

Mechanics.

ABOUT FILES.

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The Nicholson File Company has recently issued a treatise on files, which is highly commendable for the thoroughness with which the subject is treated and the value of the matter it contains. From this valuable work we condense the following

4 a pillar file ; the difference being in the proportion of the thickness to the width. Fig. 5 is a square ; Fig. 6, a warding, and Fig. 7 a round file in section. Figs. 8, 9, and 10 are sections of half-round files, termed respectively cabinet, pit-saw, and half-round files. Figs. 11, 12 and 13 are termed respectively three-square, cant, and lightning. Fig. 14 is a knife, 15 a cross, and 16 a feather-edge file.

There are three distinct forms of cut for the file-teeth, known respectively as single-cut, double-cut and rasp. Each form of cut

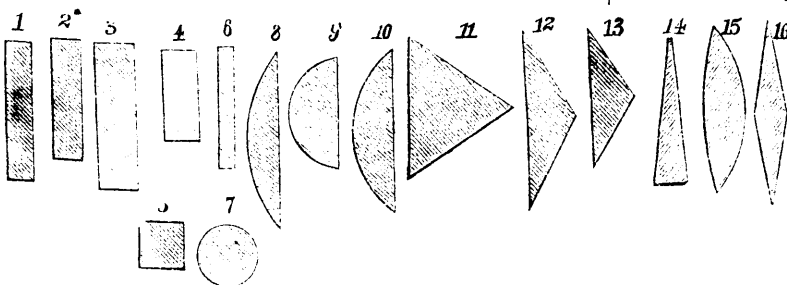


FIG. 17.

FIG. 18.

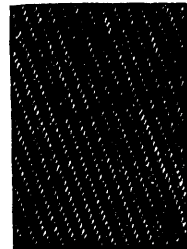
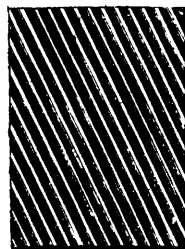


FIG. 19.

FIG. 20.

FIG. 21.

FIG. 22.

FIG. 25.

FIG. 26.

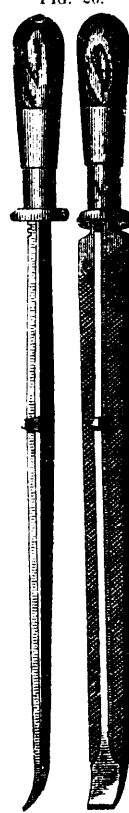
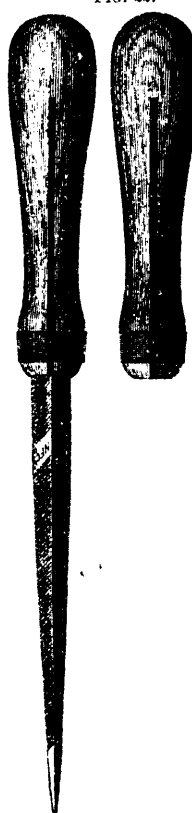
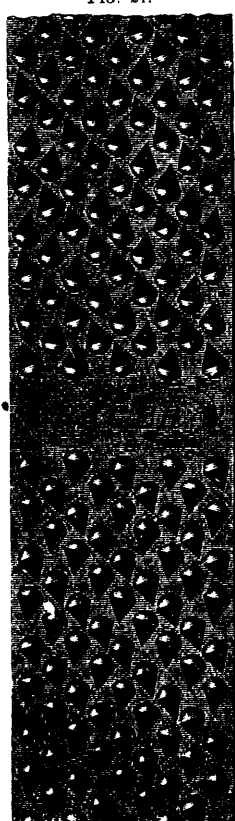
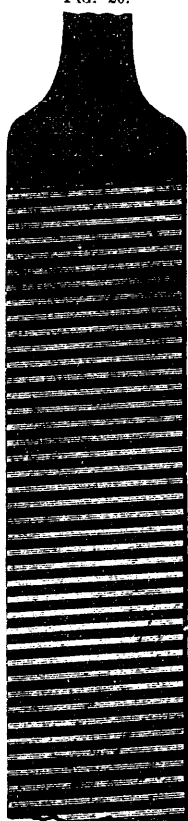
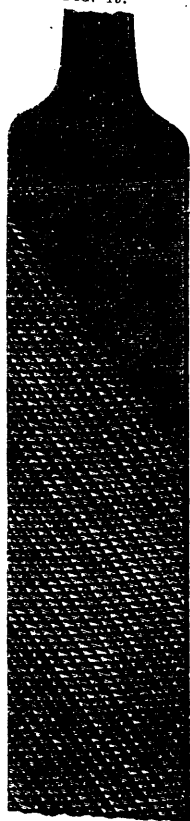


FIG. 27.

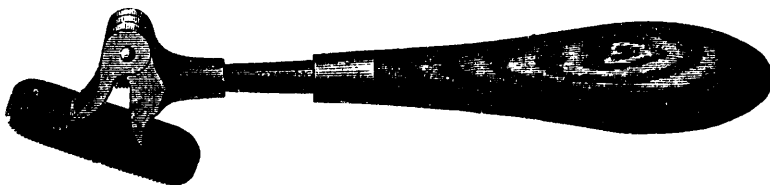


FIG. 23.

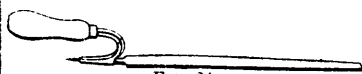


FIG. 24.

facts. Files have three distinguishing features : Their lengths (measured exclusively of the tang); their name, which is governed by the shape and the use the file is intended for ; and the cut of the teeth, which is varied to suit the nature of the work and the required coarseness of the file.

Mill files, flat files, hand files, and pillar files are of similar form, their cross-sections being as shown from Figs. 1 to 4.

Fig. 1 is a mill-saw file ; Fig. 2 is a flat, Fig. 3 a hand, and Fig.

has degrees of coarseness, governed by the distance apart of the teeth ; the widest being known as bastard, and progressing to bastard second-cut and smooth, the latter being the finest.

Single-cut files are those having but one row of chisel-cuts to form the teeth ; the cuts being parallel to each other and running diagonally across the file, as shown in Fig. 17. Double-cut files have their teeth formed by two rows of chisel-cuts, as shown in Fig. 18. Both illustrations show coarse files.