No. 839,477. PATENTED DEC. 25, 1906.

F. HELLER.

HAND CONTROLLED TOOL.

APPLICATION FILED MAR. 30, 1906.

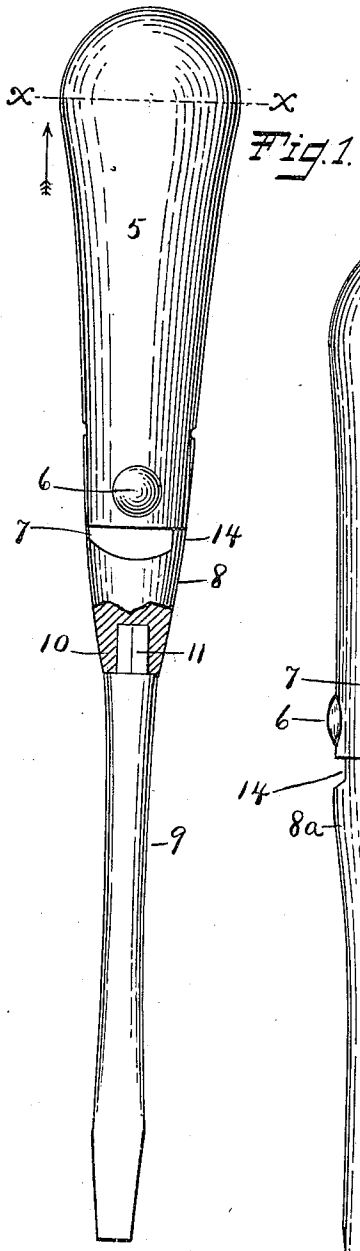

Fig. 1.

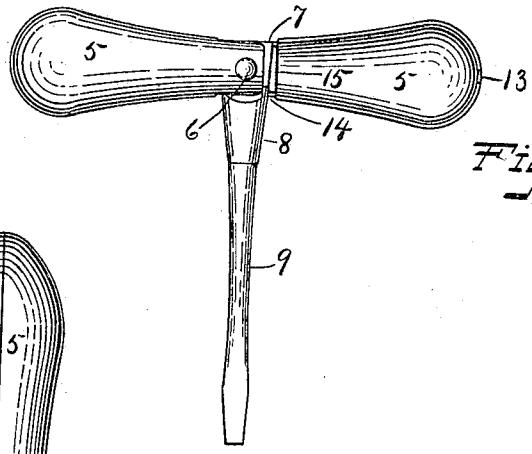

Fig. 4.

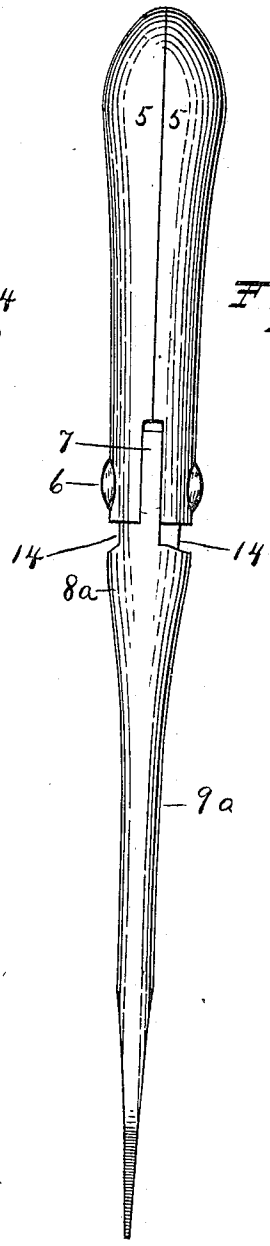

Fig. 2.

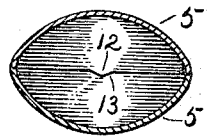

Fig. 3.

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HAND-CONTROLLED TOOL.

No. 839,477. Specification of Letters Patent. Patented Dec. 25, 1906.

Application filed March 30, 1906. Serial No. 308,997.

To all whom it may concern:

Be it known that I, FRITZ HELLER, a citizen of Germany, residing at Southington, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Hand-Controlled Tools, of which the following is a specification.

My invention relates to improvements in hand-controlled tools; and the objects of my improvement are simplicity and economy in construction and convenience in operation, especially with reference to readily changing the handle from one form to another.

In the accompanying drawings, Figure 1 is a broken-out sectional side elevation of my hand-controlled tool. Fig. 2 is an edge view of the same in a modified form. Fig. 3 is a transverse section of the handle on the line *x x* of Fig. 1. Fig. 4 is a side elevation, on a reduced scale, of the tool shown in Fig. 1, with the two parts of the handle changed in position to constitute a different form of handle.

I form the main portion of the handle of two parts 5 5, which parts are preferably formed of sheet metal struck up into a concavo-convex form or semihandle shells that meet each other in a central longitudinal seam. The smaller ends of these parts 5 5 may be filled with suitable semirounded filling-blocks 15, Fig. 4, and pivoted by the pin or rivet 6 to the hinge-lug 7 of the handle-tip 8. The handle-tip 8 may be formed separately from the screw-driver 9 or other hand-controlled tool, as shown in Figs. 1 and 4, or may be formed integral therewith, like the handle-tip 8^a and screw-driver 9^a. (Shown in Fig. 2.) In all other respects the implements shown in Figs. 1 and 2 are the same. When the handle-tip is formed separately from the tool portion, I form a socket 10 at its smaller end and provide the screw-driver or other tool with a shank 11 to fit the said socket, whereby a set of screw-drivers or analogous tools may be furnished and any one of the set may be used as occasion requires.

Some means should be provided to confine the two parts of the handle together in the position shown in Figs. 1, 2, and 3 when it is designed to rotate the handle on its longitudinal axis, as in ordinary screw-drivers. I accomplish this by means of the catch-lug 12, formed on one of the handle parts 5 5 at the butt, and an opposed recess 13 on the companion part, as shown in Fig. 3. The two parts of the handle being of sheet metal hinged to the hinge-lug of the handle-tip will be slightly yielding under pressure in the direction to separate the said two parts, although their normal tendency is to lie close together. This causes the two parts of the handle to be held together against accidental displacement, as shown in Figs. 1, 2, and 3, while they may be separated by pressure applied to the butts of the two parts to force them edgewise in opposite directions into the position shown in Fig. 4. When thus arranged, the handle is designed for rotation on an axis extending transversely to the handle, like the handle of an auger or gimlet.

Each side of the handle-tip is provided with a two-faced stop 14 near the hinge-lug 7, one face of which stop stands substantially at a right angle to the axis of the tool and the other parallel to the said axis. These stop-lugs on the handle-tip are diagonally opposite each other, as seen in end view. The two lower corners of the parts 5 5 act against these stops. As shown in Fig. 1, the right-hand lower corner of the part 5 seen therein bears against the transverse or horizontal face of the stop 14, while the opposite corner of the same part bears against the longitudinal or vertical face of the same stop when the handle parts are set as shown in Fig. 4.

By my improvement a strong and light tool-handle is produced at a small cost. By hinging the two parts of the handle to the handle-tip the handle is readily converted from the screw-driver class of handles to the auger class. By the employment of the hinged handle and a handle-tip having a socket for the reception of various tools the tools and handle are readily adapted for use with each other to the best advantage. By the employment of the stops the two parts of the handle are stopped in their proper position longitudinally of the tool.

I claim as my invention—

1. A hand-controlled tool, comprising a tool portion, a handle-tip and a two-part handle hinged to the said handle-tip, and means for holding the said two parts of the handle in position when set with the said parts in the longitudinal or transverse position, as desired.

2. A hand-controlled tool, comprising a handle-tip for a handle and tool, the said handle-tip having a hinge-lug and stops, and a two-part handle with its parts hinged to the lug of the said handle-tip and acting on the

said stops, for setting the handle parts in their proper position longitudinally of the tool.

3. A hand-controlled tool, comprising a handle-tip for a handle and tool, a handle formed of two parts hinged to the said handle-tip, on a common axis, stops on the said handle-tip for setting the said two parts in their proper position longitudinally of the tool, and a catch on the confronting faces of the handle parts for holding the two parts of the handle together when thus set.

4. A hand-controlled tool, comprising a handle-tip having a tool-socket at its outer end and a hinge-lug at its inner end, and a two-part handle, having its two parts hinged to the said lug and adapted to be set longitudinally or transversely to the axis of the said handle-tip, as may be desired.

5. A hand-controlled tool having a two-part handle, a handle-tip having a hinge-lug with flat faces, the two parts of the said handle having rounded outer faces and opposing inner faces, the latter being arranged to meet each other in a central longitudinal seam, the inner end of one of the said handle parts resting upon one flat face of the said lug and the inner end of the other of the said handle parts resting upon the opposite flat face of the said hinge-lug, and a pintle that passes through the combined handle parts and hinge-lug, by means of which both of the handle parts are hinged upon a common axis and in two different planes.

6. A hand-controlled tool comprising a handle-tip for a handle and tool, a two-part handle hinged to the said handle-tip with its two parts arranged to swing in different planes, and double-faced stops on the opposite sides of the said handle-tip for limiting the movement of the said handle parts on one face of said stops to a position transversely to the axis of the tool when the said handle parts are moved in the direction to separate the butt-ends of the said parts, and for limiting the movement of the said handle parts in the opposite direction on the other face of the said stops.

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Witnesses:
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