(No Model.)

J. W. DENMEAD.

PROCESS OF MAKING FILES.

No. 355,147. Patented Dec. 28, 1886.

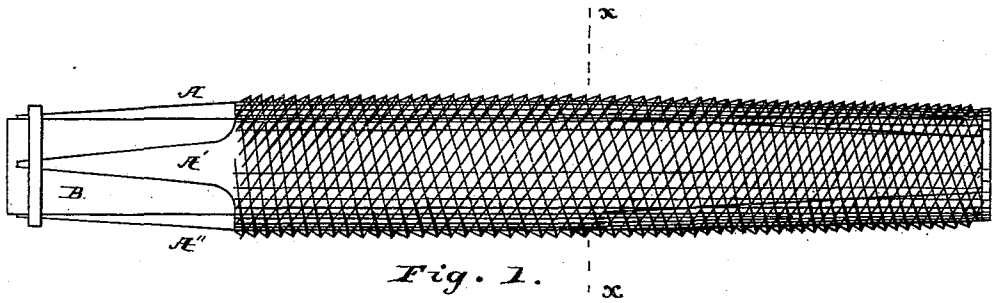

Fig. 1.

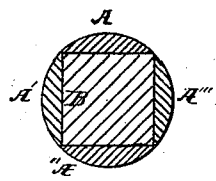

Fig. 2.

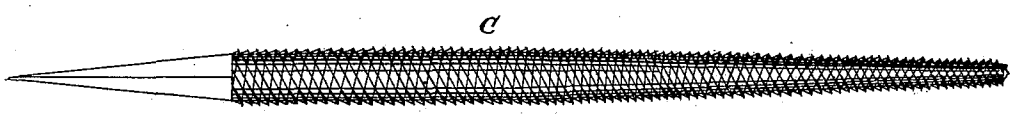

Fig. 3

Witnesses:

F. C. Bryan

Peter J. Moersch

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by C. P. Humphrey

UNITED STATES PATENT OFFICE.

JOHN W. DENMEAD, OF AKRON, OHIO, ASSIGNOR OF ONE-HALF TO JAMES H. STRATTON, OF SAME PLACE.

PROCESS OF MAKING FILES.

SPECIFICATION forming part of Letters Patent No. 355,147, dated December 28, 1886.

Application filed May 10, 1886. Serial No. 201,639. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. DENMEAD, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented a new and useful Improvement in Files and Processes of Cutting the Same, of which the following is a specification.

My invention has relation to improvements in the process of cutting round and part-round files. Heretofore such files have been cut with a chisel, and each cut being on a curved surface is deepest at the center and decreases in depth in each direction. Two objections exist to this method: First, as soon as the file becomes worn away at the least depth of cut it is practically worn out and useless; second, to recut the file the original cuttings must be entirely obliterated by grinding.

The object of my invention is to obviate the foregoing objections by making the cut equal at all points and by recutting the file without grinding.

My invention consists in the process hereinafter described, illustrated by the accompanying drawings, and claimed.

In the accompanying drawings, Figure 1 represents a device for holding half-round files while being cut, and Fig. 2 a cross-section of Fig. 1 at the line *x x;* and Fig. 3, a round file cut by my process.

The process hereinbefore referred to consists in mounting the annealed file-blank in a lathe, and turning therein a series of grooves, leaving between them a sharp fillet to constitute the file-tooth. These grooves may be a succession of parallel grooves, a continuous spiral, or two spirals running in opposite directions, and the faces of the fillet may be at any determined angle.

When the file is round, as shown in Fig. 3, it is mounted in the lathe as any other article to be turned.

Part-round files are mounted and clamped on a polygonal mandrel, B, Fig. 1, and the latter placed in a lathe, and the file-blanks thus mounted are turned, as hereinbefore specified. The files thus cut are tempered in the ordinary manner. When they become worn, they are recut by simply annealing and re-turning.

I claim—

The herein-described process of cutting round and part-round files, which consists in turning away the material in grooves, leaving between said grooves a fillet, substantially as herein described, and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of May, A. D. 1886.

JOHN W. DENMEAD.

Witnesses:

C. P. HUMPHREY,

C. E. HUMPHREY.