W. T. NICHOLSON.
File-Holder.

No. 204,596. Patented June 4, 1878.

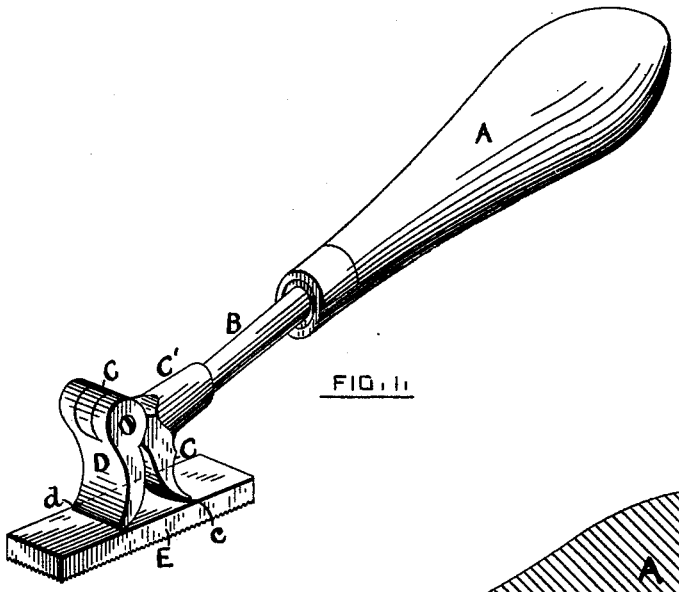

FIG. 1.

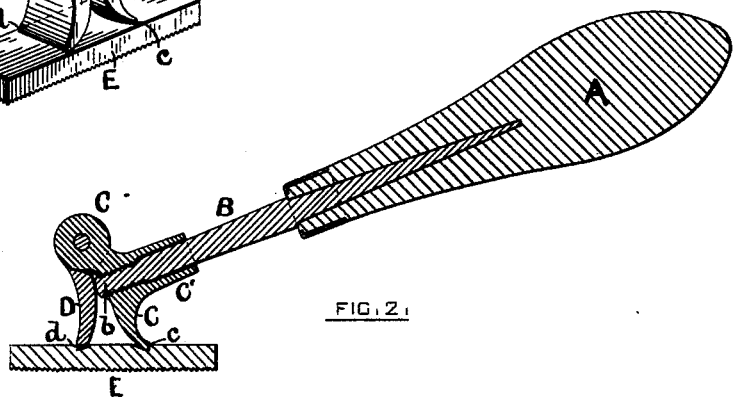

FIG. 2.

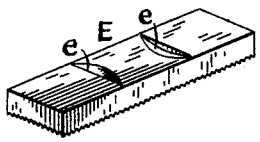

FIG. 3.

WITNESSES.

J. C. B. Woods

Edgar Fuller

INVENTOR.

Wm. T. Nicholson

UNITED STATES PATENT OFFICE.

WILLIAM T. NICHOLSON, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE NICHOLSON FILE COMPANY, OF SAME PLACE.

IMPROVEMENT IN FILE-HOLDERS.

Specification forming part of Letters Patent No. **204,596**, dated June 4, 1878; application filed April 8, 1878.

To all whom it may concern:

Be it known that I, WILLIAM T. NICHOLSON, of the city and county of Providence, and State of Rhode Island, have invented a new and Improved File-Holder, designed to hold a "stub-file," and to form, in connection therewith, what is technically known as a "riffler," the same being fully described in the following specification and illustrated in the accompanying drawing, in which—

Figure 1 represents, in perspective, my improved file-holder with stub-file attached; Fig. 2, a longitudinal section of the same; and Fig. 3, a perspective of a stub-file.

Heretofore what are technically known as "riffler-files"—that is, files for operating upon depressed surfaces or cavities which cannot be dressed by a common file—have been constructed of one piece of metal, the greater portion of the length of said piece of metal forming a handle, the other or shorter portion being furnished with a dressing or cutting face.

As there is great variation in the contour of surfaces to be operated upon by rifflers, it has heretofore been necessary for the artisan to possess a great number of such files in order to properly do his work. This has been a source of considerable expense, in that the greater portion of the metal forming the tool is found in the handle proper, which has no other office than to furnish a convenient means by which the operating-surface of the riffler may be made to do its work.

The object, therefore, of my invention is to furnish a file-handle complete in itself, which is so constructed as to admit of the ready attachment to it at a proper and desirable angle of a stub-file, the combination of said handle and file forming a riffler.

I am well aware that detachable handles for clamping files, rasps, and other similar tools have heretofore been made in various forms; but my improved file-holder differs from these in its construction and mode of attachment to a file, in that I employ a pair of expanding jaws and a handle provided with a threaded spindle, which occupies a tapped hole in one of the jaws and abuts with its end against the inner face of the other jaw, and, still further, in that the jaws of my holder are of unequal length, which secures a proper angle for the handle. The clamp engages with shoulders or pins provided for the purpose on the back of the file. It is desirable that the clamp be at the end.

The advantage of my improvement will be readily seen when it is considered that a single handle can be used in connection with any number of stub-files, it being only necessary to the production of a riffler of desirable shape to attach to said handle a file the contour of whose cutting-face is fashioned to properly operate upon the surface of the work under treatment. A set of rifflers would thus comprise a single handle and any number of attachable stub-files, the whole occupying upon the bench or in a proper receptacle far less space than a collection of the same number of common rifflers, and being much less expensive.

It is an essential feature of my holder that the clamp or file holding device proper be at the end of the handle, so that it may be inserted into recesses and enable a short piece of file to be used with all the motions desired in the use of an ordinary file. It is also of importance that the file-handle be inclined with reference to the clamp and to the cutting-face of the file, so that during its thrusting action the proper degree of pressure may be readily applied, and also so that ample space will be afforded for the fingers between the handle and the filed surface. The strain on the handle is, of course, experienced during the thrusting or cutting motion only, and, as a screw-clamp is the best form of holding mechanism, it is important that the screw be relieved from the strain incident to the forward movement of the file as far as is practicable to prevent its undue wear. All of these several conditions are fully provided for in my holder.

To particularly describe my invention, reference is had to the drawing, in which A represents the usual cylindrical wooden portion of the handle, and B the metal portion or spindle of the same, the latter being driven into the former. C D are expansible holding-jaws, hinged together at *a*, and capable of being separated by the spindle B, which is furnished at the end *b* with a screw-thread working in the jaw C and in a tubular extension or

sleeve, C′, forming a part of said jaw. These jaws are of unequal length, the outer one, D, being the shorter, for the purpose of giving the handle a proper inclination or angle with the file, as shown at Figs. 1 and 2, when the same are combined. The tooth of each jaw is brought to or nearly to an edge, *c d*, the better to engage with the stub-file E, whose back is furnished with grooves *e e* to receive the said teeth.

It being desired to attach a file to the handle, the teeth *c d* of the jaws C D are inserted into the grooves *e e* in the file, and, the handle being turned, the end of the spindle B takes bearing against the inner surface of the jaw D, the said jaws are expanded, and the file is securely held ready for use. In this instance the jaws are expanded by means of the screw upon the shank of the handle, and this is the most convenient way of operating them; but it is obvious that a special device distinct from the handle may be employed for the same purpose.

It will be seen that the end *b* of the threaded spindle B abuts directly against the inner surface of the jaw D, and that, while the thread is relied upon to cause proper engagement of the jaws with the file, said thread is wholly relieved from all thrusting force incident to its use.

Regarding the contour of the edges or teeth *c d* of the jaws, they may be straight, rounded, or V-shaped, the grooves *e e* in the file being made to correspond; or the grooves may be dispensed with and projections may be cast upon the file, or pins driven into the same, with which the jaws may engage and the file be securely held, the precise method of attachment shown in the drawing not being material.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a file-holder, the combination, with a pair of expanding jaws, of a handle provided with a threaded spindle, which occupies a tapped hole in one of the jaws and abuts at its end against the inner face of the other jaw, substantially as described.

2. The combination, with a file handle, of a screw-clamp which has two pivoted jaws of unequal length, and is attached to one end of the handle, substantially as described, whereby, when applied to a file, the handle will be inclined to the cutting-face thereof, as set forth.

WILLIAM T. NICHOLSON.

Witnesses:
J. C. B. WOODS,
GEORGE FULLER.