No. 735,845. PATENTED AUG. 11, 1903.

A. VANDERBEEK.

HAND TOOL.

APPLICATION FILED JAN. 30, 1903.

NO MODEL

Fig. 1.

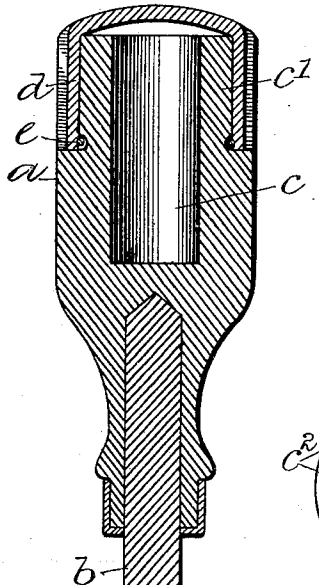


Fig. 2.

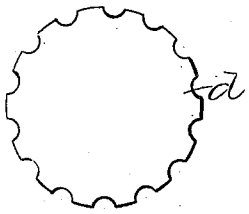


Fig. 3.

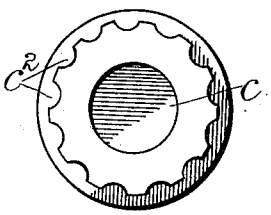


Fig. 4.

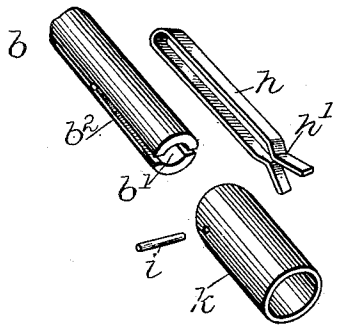


Fig. 5.

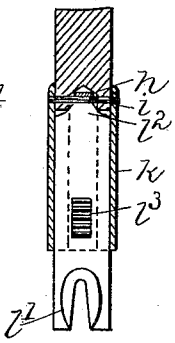
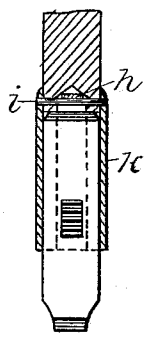
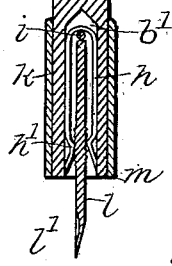


Fig. 6.





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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 735,845. Patented August 11, 1903.

UNITED STATES PATENT OFFICE.

ABRAHAM VANDERBEEK, OF HARTFORD, CONNECTICUT.

HAND-TOOL.

SPECIFICATION forming part of Letters Patent No. 735,845, dated August 11, 1903.

Application filed January 30, 1903. Serial No. 141,158. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM VANDERBEEK, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Hand-Tools, of which the following is a specification.

My invention relates more especially to the class of devices embodying several forms of tools which may be used in the one structure; and the object of my invention is to provide a neat, durable, inexpensive, and convenient tool of this class having convenient means for retaining and inclosing the different tools when not in use; and a further object is to provide a single device for holding the tools, which shall securely grasp and hold the same, in which the tools may be readily placed; and a still further object of my invention is to so construct the device as to be especially applicable in connection with a tack-puller, which may form one of the several tools to be used in the device.

One form of the invention by the use of which the above objects may be attained is illustrated in the accompanying drawings, in which—

Figure 1 is a view in longitudinal section through my improved tool, showing a tack-puller in place therein in edge view. Fig. 2 is an end view of the cap. Fig. 3 is an end view of the handle with the cover removed. Fig. 4 is a perspective view of the several unassembled parts of the holding devices. Figs. 5 and 6 are sectional views of the holder, showing different forms of tools located therein.

In the accompanying drawings the letter a denotes the handle of the tool, that may be constructed in any desired form and of any proper material, usually of wood, and to the handle is secured a shank b, also of any desired material, as metal. A recess is formed in the outer end of the handle and constitutes a pocket c, equal in depth to the length of the longest tool designed for use in the device. The end of the handle is reduced in diameter, as at c', and this reduced portion is provided about its periphery with depressions or corrugations c^2. A cap d is suitably formed to fit upon this reduced portion of the handle, the cap being corrugated to conform to the corrugations in the reduced part of the wooden handle. The cap is so constructed that it may be readily removed from the end of the handle and give access to the pocket c. A spring e is located in the handle and serves to provide a certain amount of friction to hold the cap from accidental removal. The shank b is provided at its lower end with a central opening b', extending for some distance into the shank, and a slot b^2, cut across the shank from side to side and intersecting the opening b'.

A spring h is constructed of proper form to lie within the opening b' and is provided at its ends with depressed portions forming retaining-points h'. This spring is preferably formed of a single piece of metal bent back upon itself, the two arms lying at such distance apart as to receive the blade or tool to be held thereby. A pin i extends through the shank b and lies within the bent end of the spring h, holding the latter in proper position in the recess b'. This spring constitutes what might be termed a "resilient lock" for the tool, inasmuch as either end of the tool may be readily inserted in the handle and will be held there by the locking action of said resilient lock coöperating with the face of the tool. A sleeve k is fitted upon the end of the shank, closely embracing the same and forming a support. The sleeve also forms a wall for the slot b^2.

The blade or blades to be used in this tool are constructed of proper width to be located in the slots b^2, the blades being of a width approximately equal to the diameter of the opening in the sleeve k, so that the latter will form a lateral support for the blade. The blade l (shown in Fig. 1) is formed with a tack-puller l' on one end and a screw-driver l^2 on the opposite end. This screw-driver is narrower than the body portion of the blade, this narrow portion being provided by gradually tapering the blade or forming a curved shoulder. This blade is of proper width to fit within the bottom of the opening b' below the slot b^2 and against the shoulder formed by the termination of the latter. This affords a firm support for the blade against longitudinal movement and also aids in supporting the blade against lateral movement. The construction is also such that if the blade is

of equal width for its entire length the inner end will rest in the bottom of the slot and a firm support be thus provided.

It will be noted that the blades used in this tool are comparatively short and project but a slight distance beyond the end of the shank or holder, so that extreme strength is provided in a comparatively light construction of blade.

When the blade is used for a tack-puller, as shown in Fig. 1, this location of the end of the blade attached to the end of the shank provides a construction whereby the end of the shank provides a fulcrum *m*, on which the tool as a whole may be rocked to remove a tack. This provides an extremely efficient device for the purpose intended.

The blade *l* is provided with a roughened portion l^3 for the reception of the retaining-points *h'*, by means of which the tool is prevented from outward longitudinal movement.

It is obvious that the construction may be varied and yet come within the scope of the invention, and I do not desire to confine myself to the precise construction herein shown and described.

It will be noted that the construction of the cap with the corrugated surfaces affords a firm gripping-surface by means of which the tool may be turned, and the disposition of the corrugations on both the handle and the cap, together with the spring *e*, affords a means of securing the cap to the handle that will not be affected in the use of the tool, as in cases where a cap is secured as by means of inter-engaging screw-threads, in which case force applied to the handle to turn the tool will either tighten or loosen the cap. The spring *e* is in the form of a split ring and exerts sufficient force to hold the cap securely in place.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with a shank or holder having a central hole, a slot extending across the holder, a sleeve surrounding the end of the shank and providing walls for the sides of the slot, and a resilient lock arranged within the central hole to hold a tool in place in the holder.

2. In combination with a shank or holder having a slot extending across it, a U-shaped spring arranged within the slot with its mouth opening outward, a blade fitting within the slot and between the arms of the spring, and means for holding the spring.

3. In combination with a shank or holder, a central hole arranged in said holder, a slot intersecting said hole, a sleeve surrounding the end of the shank and providing walls for the sides of the slot, and a resilient lock arranged within the central hole and projecting within the slot.

4. In combination with a shank or holder having a slot extending across it and a central recess extending beyond the bottom of the slot, a blade fitting within said slot and having a narrow portion fitting within the opening below the slot and a resilient lock arranged within the central recess and providing a frictional grasp for the blade.

5. In combination with a shank or holder having a slot and an opening extending beyond the bottom of the slot, a sleeve closely embracing the end of the shank, a blade fitting within said slot and with a narrow end extending into the opening beyond the slot, and means for yieldingly holding the blade in the slot.

6. In combination with a shank or the like having a slot and an opening extending beyond the end of the slot, a sleeve closely embracing the end of the shank, a spring located within said opening, and a blade fitting the slot and engaging the spring and having a narrow end projecting into the opening beyond the slot.

7. In combination with a shank or holder having a central bore and a slot intersecting said bore, a ferrule surrounding said shank and forming walls for the slot, a U-shaped spring arranged within the central opening and projecting as to a portion of its length within the slot, a pin passing through the ferrule and shank and the inner side of the U-shaped spring, and a blade fitting said slot.

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