N. B. Dit LEPINE.

AWL-HAFTS.

No. 190,747. Patented May 15, 1877.

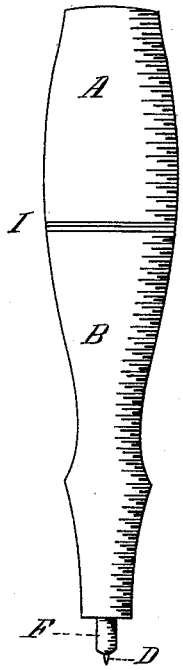

Fig. 1.

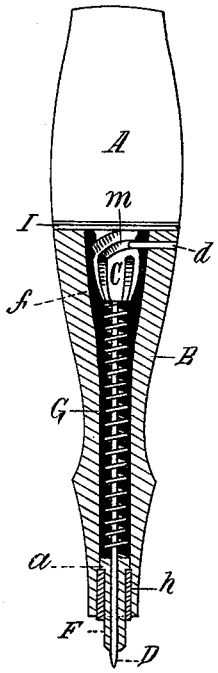

Fig. 2.

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NORBERT B. DIT LEPINE, OF WAYLAND, MASSACHUSETTS, ASSIGNOR TO WILLIAM HAMMOND, OF SAME PLACE.

IMPROVEMENT IN AWL-HAFTS.

Specification forming part of Letters Patent No. **190,747**, dated May 15, 1877; application filed February 26, 1877.

To all whom it may concern:

Be it known that I, NORBERT B. DIT LEPINE, of Wayland, in the county of Middlesex, State of Massachusetts, have invented certain new and useful Improvements in Awl-Hafts, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which my invention appertains to make and use the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a side elevation, and Fig. 2 a longitudinal sectional view.

Like letters of reference indicate corresponding parts in the different figures of the drawing.

My invention relates, principally, to that class of awl-hafts which are provided with a retractor or device to assist in withdrawing the awl from the work, and will be readily understood by all conversant with such matters from the following description:

In the drawing, A represents the upper, and B the lower, part of the body of the haft. The part A is solid, and provided with the downwardly-projecting spring-fingers C, which form a self-acting clutch-socket for the end of the awl D. The part B is hollow, being bored out longitudinally to receive the fingers C, awl D, spring G, retractor F, and stop *h*. The awl is elongated, its upper end being secured in the fingers C, and its lower end passing through and working freely in a hole in the retractor F. The coiled spring G is arranged around the awl within the part B, its upper end resting against the lower ends of the fingers C, and its lower end against the upper end of the retractor F, and acts expansively to force the retractor downwardly over the lower end of the awl.

A circular ring or stop, *h*, is fitted closely in the lower end of the part B, the object of which is to assist in keeping the retractor in proper position, its shoulder *a* coming into contact with the top of the ring, thereby preventing it from being thrust entirely out of the haft by the action of the spring. Around the base or wrist of the fingers C there is a spiral groove, *m*. This groove, as it descends, takes the directions of the fingers, as seen at *f*, the grooves *m f* being continuous. A pin or stud, *d*, is fixed in the upper portion of the part B, its inner end projecting into the groove *f m*.

In the use of my improvement, the upper end of the awl D is inserted in the fingers C, the spring G, retractor F, and stop *h*, being in position in the part B. The part A is then grasped in the hand, and the awl passed downwardly through the coils of the spring, and through the hole in the center of the retractor in which it works, until the pin *d* enters the lower end of the groove *f*, when the part A is manipulated to screw the two sections of the haft together, and secure them in a manner which will be readily understood without a more explicit description.

In place of the fingers C for holding the awl, a great variety of devices may be used without departing from the spirit of my invention.

I sometimes construct the awl with a male screw at its upper end, which fits a corresponding socket in a stud projecting downwardly from the lower end of the part A, the grooves *f m*, in such case, being cut around the stud, and the fingers dispensed with.

The fingers C may also be caused to act more forcibly in grasping and holding the awl if threaded exteriorly, and provided with a nut, the parts being formed in such a manner as to close the fingers upon the awl when the nut is screwed on.

Between the parts A B there is a leather ring or packing, I, for lessening the shock produced by the blow which drives the awl and forces the retractor upwardly through the stop *h* into the cavity in the part B, the spring G being compressed as the awl advances, and acting upon the retractor to assist in withdrawing the awl from the leather or work.

I am aware that a centering-awl designed to be used in the hanging of doors, having the awl-shank working within and through a metallic tube beveled at its lower end, with a reacting spiral spring, embracing a portion of the awl-shank, and the reciprocating movement of the awl-shank controlled by a pin working in apertures in the metallic tube, is

old, and such I do not claim as my invention; but

Having thus explained my improvement, what I claim is—

The combination of the part A, provided with fingers C, having the spiral groove *m*, and part B, provided with the spring G, retractor F, stop *h*, and stud *d*, and the awl D, the several parts constructed and relatively arranged as herein shown and described.

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Witnesses:

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