(No Model.)

L. MÜLLER.

FILE.

No. 424,018. Patented Mar. 25, 1890.

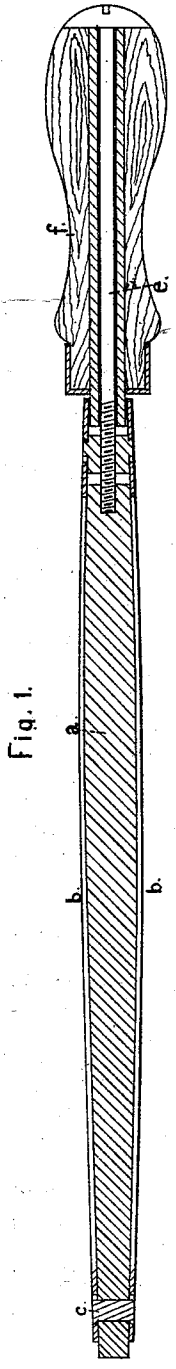

Fig. 1.

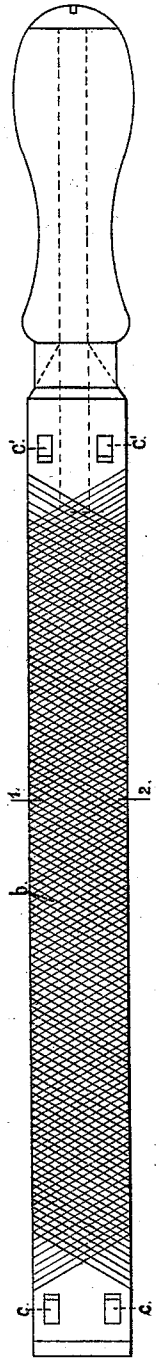

Fig. 2.

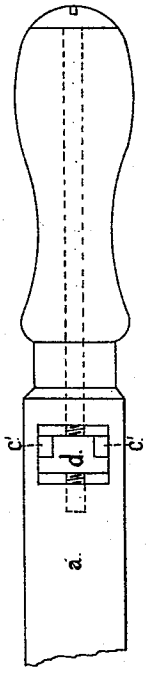

Fig. 3.

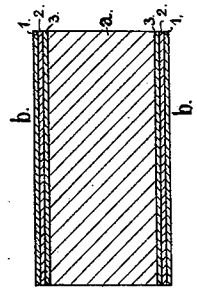

Fig. 4.

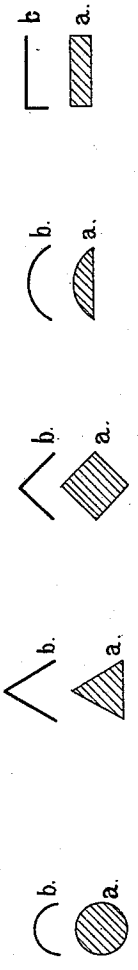

Fig. 5.

Witnesses:
Ewell A. Dike
William H. Shipley.

Inventor:
Ludwig Müller
by Marcellus Bailey
his Attorney.

UNITED STATES PATENT OFFICE.

LUDWIG MÜLLER, OF DRESDEN, SAXONY, GERMANY, ASSIGNOR TO THE DEUTSCHE PATENTFEILEN-FABRIK MEYER, FOCKE & COMPANY, OF SAME PLACE.

FILE.

SPECIFICATION forming part of Letters Patent No. 424,018, dated March 25, 1890.

Application filed November 20, 1889. Serial No. 330,950. (No model.)

To all whom it may concern:

Be it known that I, LUDWIG MÜLLER, a subject of the King of Saxony, residing at Dresden, Kingdom of Saxony, Germany, have invented a new and useful Improvement in Dissectible Files, whereof the following is a specification.

My invention relates to files which are composed of an iron body having the form of a file and one or more thin plates of steel provided with a file-cut and detachably secured to the former. These files as heretofore manufactured present the inconvenience that the said steel plates are very apt to crack, especially while being hardened. For the purpose of obviating this deficiency I make the plates of a layer of iron and one or two layers of steel welded to the former, the said layer or layers of steel being thereupon provided with the cut.

In the annexed drawings, Figure 1 shows in sectional side view a flat file to which my invention is applied. Fig. 2 is a top view corresponding to Fig. 1, and Fig. 3 a top view of a portion of the body of the file. Fig. 4 is a transverse section on line 1 2, Fig. 2, drawn to a larger scale. Fig. 5 shows different forms of file-bodies and of the plates to be used therewith.

In the figures, *a* is the body of the file, and *b* are the plates provided with the cut. The body *a* has at one end the fixed projections *c* and at the other end the sliding piece *d*, with the projections *c'*, the said projections *c* and *c'* being undercut in dovetail form at their respective fore and rear sides, while the plates *b* have holes corresponding to the projections *c c'*, so that when the plates are hooked on the latter and the piece *d* is drawn outward, by means of the screw *e* passing through the handle *f*, both plates are pressed tightly against and secured to the body *a*.

As shown by the section, Fig. 4, the plates *b* are composed of three layers 1 2 3, the layers 1 and 3 being made of steel and the layer 2 of wrought-iron, and all three layers being welded together and rolled to the desired thickness. The plates may, however, also have but one layer of steel. If there are two such layers, both can be provided with file-cuts, so that the plates are then reversible. This arrangement is preferable for flat and square files, while plates of the forms shown by Fig. 5, which can be cut on one side only, are ordinarily made with but one layer of steel.

I claim as my invention—

In a dissectible file, the combination of the body *a*, the plate or plates *b*, composed of one or two layers of steel and a layer of iron welded together, the said layer or layers of steel being subsequently provided with file-cuts, and means for detachably securing the plate or plates to the body *a*, substantially as and for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

LUDWIG MULLER.

Witnesses:
GEORGE MORITZ,
PAUL DRUCKMÜLLER.