

Z. LITTMAN,
TOOL HANDLE.
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1,243,310.

Patented Oct. 16, 1917.

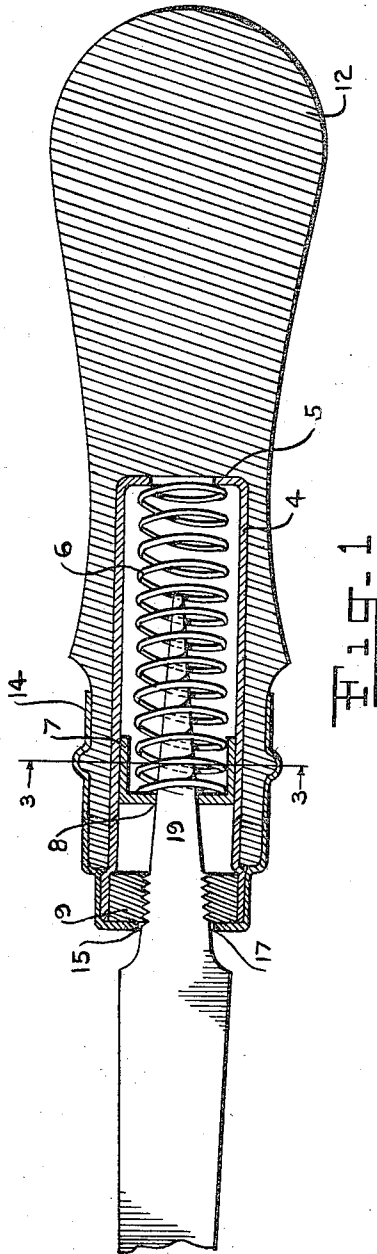


Fig-1

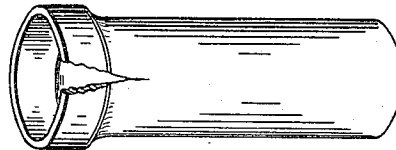


Fig-4

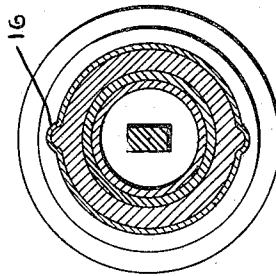


Fig-3

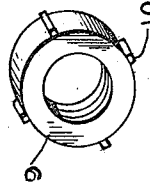


Fig-2

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UNITED STATES PATENT OFFICE.

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TOOL-HANDLE.

1,243,310.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ZENO LITTMAN, a subject of the Emperor of Austria-Hungary, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Tool-Handles, of which the following is a specification.

This invention relates to tool handles of the type in which the tang of the tool is forced into a screw-cutting die carried by the handle, whereby threads are formed on the tang to hold the tool in position with respect to the handle. It is an object of my invention to provide in a device of this kind means independent of the die, engaging the tang and preventing lateral motion of the tool with respect to the handle.

Another object is to provide a construction and relation of parts whereby assembly is greatly facilitated.

Still another object is to provide a construction and relation of parts by reason of which the several components will be rigidly united and whereby likelihood of loosening the parts in operation is minimized.

Other objects and aims of the invention, more or less broad than those stated above, together with the advantages inherent, will be in part obvious and in part specifically referred to in the course of the following description of the elements, combinations, arrangements of parts, and applications of principles constituting the invention; and the scope of protection contemplated will appear from the claims.

In the accompanying drawings, which are to be taken as a part of this specification, and in which I have shown a merely preferred form of embodiment of the invention, Figure 1 is a central longitudinal sectional view, with parts in elevation showing a tool handle made in accordance with my invention, and in engagement with a tool; Fig. 2 is a perspective view of the screw-cutting die; Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1 looking in the direction of the arrow; and Fig. 4 is a perspective view of the tubular member.

Referring to the numerals on the drawings, there is shown at 4 a tubular member which has one end partially closed in as indicated at 5, the other end being entirely open, and of slightly larger diameter as in-

dicated at 4'. Within the tube there is placed a coiled spring 6, one end of which bears against the closed end 5 of the tube, while the other end bears against and within the cup-shaped member or follower 7, which is centrally apertured as indicated at 8. Into the open end of the tubular member 4 is driven a screw-cutting die indicated by the reference character 9, and best shown in Fig. 2. This cutting die is preferably provided with projections on its outer surface indicated at 10, so that when it is forced into the end of the tube 4 it is firmly held against rotation therein. The screw-cutting die is prevented from moving too far toward the closed end of the tube because it comes in contact with the shoulder between the parts 4 and 4' of the tube. The tubular member carrying the spring 6, the follower 7 and the screw-cutting die 9 is now to be inserted within the appropriately hollowed handle 12, the relative sizes of the parts being such that the tube must be forced in, so that relative rotative movement of the handle or tube is to a large extent prevented by the frictional engagement between them. As a further guarantee against such relative movement and against the coming apart of the device in using, the end of the handle, with the tubular member 4 projecting therefrom, is driven into a ferrule 14, which has a closed end, except for the central aperture 15, corresponding with the aperture 8 of the follower 7. This ferrule is preferably not exactly circular in horizontal cross section, but has recessed portions or bays 16, while it may also have such recessed portions in longitudinal cross section, so that as the handle is driven in the wood of which it is made may spread into these recesses and lock the handle and the ferrule against both rotative and longitudinal displacement relatively to each other. The ferrule prevents movement of the tube 4 and cutting die 9 because the lower end 17 of the ferrule projects thereunder as shown in Fig. 1, and I prefer to lock the ferrule and the tube 4 against relative rotative movement by providing a number of indentations 18 in the outer surface of the ferrule, which may coincide with the indentations of the tube.

In practice the tubular member is first equipped with its spring 6, follower 7 and cutting die 9. Then the tube is inserted

within the handle 12, and then the handle, with the tube, &c., is forced into the ferrule 14. The tang 19 of a file or tool is inserted through the central aperture of the screw-cutting die as shown in Fig. 1, and passes also through the aperture 8 of the follower 7, which, because of the spring 6, is constantly urged in a downward direction, referring to Fig. 1. The tool is turned, so as to cut threads on the tang, and these threads serve to hold the tool firmly within the handle and against relative longitudinal movement, while the ferrule 7 prevents lateral movement of the tang with respect to the handle.

Inasmuch as many changes could be made in the above construction, and many apparently widely different embodiments of my invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the language used in the following claims is intended to cover all the generic and specific features of the invention herein described and all statements of the scope of the invention, which, as a matter of language, might be said to fall therebetween.

I claim:

1. A device of the kind described comprising a handle having an axial aperture therein, a tubular member within said aperture, a coiled spring within said tubular member, an abutment within said tubular member against which one end of the spring rests, a follower within the tubular member engaging the opposite end of the spring, said follower having a central aperture, and a screw cutting die or nut immovably mounted within the tubular member and adapted to hold all of the assembled elements within said member as an entirety.

2. A device of the kind described comprising a handle having an axial aperture therein, a tubular member within said aperture partly closed at one end and provided with an enlargement at its opposite end, a coiled spring within and engaging the partly closed end of the tubular member, a follower within the tubular member resting against the spring, said follower having a central aperture, and a screw cutting die or nut immovably mounted within the enlarged opened end of the tubular member thereby maintaining all of the assembled elements as an entirety within the tubular member.

In testimony whereof I affix my signature.

ZENO LITTMAN.

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