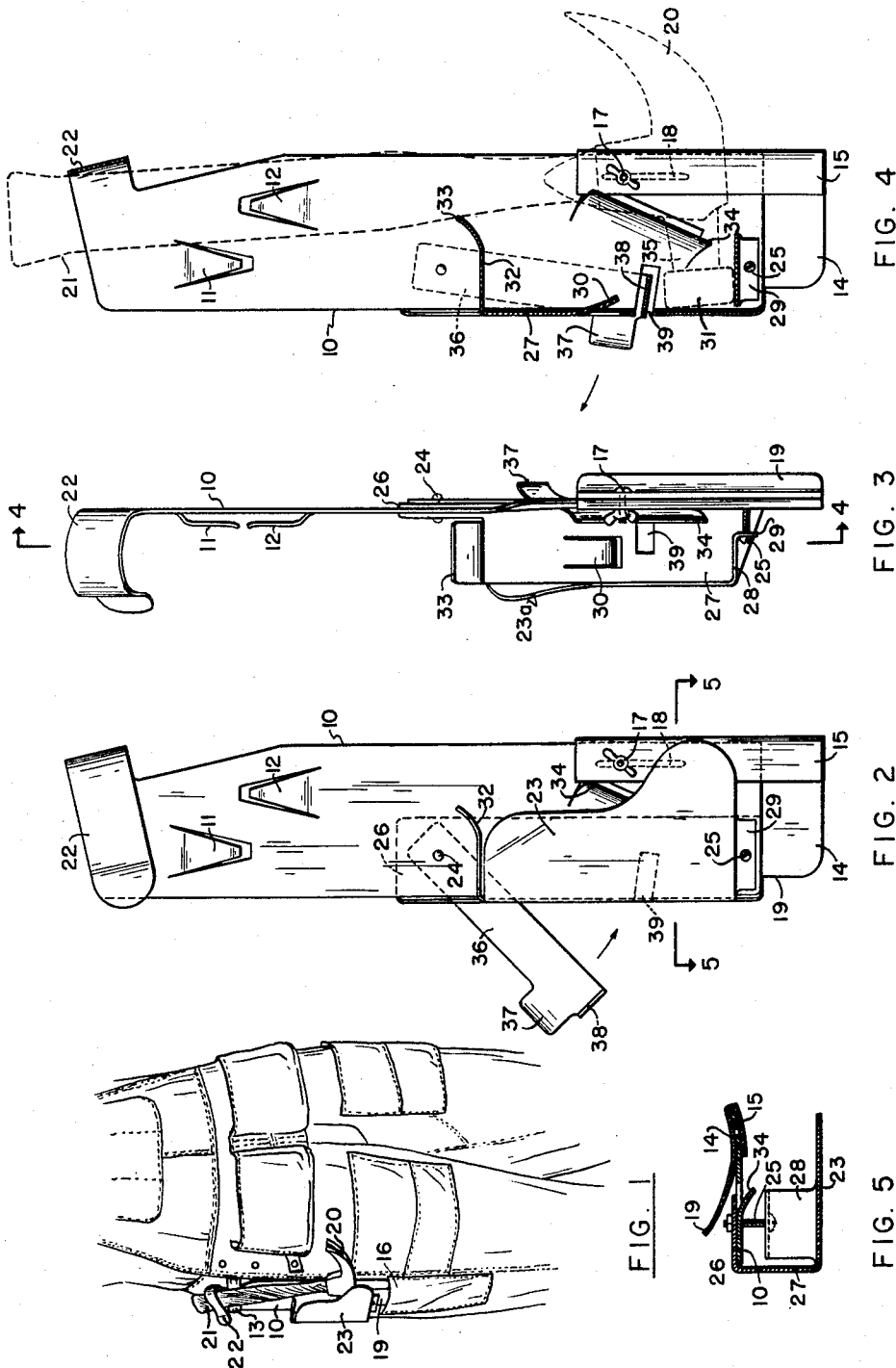


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E. C. HENDERSON
HOLDER FOR HEADED TOOLS

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HOLDER FOR HEADED TOOLS

Eldon C. Henderson, P.O. Box 694, Paso Robles, Calif.

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11 Claims. (Cl. 224—5)

This invention relates to holders for tools, such as carpenter's or claw hammers, machinist's ball-peen hammers, blacksmith's set hammers, or the like, having a helve and a tool head with a terminally widened face end at the end of a neck. The holder, when provided with a hook or clasp for attachment to a workman's garment, permits the tool to be quickly withdrawn for use with a continuous motion and is adapted to receive the tool easily and rapidly, thus speeding the work at hand, especially when the workman is engaged in an activity occupying his hands, such as working on scaffolding or a ladder.

Tool holders for hammers, axes, and the like, employing clips, loops or holsters and adapted for support from belts or other parts of the workman's garment are known but are generally subject to the drawback that the tool can be withdrawn for use and/or returned to the holder only awkwardly, after a series of time-consuming manipulations, usually involving careful positioning of the tool in relation to the holder and/or grasping the holder to open it. These drawbacks are aggravated when the holder is designed to hold the tool securely against inadvertent displacement.

It is an object of the invention to provide a quick-draw tool holder for headed tools of the type indicated from which the tool can be withdrawn with a single, continuous motion of the workman's arm, thereby speeding the work.

A further object is to provide a holder as stated above into which the tool can be rapidly inserted with a simple, continuous motion and without need to open the holder or position the tool carefully in relation to the holder.

A further object is to provide an improved tool holder having a lock for securing the tool against withdrawal.

Other objects are to provide a tool holder for headed tools of the type indicated wherein the tool head is shifted positively toward its face end as the tool is pushed axially into the holder toward seated position; to secure the tool against accidental displacement by a guard abutment which engages the face end of the tool end when in seated position; and to position the tool holder in relation to the workman's body in a conveniently oriented position for drawing and replacing the tool.

Additional objects will become apparent from the following description.

In summary, the holder comprises a base, preferably provided with support means such as hooks for fastening it to a garment in vertical position against the side or leg of a workman and with a downward extension adapted to enter a garment pocket or retaining loop and laterally offset from the base to orient the base, said base having near the top thereof a clip for receiving the tool helve and, near the bottom, a socket for receiving at least a part of the tool head and a ledge positioned to engage the widened face part of the tool head adjacently to the neck, so as to secure the tool head toward the face end. The ledge is preferably elongated for sliding engagement with the face part and inclined so as to shift the tool head in

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the longitudinal direction toward the face part as the tool is moved into the socket.

By providing a fulcrum on the base between the socket and the clip, positioned to engage the side of the helve which is toward the face end of the tool head, and by forming the clip with an opening in the direction of the said side the tool can be quickly withdrawn by a continuous movement in which the end of the helve is pulled away from the socket and shifted out of the open end of the clip by imparting a horizontal thrust thereto, thereby pivoting the tool about the fulcrum. Further, by providing a guard abutment or ledge within the socket to engage the side of the tool end nearest the clip or to lie in the path of said tool end as the tool is moved axially from its seated position, the tool head is prevented from axial movement out of the socket and the tool can be withdrawn from the holder only by executing the above-described pivotal movement in combination with an axial pull on the helve.

The tool holder preferably has a lock which is movable into locking position after the tool head has been seated, so as to provide a locking abutment which engages the tool head or lies in the path of the tool head, in a manner to lock it in seated position and thereby prevent its withdrawal or accidental dislodgement from the holder.

The holder will be described more particularly with reference to the accompanying drawing forming a part of this specification and showing one preferred embodiment of the invention, wherein:

Figure 1 is a pictorial view of the holder applied to a workman's garment for holding a claw hammer;

Figure 2 is a front elevation view of the holder, the lock being pivoted away from locking position beyond the normal disengaged position for clarity;

Figure 3 is an end elevation view of the holder, viewed from the right of Figure 2;

Figure 4 is a sectional view taken on the line 4—4 of Figure 3, a claw hammer secured by the holder being shown in phantom and the lock being in locking position; and

Figure 5 is a transverse sectional view taken on the line 5—5 of Figure 2.

Referring to the drawing in detail, the holder comprises a rigid base 10, e.g., formed of sheet metal, which is elongated in the axial direction. For convenience, axial, longitudinal and lateral directions will be mentioned herein; they refer respectively to the vertical directions of Figure 2, the horizontal directions of Figure 2 and the horizontal directions of Figure 3, or, stated otherwise, the axis of the tool helve, the tool head, and the directions transverse to the tool head axis. To permit the holder to be suspended from a part of a workman's clothing, such as a belt or a strap, the base has clasp means near one end; thus, it may have a pair of opposed lugs or fingers 11 and 12 pressed laterally toward the outer face (away from the wearer) for engagement with a garment strap 13. To position the holder along the leg of the workman as shown in Figure 1 and further to orient the base about its axis, there is provided at the other end thereof a base extension 14 having a flange 15 which is bent about the edge of the base to engage the outer face thereof, the body of the extension being situated on the inner side. The extension is axially adjustable on the base and is adjusted to enter a pocket 16 or the like on the garment. The base extension is fixed in axially adjusted position by a clamping bolt and wing nut 17, the bolt extending through aligned holes in the extension body and flange 15 and through an axially elongated slot 18 formed in the base. A part 19 of the base extension at one longitudinal extremity (the part toward the rear of the workman) is offset laterally toward the

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workman's body with respect to the base and to the other parts of the base extension. The said part 19 engages the workman's leg and thereby orients the base about its vertical axis, in a direction which prevents the claw of the hammer head 20 from projecting outward from the workman's body at too great an angle.

The base carries a clip 22, e.g., formed integrally therewith, shaped to receive the helve 21 of the hammer when positioned along the base. The clip is open toward the rear to permit the helve to be inserted or removed without hindrance. This clip is located at the end which is uppermost when the base is attached to the garment as shown in Figure 1 and retaining the helve with vertical slidable restraint.

A vertically elongated socket including a jaw 23 is attached to the end of the base remote from the clip 22, e.g., by a pin or rivet 24 and a bolt 25. The socket further includes a flange 26 which lies against the inner face of the base, a laterally extending wall 27 from which the jaw 23 extends longitudinally in spaced relation to the base, a flange 28 at the end of the jaw, and a bolt flange 29 at the end of the flange 28. The jaw 23 is spaced from the base by a distance slightly in excess of the width of the tool head and this distance may be adjusted by means of the bolt 25 and the nuts affixed thereon adjacent to the base and the flange 29. The flange 28 forms the floor of the socket and thereby forms an abutment which limits axial movement of the tool head in the direction away from the clip 22. The wall 27 forms abutment means for limiting the longitudinal movement of the tool head, as is apparent from Figure 4. This wall has a guard abutment, formed as a finger 30 which is cut and pressed into the socket a small distance from the tool face part 31 when the latter is seated within the socket. This guard abutment is in the axial path of the tool head end and prevents the latter from being withdrawn from the socket by a mere axial motion.

The free corner 23a of the jaw nearer the clip is bent away from the base to widen the socket mouth and thereby facilitate entry of the tool head without careful alignment thereof in relation to the socket. An arm 32 is formed integrally with the socket wall 27 and extends across the socket; the end of this arm is curved toward the clip to form a fulcrum 33 which is positioned to engage the helve between the tool head and the clip. It is evident that this fulcrum, in combination with the closed end of the clip 22, limits the longitudinal movement of the tool head within the socket toward the wall 27 and that this wall is, therefore, not essential as an abutment.

A retainer or ledge 34 extends into the socket and is formed by cutting and pressing a part of the base. The retainer is shaped to engage the part of the tool face part 31 which is adjacent to the neck 35, as is shown in Figure 4, so as to urge the tool head longitudinally into the socket. The retainer is preferably elongated and inclined in the longitudinal direction away from the wall 27 (or, stated otherwise, from the fulcrum 33) toward the clip 22, so that the widened tool face part 31 can slide along it and be thereby shifted longitudinally toward the wall 27 as the tool head is moved axially away from the clip. When the head is fully seated within the socket the retainer prevents displacement thereof in the direction toward the claw 20.

A lock 36 is pivotally mounted on the pin or rivet 24. It has an inclined tab 37 by which it can be manipulated and a flange 38 which constitutes a locking abutment which can enter the socket through an opening 39 in the wall 27 to assume a position immediately adjoining the tool face end. When the lock is in operative, locking position, as is shown in Figure 4, the tool head is positively locked within the socket by the joint actions of the abutment 38 and the retaining ledge 34.

In using the holder after attachment to the workman's garment, the tool is inserted or withdrawn with the lock 36 so positioned that the locking abutment 38 is out of the socket. To insert the tool, it is grasped near the end

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of the helve and the latter is placed into the clip 22 in an inclined position with the tool head just below the fulcrum 33 and outside of the socket. The helve is then rotated in a plane parallel to the base to move the tool head longitudinally into the socket until the helve engaged the fulcrum; this places the face part 31 beyond the retaining ledge 34. The tool is thereafter moved axially away from the clip (either by pushing it or by letting it fall); the ledge 34 causes the tool head to move toward the wall 27 into the seated position shown in Figure 4, resting on the floor flange 28. The guard abutment 30 then prevents the tool head from moving toward the clip by a mere axial motion, so that the tool can be carried in readiness for immediate use without applying the lock 36. The lock would be used, however, when the workman assumes a position other than upright, e.g., when crawling.

The tool can be drawn quickly by grasping the end of the helve and shifting it out of the open end of the clip while pulling up. This causes the helve to pivot about the fulcrum 33 to shift the face part 31 out of the path of the guard abutment 30, so that the tool can pass out of the holder without awkward manipulation.

I claim as my invention:

1. A holder for a tool having a helve and a head with a terminally widened face part at the end of a neck, said holder comprising: an axially elongated base having means for attachment to a wearer's garment in a substantially vertical position; a clip on said base near the upper end thereof for retaining said helve vertically with axially slidable restraint, said clip being open toward the rear; a socket on the base near the lower end thereof for receiving at least a part of said tool head with bilateral restraint when said face end is toward the rear and said helve is within the clip, and a bottom support for limiting the downward movement of the tool head; a downwardly and rearwardly inclined retaining ledge projecting laterally into said socket and engageable with said widened face part adjacently to the neck for shifting the tool head rearwardly as the tool is shifted downwardly; and a fulcrum on said base between the clip and the socket positioned to engage the rear side of the helve.

2. In combination with the tool holder according to claim 1, a downwardly directed guard abutment fast to the base at the rear of the socket positioned to engage the tool head end when the tool head is seated within the socket for preventing upward movement of the tool without pivotal movement about said fulcrum.

3. In combination with the tool holder according to claim 2, a lock having a pivoted connection to said base and including a lip providing a downwardly directed locking abutment situated below said guard abutment for engaging the tool head end when the tool head is seated within the socket and the lock is in locking position for preventing upward movement of the tool, said lock being pivotally movable to an unlocked position in which said lip is clear of the tool head.

4. A holder for a tool having a helve and a head with a widened face part at the end of a neck, said holder comprising: an axially elongated base; a clip on said base for retaining said helve with axially slidable restraint; a socket fast on said base in axially spaced relation to said clip and shaped to receive at least a part of said head with bilateral restraint when slid axially away from said clip, said holder including means to limit said axial motion; an elongated retaining element on said base disposed for sliding engagement by said widened face part adjacently to said neck during axial movement of the head into the socket for urging the head longitudinally in the direction toward said face part; and abutment means for limiting longitudinal movement of said head in the said direction.

5. A tool holder according to claim 4 wherein the said retaining element is inclined to the axis of the base at an angle to shift the tool head longitudinally in the said direction as the tool head is moved into the socket.

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6. A tool holder according to claim 4 wherein said abutment means includes a fulcrum situated between the clip and the socket and directed oppositely to the said direction for engagement with the helve.

7. A tool holder according to claim 6 wherein the said clip is open toward the said longitudinal direction, whereby said tool can be withdrawn from the holder by pulling it axially out of the socket and pivoting the helve about said fulcrum to disengage the helve from the clip.

8. In combination with the tool holder according to claim 7, a guard abutment on the base at the socket directed away from the clip and positioned to engage the face part of the head when the latter is seated within the socket, for preventing axial movement of the head out of the socket without pivotal movement of the helve about said fulcrum.

9. A tool holder according to claim 6 wherein said abutment means includes, in addition to said fulcrum, a wall in said socket positioned for engagement with the face of the tool head when the latter is seated within the socket.

10. In combination with the tool holder according to claim 4, a lock pivotally secured to the base outside of the socket and having a locking abutment which, when the lock is in locking position, engages the side of the tool head nearer the clip within the socket, said socket having an opening for the entry of said locking abutment,

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said lock being movable to swing said locking abutment out of the socket and clear of said tool head.

11. A holder for a headed tool having a helve, said holder including a vertically elongated base plate, means for securing the tool alongside of the base plate with the helve upward, said means including a retaining clip near the top and open toward the rear, a socket near the bottom for receiving the tool head, and a fulcrum situated between the clip and the socket and positioned to engage the helve to permit withdrawal of the tool by an upward and pivotal movement about said fulcrum; means for securing the base plate upright alongside of a wearer's garment; and positioning means for the base plate including a projection on said base plate extending therefrom toward said garment and situated to one side of the vertical center line of the base plate.

References Cited in the file of this patent

UNITED STATES PATENTS

1,081,261	Barrett	Dec. 9, 1913
1,166,781	Parrish	Jan. 4, 1916
2,109,734	Preneta	Mar. 1, 1938
2,618,419	Vanish	Nov. 18, 1952
2,812,891	Carlson et al.	Nov. 12, 1957
2,852,824	Kilpatrick	Sept. 23, 1958