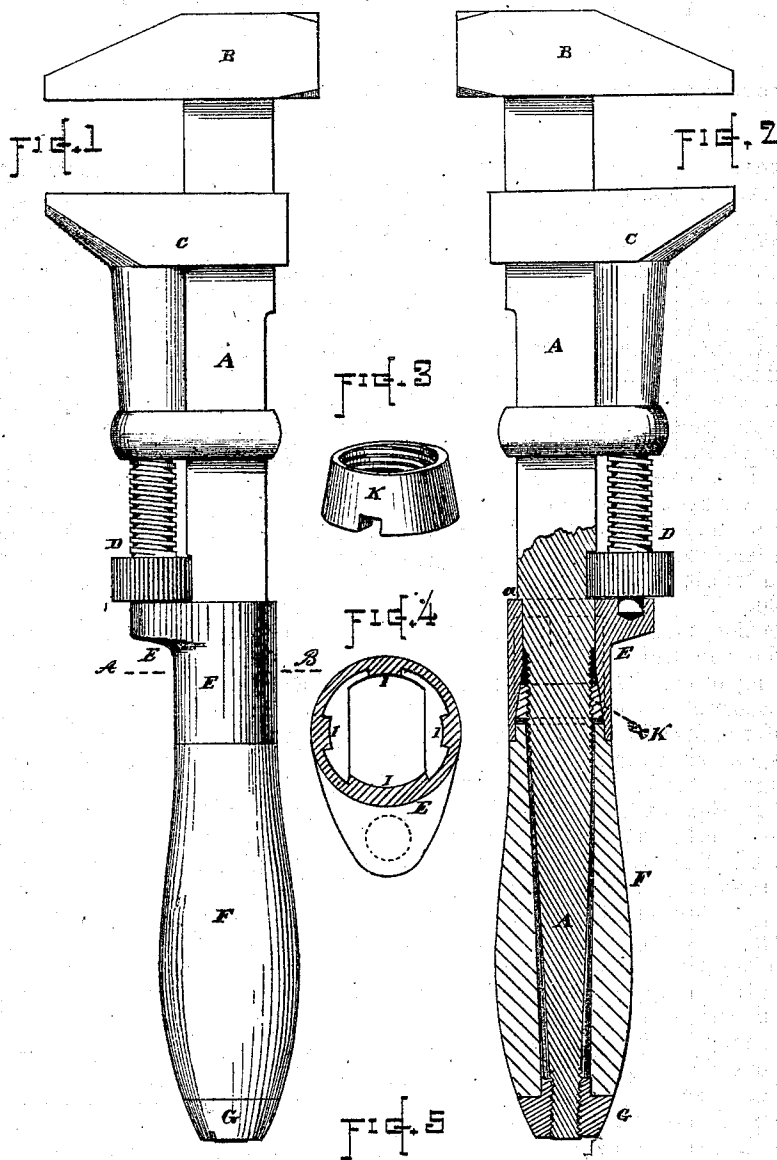


AURY G. COES.

Improvement in Wrenches.

No. 122,108.

Patented Dec. 26, 1871.



Witnesses

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AURY G. COES, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. 122,108, dated December 26, 1871.

To all whom it may concern:

Be it known that I, AURY G. COES, 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 side view of a screw-wrench embracing my improvements. Fig. 2 represents a central section of the wrench-handle, ferrule, and bar-shank. Fig. 3 represents on a larger scale a perspective view of the tapering collar. Fig. 4 represents on a similar scale a transverse section of the ferrule at line A B, Fig. 1, and Fig. 5 represents a longitudinal section of the ferrule on a like scale.

The nature of my invention consists: First, in the combination, with the bar and ferrule in a screw-wrench, of a tapering supporting-collar, as hereinafter described. Second, in the combination, with the interior of the ferrule, of a series of wedge-shaped flanges, as hereafter set forth.

In the drawing, the part marked A represents the bar of the wrench. B indicates the head; C, the movable jaw; D, the rosette and screw; E, the ferrule; F, the wood handle; and G, the tip-nut. The ferrule E is provided with a series of longitudinal wedge-shaped flanges, I, formed upon its inner surface, which extend from its upper part nearly to the bottom thereof, with their lower ends tapered off in the manner illustrated in Fig. 5. In the present instance there are four flanges, but more or less may be used when desired. The shank of the bar A is screw-threaded, and a tapering collar, K, is screwed onto said shank, which collar is formed of a corresponding bevel, and fits up against the wedge-shaped ends of the flanges I in the lower part of the ferrule, and when the collar K is turned up tightly into place it binds the parts firmly together and supports them in position. The collar is set up into the interior of the ferrule sufficiently far to leave a small rim of the ferrule to support the wood handle F in proper position, (see Fig. 2,) said

handle being retained upon the shank by the tip-nut G in the ordinary manner. The upper part of the ferrule E is made to fit close around the bar A at the shoulder *a*; and it will be observed that by means of the tapering collar K, set into its lower part, as illustrated, the ferrule is held firmly up against the shoulder *a*, and at the same time its lower portion is supported against any lateral movement or strain, so that when the wrench is in use the backward pressure of the jaw C through the rosette screw D cannot crowd the ferrule back onto the wood handle nor cause the ferrule to tip or incline to one side, as is sometimes the case when the wood handle is depended upon for supporting the lower end of the ferrule, or the ferrule is supported near its upper part by a nut or otherwise; neither can the lower part of the ferrule be crushed in or flattened by resting or dropping heavy pieces of machinery upon the sides of the wrench. It will also be observed, especially by those skilled in the art to which my invention belongs, that the lower part of the ferrule will, by turning up the tapering collar K, always be adjusted to a position concentric with the axis of the bar A, so that the handle will always fit straight upon the bar, and the joint at the ferrule will be uniform at all sides. By making the ferrules with flanges I, they are comparatively very light, while at the same time they possess the required amount of strength.

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—

1. The combination, with the bar A and ferrule E, of the tapering, centering, and supporting-collar K, substantially as and for the purposes set forth.

2. The combination, with the ferrule E, of a series of wedge-shaped flanges, I, substantially as and for the purposes set forth.

AURY G. COES.

Witnesses:

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