C. WILLERS.

TACK DRIVER.

APPLICATION FILED JUNE 28, 1911.

1,127,838. Patented Feb. 9, 1915.

Fig. 1.

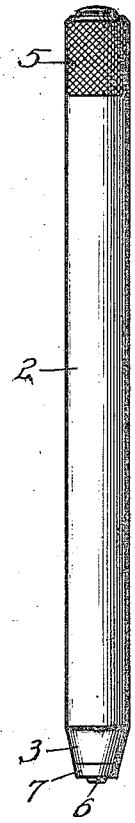


Fig. 2.

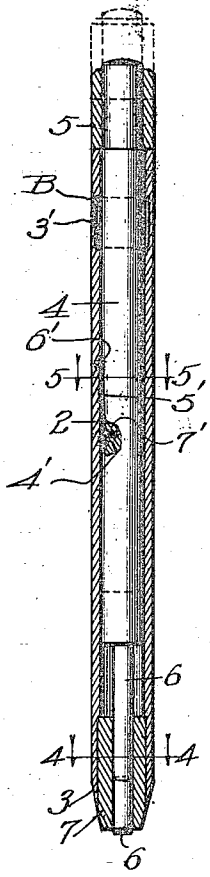


Fig. 3.

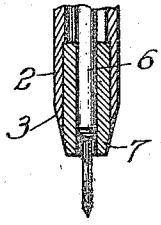


Fig. 4.

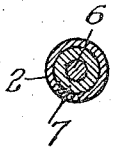
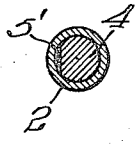


Fig. 5.



Witnesses:
Robert F. Mc Ilvain
A. L. Walcutt

Inventor
Carl Willers
By H. Sanders
Atty.

UNITED STATES PATENT OFFICE.

CARL WILLERS, OF CHICAGO, ILLINOIS.

TACK-DRIVER.

1,127,838. Specification of Letters Patent. Patented Feb. 9, 1915.

Application filed June 28, 1911. Serial No. 635,788.

To all whom it may concern:

Be it known that I, CARL WILLERS, a citizen of Sweden, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Tack-Drivers, of which the following is a specification.

My invention relates to drivers for tacks, nails, brads, pegs, etc., and has for its object improvements in devices of that character.

In the accompanying drawings Figure 1 is in elevation; Fig. 2 is a vertical section; Fig. 3 is a similar section of the lower portion showing a nail or tack retained therein; and Figs. 4 and 5 are transverse sections of Fig. 2 on lines 4—4 and 5—5, respectively.

The casing consists of a cylindrical shell or tube 2, having a longitudinally perforated plug 7 secured in its lower end. The lower extremity of the shell 2 and the plug 7 are tapered as shown at 3 so as to reduce the diameter at the point where the tacks are driven. Fitted into the shell or casing 2 is a reciprocating cylindrical hammer body 4 having, on its lower end, a magnetized projection 6 adapted to fit into and be guided by the perforation in the plug 7. On the upper end of the body 4 is secured a knurled head 5 which is preferably of the same exterior diameter as that of the casing 2. The length of the parts is such that when the head 5 is in contact with the upper end of the casing 2, the lower end of the projection 6 will extend slightly beyond the lower end of the plug 7 as shown in Figs. 1 and 2.

Intermediate its ends, a portion of the hammer body 4 is milled away on one side, and in the recess so formed is located a spring 5^1. The lower end of this spring is secured to the hammer body in any convenient manner, as by screw 7^1 illustrated in Fig. 2 by a portion of the hammer body being broken away at 4^1. This spring is given an initial tension to cause the free end 6^1 to spring outward from the body 4, which outward movement is normally restrained by contact with the inner wall of the casing 2. Near the upper end of the casing 2 the inner wall is provided with an annular recess 3^1, and against the upper shoulder formed by this recess the free end 6^1 of the spring 5^1 impinges to limit the upward movement of the hammer. To permit the withdrawal of the hammer from the casing, a small hole B is drilled through the casing just beneath the upper shoulder of the recess 3^1, and through this hole a pin may be inserted to press back the free end 6^1 so that it will clear the upper shoulder.

As shown in Fig. 1 it will be observed that this driver is a plain cylinder body being slightly tapered at one end, and has no external shoulders or projections to catch on external objects, and no external springs subject to damage. Also, that it has no external openings through which dirt may get into the working parts except the small hole B. The locking spring 5^1 not only serves to prevent the accidental withdrawal of the hammer from its casing, but by reason of its initial tension it produces a frictional contact with the casing sufficient to retain the hammer in any position but not sufficient to interfere with the operation of the device.

What I claim is:—

1. In a tack driver, a cylindrical shell, a cylindrical tack holding hammer designed to fit and reciprocate within the shell, and a spring locking device arranged to prevent the displacement of the hammer from the shell during the reciprocations, the construction and arrangement being such that the spring may be released from the exterior of the shell.

2. In a tack driver, a cylindrical shell, a cylindrical hammer within the shell, and a spring secured to the hammer, said shell being provided with a recess to coöperate with the spring for limiting the movement of the hammer and the construction and arrangement being such that the spring may be released from the exterior of the shell.

3. In a tack driver, the combination with a shell, of a hammer within the shell and a spring secured to the hammer, said shell having a recess in its interior surface arranged to coöperate with the spring to limit the movement of the hammer with respect to the shell and said recess being provided with an opening through which an instrument may be introduced to release the spring to separate the shell and hammer.

4. In a tack driver, a cylindrical shell, a cylindrical tack-holding hammer designed to fit and reciprocate within the shell, a spring locking device secured to the hammer

for engaging the shell to limit the movement with respect to each other, said shell being provided with an opening for permitting the release of the spring to withdraw the hammer.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two subscribing witnesses.

CARL WILLERS.

Witnesses:
M. E. FLYNN,
KARL PALM.