L. JANO.

FILE.

APPLICATION FILED NOV. 5, 1918.

1,316,898. Patented Sept. 23, 1919.

FIG 2

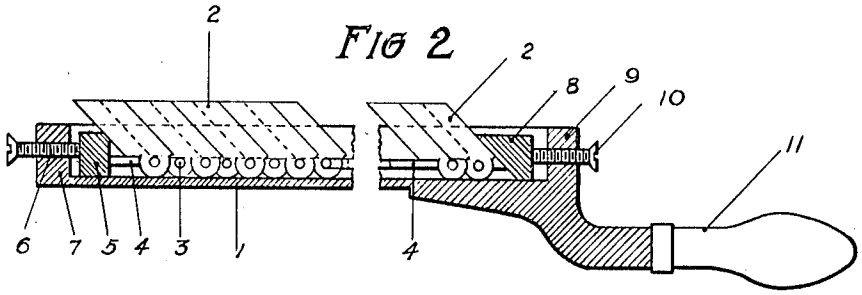


FIG 1

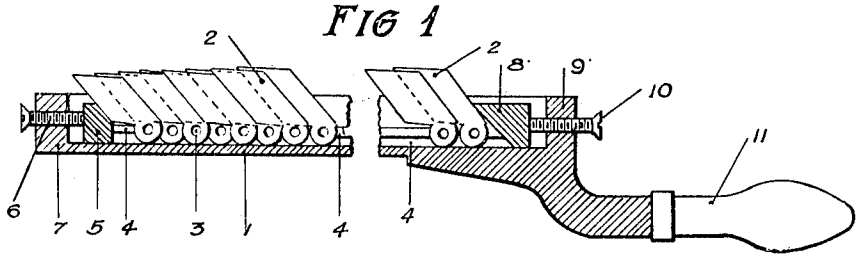


FIG 3

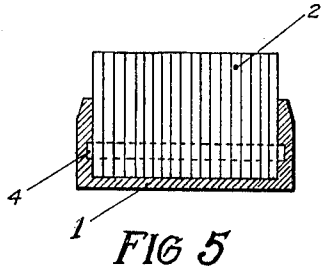


FIG 5

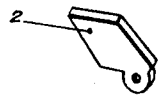
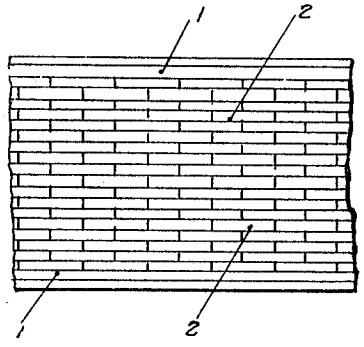


FIG 4



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FILE.

1,316,898. Specification of Letters Patent. Patented Sept. 23, 1919.

Application filed November 5, 1918. Serial No. 261,310.

To all whom it may concern:

Be it known that I, LUIGI JANO, mechanic, a subject of the King of Italy, and residing in Turin, Italy, have invented certain new and useful Improvements in Files, of which the following is a full, clear, and exact specification.

The present invention has for its object a special file provided with teeth the position of which can be easily altered and which can be readily sharpened by the man who uses the tool.

A practical form of the invention is shown by way of example on the annexed drawings.

In said drawings,—

Figure 1 is a longitudinal sectional view of the device with the plates constituting the teeth in operative position;

Fig. 2 is a similar view with the plates in position for planing in order to sharpen the cutting edges;

Fig. 3 is a transverse sectional view, and

Fig. 4 is a top plan view;

Fig. 5 is a perspective view of one of the parts 2.

The file comprises a frame 1 having the form of a rectangular casing the size of which varies according to the dimension wanted for the file itself. In the rectangular casing a set of small plates 2 is placed; the said plates have a rhomboidal form and are provided with a tail-piece having a hole through which passes a cross-pin 3 around which they can rotate. The ends of the pins or pivots 3 can slide in suitable grooves 4 in the sides of the casing 1, and the plates 2 are placed in an inclined position, those of one set bearing against those of the preceding set or line, and alternately disposed in the cross-direction. The inclination of the plates 2 can be altered and they can be fixed in any desired position by means of set screws 6 and 10 passing through the heads 7 and 9 of the casing 1 and bearing against small slidable blocks 8 and 5. By inclining the plates toward the left-hand side of the drawing, the plates 2 will reach such a position that they do not project one as regards the other, but their upper sides are all flush in one and the same plane as shown on Fig. 2.

In said position (Fig. 2) the file is ready for sharpening which is effected by simply smoothing with a planing mill the upper surface of the plates.

After the file is sharpened the screw 10 is loosened and the screw 6 is tightened so that the plates will turn around the pivots 3 and the cutting edge of each plate will thus project. Said projection of the cutting edges of the plates can be varied according to the different kind of work on which the file is to be used so that a file which is most suitable to the work in hand is automatically obtained. The casing 1 may be provided with a handle 11.

If thought to be more suitable, the pivots 3 can be fixed in corresponding holes in the sides of the casing, in which case the holes must be so spaced as to allow for the rotation of the plates until their upper surfaces come all in the same plane.

Such a file can obviously be used for all kinds of work either in wood or in metals, and for fine or rough working such for instance as that usually done with rasps, all depending upon the greater or less projection of the teeth.

What I claim is:

1. A file comprising a frame, and a plurality of small plates pivotally mounted on axes transverse of said frame, said plates being arranged in series running transversely of said frame, and means for varying the angular position of said plates on their pivots.

2. A file comprising a frame, and a plurality of small plates pivotally mounted on axes transverse of said frame, said plates being arranged in series running transversely of said frame, and means for varying the angular position of said plates on their pivots, the plates of one transverse series being alternately located between the plates of a contiguous transverse series.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

LUIGI JANO.

Witnesses:

ANDREA LUINO,

HENRIETTA DELPERNO.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."