

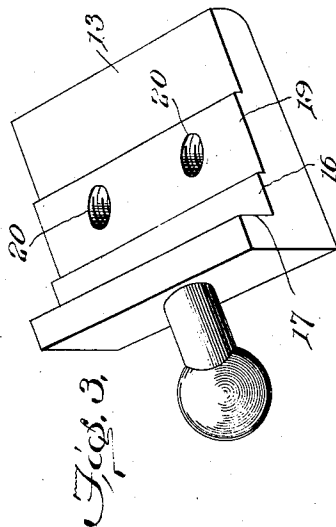
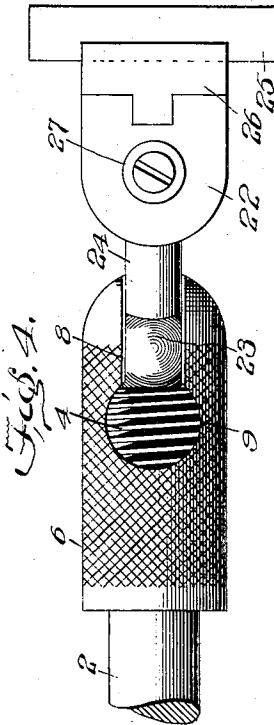
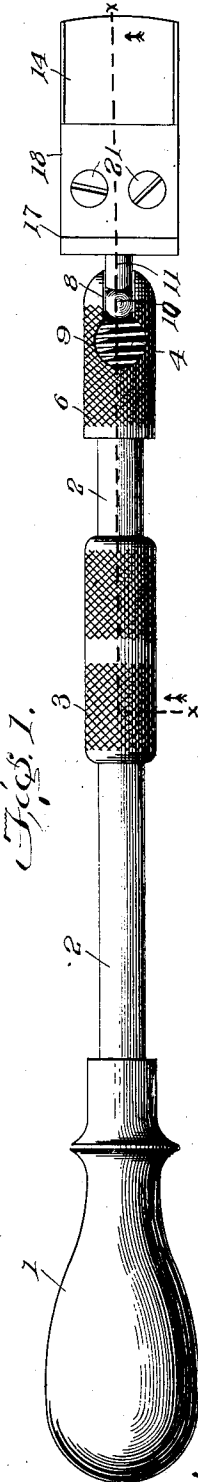
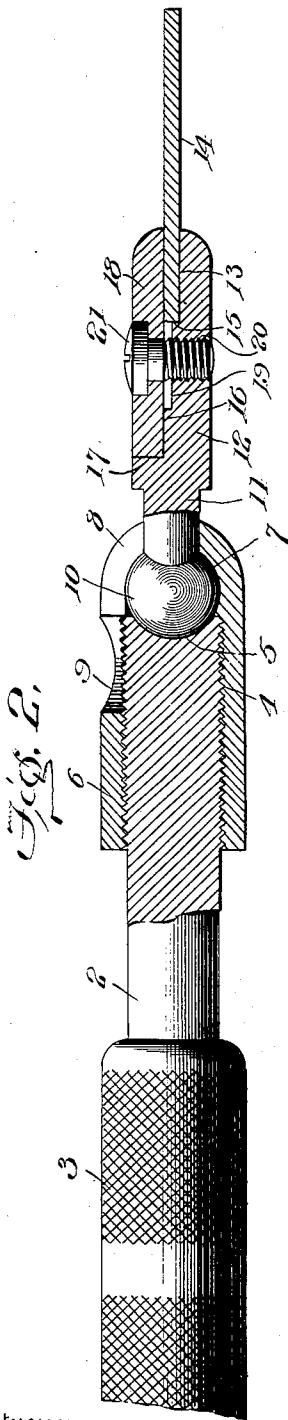
No. 835,160.

PATENTED NOV. 6, 1906

J. W. & C. O. LUTZ.

TOOL HOLDER.

APPLICATION FILED MAY 26, 1905.



Witnesses

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UNITED STATES PATENT OFFICE.

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TOOL-HOLDER.

No. 835,160.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed May 26, 1905. Serial No. 262,496.

To all whom it may concern:

Be it known that we, JOHN W. LUTZ and CLARENCE O. LUTZ, citizens of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Tool-Holders, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to tool-holders, and has for its object to provide a simple and efficient tool-holder whereby a working tool or instrumentality, such as a scraper or file, may be detachably held in any desired angular relation to the handle portion of the tool, the connection between the tool-clamp and handle portion of the holder being such that the tool-clamp may be readily disconnected from the handle portion and another tool-clamp of a different character adapted to hold a working tool of a different kind be readily substituted therefor.

To these and other ends the invention consists in certain novel features, which we will now proceed to describe and will then particularly point out in the claims.

In the accompanying drawings, Figure 1 is a plan view of a tool-holder embodying our invention in one form, the same being shown with a scraper and its tool-clamp applied thereto. Fig. 2 is a longitudinal sectional view of a portion of the same, on an enlarged scale, taken on the line *x x* of Fig. 1 and looking in the direction of the arrows. Fig. 3 is a detail perspective view of the base-block of the scraper-clamp, and Fig. 4 is a detail view of the end portion of the holder, having a file-clamp substituted for the scraper-clamp.

In the said drawings the handle portion of the holder is shown as comprising a handle proper, 1, preferably of wood, and a handle-bar 2, secured thereto and preferably provided with a handle-grasp 3, which is knurled or otherwise roughened to provide a better grip for the hand of the operator. The end of this handle-bar farthest from the handle proper, 1, is threaded, as indicated at 4, and the extremity of said handle-bar is preferably provided with a cup-like socket 5, having the shape of a portion of a sphere. Upon the threaded end of the handle-bar there is mounted a cap-sleeve 6, internally threaded, so as to screw upon the threaded portion 4 of

the handle-bar 2. The outer end of this cap-sleeve has formed in its interior a socket 7, having the form of a portion of a sphere, the wall of this socket being slotted, as indicated at 8, from the extremity of the rounded end of the cap back to the cylindrical body portion of the same, where the slot terminates in an enlargement or circular opening 9, formed laterally in the cap-sleeve. The sleeve 6 is also preferably knurled or otherwise roughened as to give a better hand-grip.

Each of the tool-clamps employed in connection with the handle portion just described is provided with a ball 10 of a size such as to pass readily through the opening 9 and fit within the spherical socket 7 in the end of the cap-sleeve, said ball being connected with the tool-clamp by a neck 11, which is of a diameter equal to the width of the slot 8.

Various forms of tool-clamp may be employed in connection with the holder proper, and in Figs. 1, 2, and 3 we have shown a tool-clamp adapted to hold a scraper or scraping-blade. This tool-clamp comprises a base-plate 12, to which the neck 11 is secured or with which it is formed in one piece together with the ball 10. This base-plate provides the fixed jaw of the two clamping-jaws, and to this end it is provided at that margin thereof farthest from the devices connecting it with the handle portion with a seat or cut-away portion 13 of less depth than the thickness of the scraper-blade, which is indicated at 14, said seat terminating in a shoulder 15, against which one end of the scraper-blade abuts when in place. The base-plate is further provided with a seat or cut-away portion 16, terminating in a shoulder 17 and adapted to receive the clamping-plate 18, which forms the movable jaw. One edge of this clamping-plate abuts against the shoulder 17, while the opposite edge is coincident with the outer edge of the seat 13, the top of the clamping-plate being flush with the top of the base-plate 12. Said base-plate is relieved or cut away between the seats 13 and 16, as indicated at 19, and through this portion of the plate there are formed threaded apertures 20 to receive clamping-screws 21, which pass loosely through the clamping-plate 18, in which their heads are countersunk, and upon which plate said heads bear in such a way as to cause the clamping-plate 18

to firmly hold the scraper-blade 14 in its seat 13, this action resulting from the relieving of the base-plate between the seats 13 and 16 in such a way that the shoulder 15 is of less height than the thickness of the scraper-blade.

The scraper-blade preferably has each of its margins formed into a working edge, so that said blade constitutes, in effect, a plurality of scrapers, which may be successively used until worn out. Said edges may be beveled at different angles to suit different kinds of work. Their angular relations to each other may be varied, and they may be straight or curved, as desired.

It will first be noted that the scraper-blade 14 is readily detachable, it being necessary only to loosen the clamping-screws 21 to permit the removal of the scraper-blade and the insertion of another blade or the reinsertion of the same blade, so turned as to present a different or new working edge, the clamping-screws when tightened up serving to firmly clamp the blade in position. It will be further seen that the angular relations of the tool-clamp and blade to the handle portion of the device may be varied throughout a wide range. In the first place, the blade and holder may be moved from the position shown, in which the blade is axially in line with the handle-bar of the holder to a position at right angles thereto, in which the blade is in a plane at right angles to the longitudinal axis of the handle portion. Furthermore, when in this latter position the blade may be so turned that its plane may be either transverse to the longitudinal axis of the handle portion or coincident with said longitudinal axis. Any intermediate angle of adjustment in these two relations may be obtained or any combination of the two angular adjustments, thus giving the blade all desired possible relations to the handle portion. These adjustments are effected in an obvious manner by unscrewing the cap-sleeve 6 sufficiently to release the ball 10 from the grip with which it is held in the socket 7 by the end of the handle-bar 2, whereupon said ball may be rotated around an axis at right angles to the axis of the neck 11, said neck moving through the slot 8 during this adjustment, or said ball may be turned around an axis coincident with the longitudinal axis of the neck 11, or a combined movement around both axes may be effected. After the adjustment is effected the parts are clamped in position by screwing the cap on the threaded portion of the handle-bar until this latter clamps the ball firmly in the position to which it is adjusted. Finally, it will be observed that the cap may be unscrewed until the end of the handle-bar clears the opening 9, whereupon the tool-clamp may be detached from the handle por-

tion by withdrawing the ball 10 through the opening 9. This not only forms a ready means of disconnecting the tool-clamp when it is desired to do so, but it also provides a means for adapting the handle portion for use with tool-clamps designed for holding tools of different characters. As an illustration of this we have shown in Fig. 4 a tool-clamp 22 having a ball 23 and neck 24 identical with the ball 10 and neck 11 of the scraper-clamp. This tool-clamp 22 is designed to hold a file 25 or other similar working tool or instrumentally having a working surface as distinguished from a working edge, having for this purpose clamping-jaws 26, which are operated by a clamping-screw 27. We make no claim to the file-holding clamp in the present application, however, as the same forms the subject-matter of another application filed by us of even date herewith.

It is obvious that a number of tool-clamps of different character may thus be employed with the handle portion of our improved tool-holder, one being readily substituted for another and the one in use being held in any desired angular relation to the handle portion.

We do not wish to be understood as limiting ourselves to the precise details of construction hereinbefore described and shown in the accompanying drawings, as it is obvious that these details may be varied without departing from the principle of our invention.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A tool-holder comprising a handle portion having a handle-bar threaded at its extremity, a cap-sleeve threaded to fit the same, having a terminal socket, and slotted from its end longitudinally, said slot terminating in a lateral opening, in combination with a tool-clamp having a ball adapted to pass through said opening and fit said socket, and a neck connecting said ball with the tool-clamp and passing through said slot, substantially as described.

2. A tool-holder comprising a handle portion, in combination with a tool-clamp, said tool-clamp being adjustable from a position in alinement with said handle portion to a position substantially at right angles thereto, said tool-clamp being also adjustable around an axis extending centrally thereof transversely to the working edge of the blade, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN W. LUTZ.

CLARENCE O. LUTZ.

Witnesses:

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R. E. CROSS.