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GEORGE C. TAFT.

Improvement in Wrenches.

No. 122,139.

Patented Dec. 26, 1871.

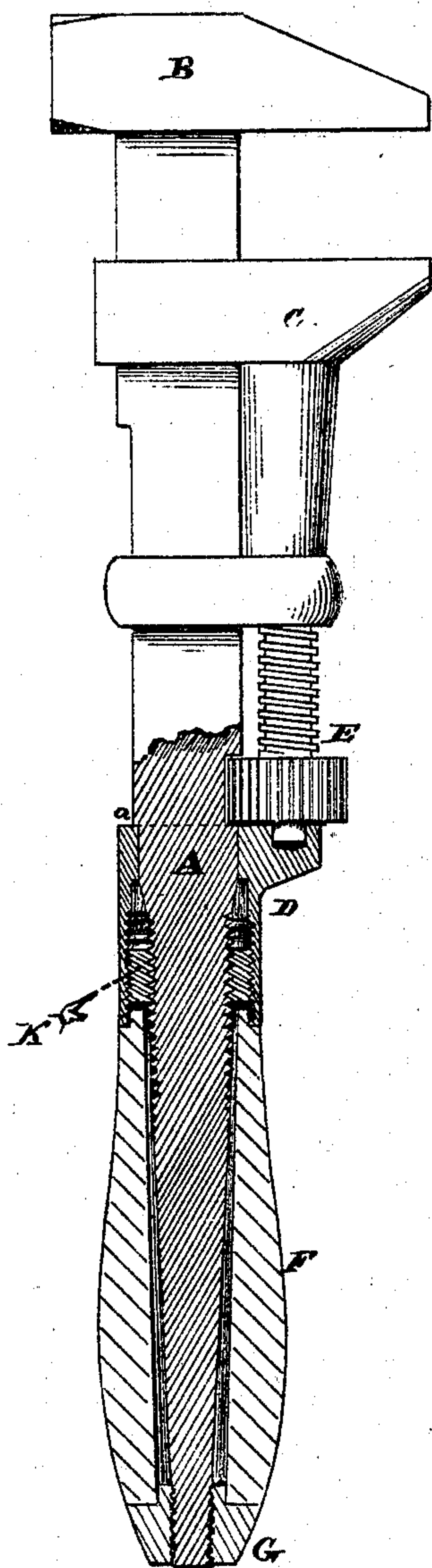


FIG. 1

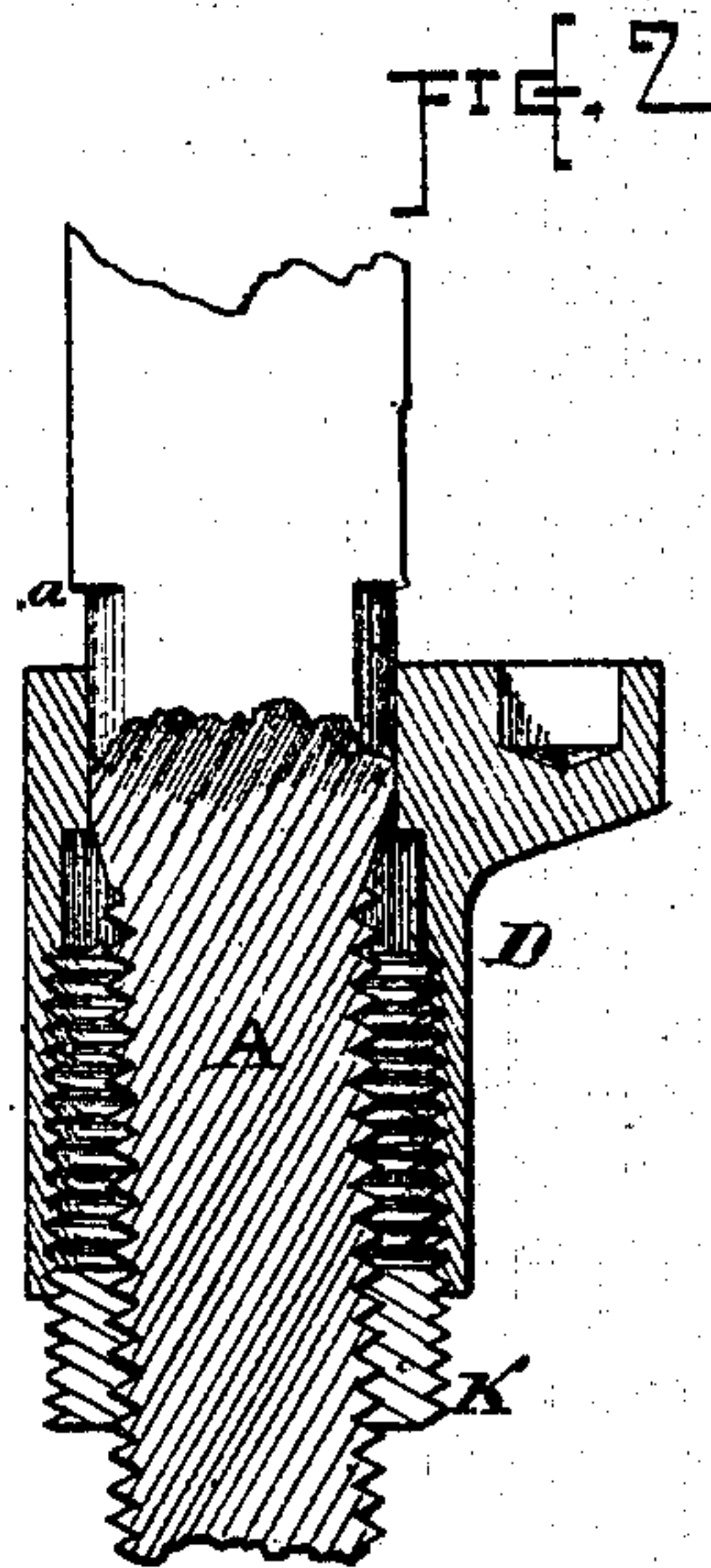


FIG. 2

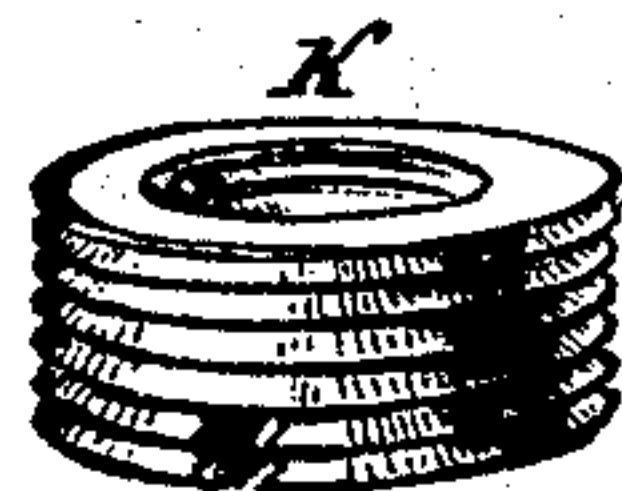


FIG. 3

Witnesses
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GEORGE C. TAFT, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO JOHN H. COES, OF SAME PLACE.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. 122,139, dated December 26, 1871.

To all whom it may concern:

Be it known that I, GEORGE C. TAFT, of the city and county of Worcester and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Screw-Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing which forms a part of this specification, and in which—

Figure 1 represents a view of a screw-wrench embracing my improvements, the handle, bar-shank, and ferrule being shown in section. Fig. 2 represents a section of the ferrule and bar-shank upon a somewhat larger scale. Fig. 3 represents a perspective view of the double-threaded screw-supporting thimble.

The nature of my invention consists in the combination, with the bar and ferrule in a screw-wrench, of a double screw-threaded binding and supporting thimble, as hereinafter described.

In the drawing, the parts marked A represent the bar of the wrench. B indicates the head; C, the movable jaw; D, the ferrule; E, the rosette and screw; F, the wood handle; and G, the tip-nut. The ferrule D is provided with a screw-thread formed upon its internal surface, and the shank of the bar A is provided with a screw-thread formed upon its exterior. These screw-threads are of different pitch, the thread of the ferrule being somewhat finer than that upon the bar-shank. In the present instance the ferrule is cut with a thread of sixteen to the inch and the bar with a thread of twelve to the inch; but I do not confine myself to that particular proportion, as threads of greater or less pitch can be used, according to the size and style of wrench to which they are applied. A thimble, K, is provided having screw-threads formed upon both its external and internal surfaces, which threads correspond in pitch to the threads on the bar and ferrule, respectively.

When the parts of the wrench are put together the ferrule D is adjusted at the position shown in Fig. 2, its upper end being set at a short dis-

tance below the shoulder *a*. The thimble K is then turned onto the bar A, and when it reaches the lower end of the ferrule D its external thread engages with the thread on the interior of the ferrule, and with its further forward motion runs up into the interior of the ferrule, while, at the same time, owing to the difference of pitch between the inner and outer threads, the ferrule D is moved up the bar until it strikes the shoulder *a*, which stops its further progress and causes the thimble K to bind firmly in between the ferrule and bar at the position indicated in Fig. 1. The ferrule D is thus forced firmly up against the shoulder *a* and there securely held, the parts being as rigidly connected as though the bar and ferrule were cast in a single piece, while, at the same time, the ferrule is, by the thimble K, supported so that it cannot be crushed in by any lateral pressure or a blow upon its side. This permits of the lower part of the ferrule being made very light and thin. A small rim of the lower end of the ferrule extends below the thimble K, when the latter is set up to place, for supporting the upper end of the wood handle, which latter is held in place by the tip-nut G in the ordinary manner.

It will be observed that the thimble K must be started into the ferrule before the latter is moved up against the shoulder *a*; otherwise the thimble cannot be run up into the interior of the ferrule, as the parts bind as soon as the ferrule and shoulders are brought together.

Having described my improvements in screw-wrenches, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

The combination, with the bar A and ferrule D, of the thimble K, having internal and external screw-threads of different pitch, substantially as and for the purpose set forth.

GEO. C. TAFT.

Witnesses:

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