No. 662,748. Patented Nov. 27, 1900.

W. E. WOOD.

TOOL HANDLE.

(Application filed Sept. 22, 1898.)

(No Model.)

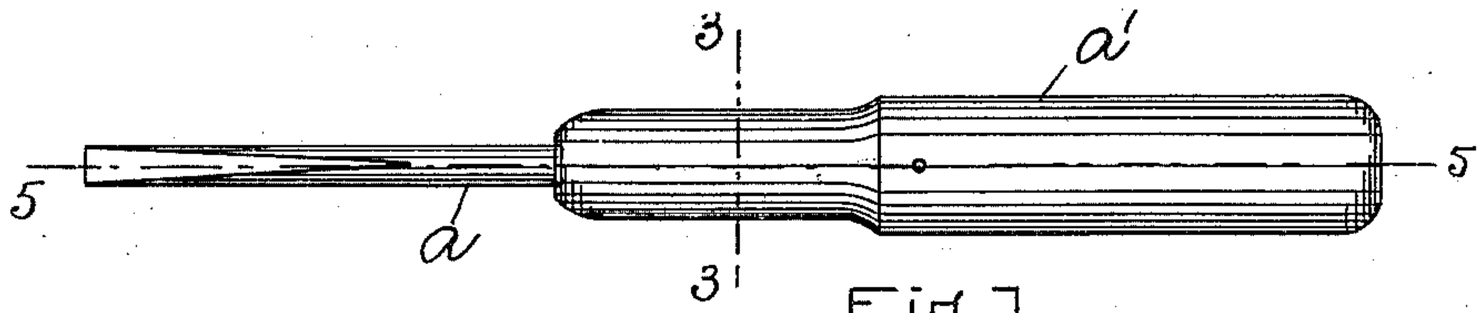

Fig. 1.

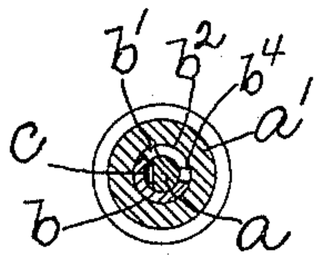

Fig. 3.

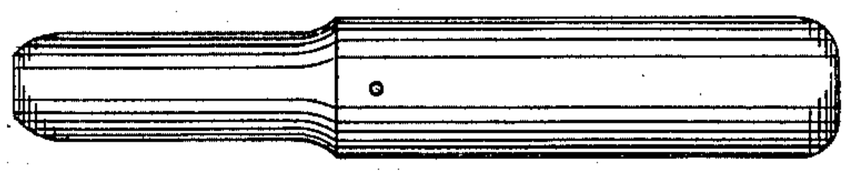

Fig. 2.

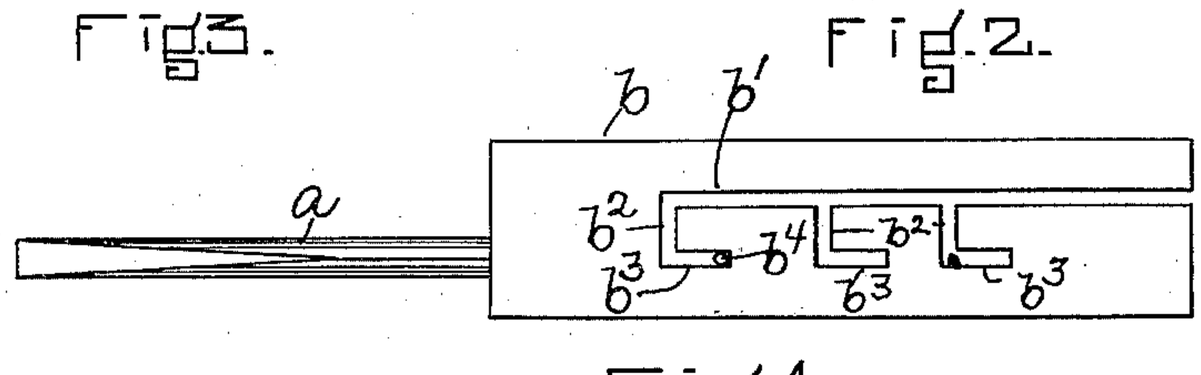

Fig. 4.

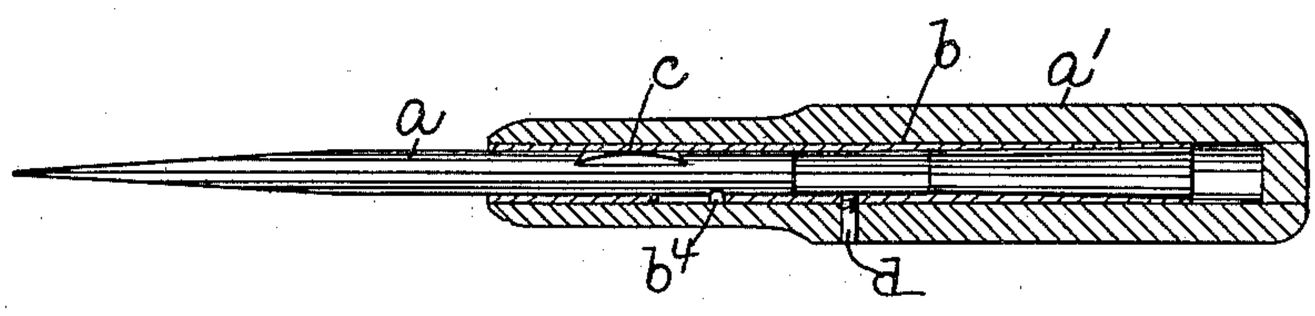

Fig. 5.

WITNESSES.

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UNITED STATES PATENT OFFICE.

WINTHROP E. WOOD, OF BOSTON, MASSACHUSETTS.

TOOL-HANDLE.

SPECIFICATION forming part of Letters Patent No. 662,748, dated November 27, 1900.

Application filed September 22, 1898. Serial No. 691,634. (No model.)

To all whom it may concern:

Be it known that I, WINTHROP E. WOOD, a citizen of the United States, residing at Boston, (Jamaica Plain,) in the county of Suffolk and State of Massachusetts, have invented an Improvement in Tools or Instruments, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to a convenient pocket tool or instrument, which is herein shown as a screw-driver.

The invention has for its object to provide a tool which can be conveniently carried in the pocket in what may be termed its "closed" condition and which can be quickly and easily placed in operative condition, as will be described. These and other features of this invention will be pointed out in the claims at the end of this specification.

Figure 1 is an elevation of a tool embodying this invention in its operative position; Fig. 2, a like view of the tool in its inoperative or closed position; Fig. 3, a cross-section on the line 3 3, Fig. 1; Fig. 4, a developed view of the tube to be referred to, showing the tube developed; Fig. 5, a longitudinal section of the tool shown in Fig. 1.

The tool herein shown as embodying this invention consists of a screw-driver a, provided with a hollow handle a', into which the tool a is adapted to be withdrawn when in its inoperative or closed position.

The tool a in its operative or open position is adapted to be locked against movement into the hollow handle and also against rotary movement in said handle. In the preferred construction the hollow handle a' has fitted into it a metal tube b, provided with a longitudinal slot b', extended for a portion of the length of said tube, closed at its outer end, and provided with one or more transverse slots b^2, from the end of which extend shorter longitudinal slots b^3.

The tool a may be provided with a stud, pin, or projection b^4 near its rear or inner end, which is adapted to be moved in said slots and which when in the shorter longitudinal slot b^3 engages the walls of said slot and locks the tool a against rotation independent of the handle, as shown in Fig. 4, and when in this position the tool is in operative condition and can be used after the manner of the ordinary tool. The shorter longitudinal slot b^3, engaging the pin b^4, as shown in Fig. 4, acts to lock the tool a to the handle, so that the latter can be turned to the right or left and pressure applied without liability of the tool being forced back into the hollow handle.

When the tool a is not in use, it can be pushed back into the hollow handle, so as to be concealed therein, as shown in Fig. 2, and in this condition it can be carried in the pocket with safety and without liability of injury to the person carrying it, and as the tool in its closed condition takes up very little room it is especially convenient among other uses to be employed by bicycle-riders.

The tool a may and preferably will be frictionally held within the hollow handle in its closed position, which may be accomplished, as shown, by a spring c, carried by the tool a, engaging the inner wall of the tube b, and for convenience in opening the tool the tube b at its inner or rear end is gradually made of increasing diameter, so that by a slight movement of the front end of the handle the tool a will be thrown or projected out of the handle a sufficient distance to enable it to be grasped by the operator and pulled out into its operative position.

In many instances it is necessary to use shorter tools on account of the lack of room, and to provide for this the tube b may be provided with a series of the transverse slots b^2 and short longitudinal slots b^3, as represented in Fig. 4, so that the complete tool may be made of varying lengths, according to the amount of room in which there is to work.

The tube b is inserted into the hollow handle, with the shorter longitudinal slot near the front end of the said handle, so as to lock the tool a to the handle when projected therefrom.

I have herein shown my invention as embodied in a screw-driver; but it will be understood that instead of the particular tool a herein shown I may employ other tools—as, for instance, a gimlet, chisel, &c. The metal tube b may be secured within the hollow handle by a screw d.

I claim—

1. In an instrument of the class described,

the combination of the following instrumentalities, viz: a handle having a socket of substantially the length of the tool, a tube fitted into said socket and provided with a substantially long longitudinal slot extended from the rear toward the front end of the hollow handle, a transverse slot extended from the longitudinal slot, and a shorter longitudinal slot extended from said transverse slot back toward the rear end of the handle, and a tool of the class described provided with a stud or projection movable in said slots and engaging the shorter longitudinal slot when projected from the handle and in its operative position, the said shorter longitudinal slot acting to lock said tool to the handle, substantially as described.

2. In an instrument of the class described, the combination of the following instrumentalities, viz: a handle having a substantially long socket enlarged at its inner or rear end, a metal tube fitted tight in said socket and enlarged at its rear end, said tube having a substantially long longitudinal slot, a transverse slot extended therefrom near the front end of the handle and a shorter longitudinal slot extended from said transverse slot back toward the rear of the handle, a tool provided with a stud or projection movable in said slots and locked against rotation independent of the handle in its projected position, and a friction device movable with the tool and engaging the inner wall of the tube, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WINTHROP E. WOOD.

Witnesses:
JAS. H. CHURCHILL,
J. MURPHY.