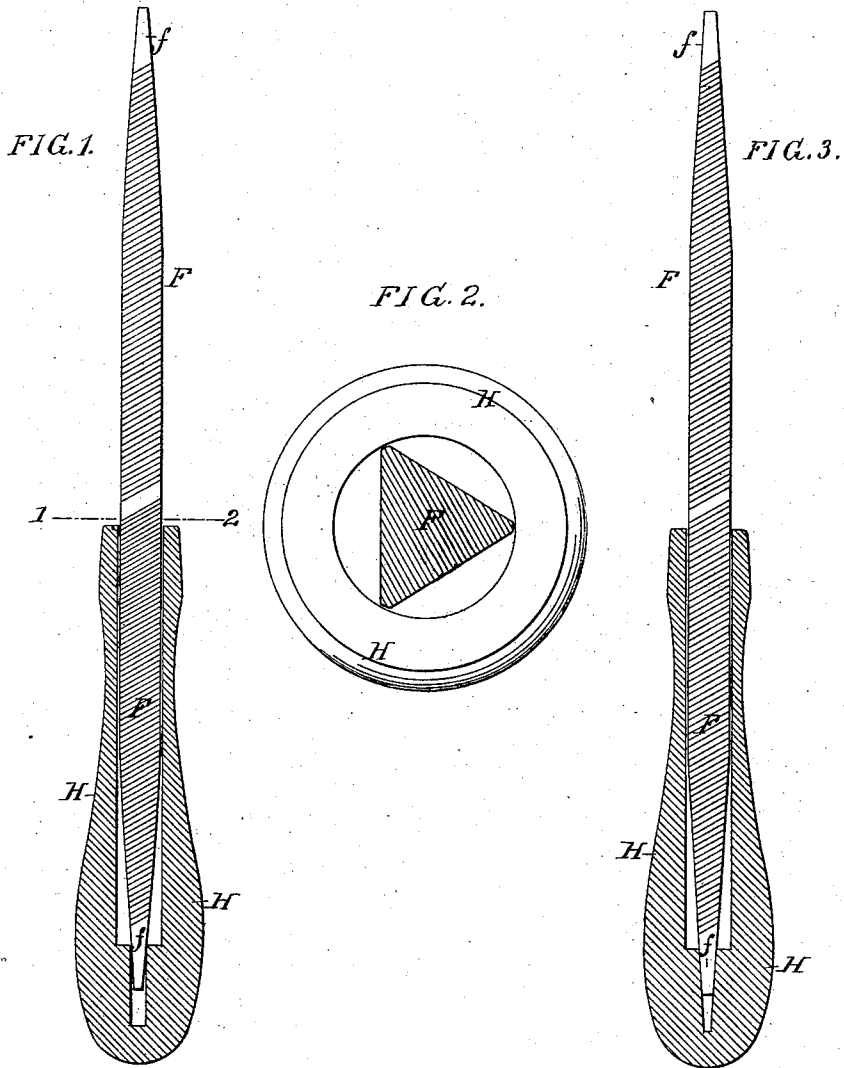


(No Model.)

J. F. FRENCH.
FILE HANDLE.

No. 281,626.

Patented July 17, 1883.



WITNESSES:

James J. Tobin
Harry S. Ashenfelter

INVENTOR:

Josiah F. French
by his Attorneys
Howson & Sons

UNITED STATES PATENT OFFICE.

JOSIAH F. FRENCH, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO THE J. BARTON SMITH COMPANY, OF SAME PLACE.

FILE-HANDLE.

SPECIFICATION forming part of Letters Patent No. 281,626, dated July 17, 1883.

Application filed April 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH F. FRENCH, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in File-Handles, of which the following is a specification.

The object of my invention is to provide a reversible taper file with a handle from which the file can be readily withdrawn when it has to be reversed.

A further object of my invention is to determine the extent to which a portion of the file shall project from the handle.

In the accompanying drawings, Figure 1 is longitudinal section of my improved file-handle with the file in place; Fig. 2, an enlarged section on the line 1 2, Fig. 1, and Fig. 3 a longitudinal section of a modification.

In these drawings, F is a three-cornered double-ended file, and H is a wooden handle, of about half the length of the file. Heretofore in applying handles to files of this class the opening in the handle has been made of such a size that when either end of the file was inserted the toothed body of the file would fit closely in the wood, and on giving a slight turn to the file the teeth would become firmly jammed, so that it would be difficult to withdraw the file from the handle, and the latter, after being used for a short time, would be worn out. As the strain came principally on the open end of the handle, the latter had to be provided with a ferrule. To overcome these objections and enable the file to be easily inserted and withdrawn without lacerating the wooden handle, I make the opening in the handle for the toothed body of the file slightly larger than the said body, so that the latter will not fit closely into the wood of the handle, but may have its three corners free, as shown in Fig. 2. The bottom of the opening, where the smooth point *f* of the file comes, is of such a size as to form a socket for the said smooth point, which fits it closely.

In making the handle I prefer to bore a cylindrical hole of a diameter larger than the body of the file and about as long as half the toothed body of the file, and then at the bottom of this opening I bore a smaller cylindrical hole or recess, into which the smooth point of the file is forced, so as to fit tightly, while the toothed body is freely inclosed in the larger opening in the handle, the latter thus

protecting the hand of the operator from that half of the file not in use.

As the outer end of the file is held between the fingers of one hand, while the other grasps the rounded end of the handle, the principal strain comes on the opposite ends of the file in its to-and-fro movements, so that any grasp on the body of the file itself is unnecessary, and the outer end of my handle simply acts as a guide to keep the end of the file in place in the bottom of the handle. While the smooth point of the file may be forced quite tightly into place in its socket, it can very readily be removed for reversal without injury to the wood.

Instead of making the small recess or socket for the point *f* of the file cylindrical, it may be made tapering, as shown in Fig. 3, to correspond with the taper of the point.

In using files of this class, and especially for sharpening saws, it is important that there should be but little variation in the extent to which the points of the different files used shall project from the handle, for this distance determines the extent of the stroke by the operator, which should be maintained throughout in filing the different teeth. When the body of the file is made to fit tightly in the opening of the handle the extent of the projection of the point from the handle can never be determined, owing to slight variations in the sizes of different files, or the contraction of the orifices in the handles by the shrinkage of the wood. When the opening in the handle, however, is made slightly larger than the body of the file and there is an orifice in the end of the opening for receiving and retaining the end only of the said file, the distance of the outer point from the handle will always be determinate, or nearly so.

I claim as my invention—

The combination of a double-ended file with a handle, H, having an opening for the toothed body of about half the file larger in diameter than the said toothed body, and having at the end of the said opening a smaller opening or socket of a size to fit the smooth point of the file, substantially as set forth.

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

Witnesses: J. F. FRENCH,
HARRY L. ASHENFELTER,
HARRY SMITH.