July 24, 1934. C. VALLONE 1,967,458

WRENCH SET HOLDER OR UNIT

Filed Sept. 30, 1933

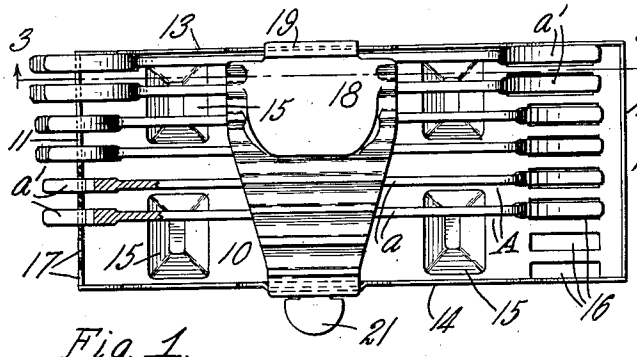


Fig. 1.

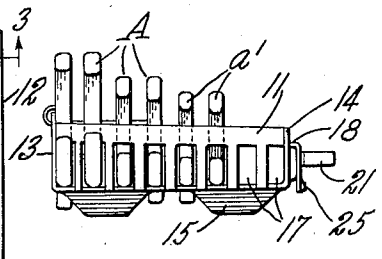


Fig. 2.

Fig. 3.

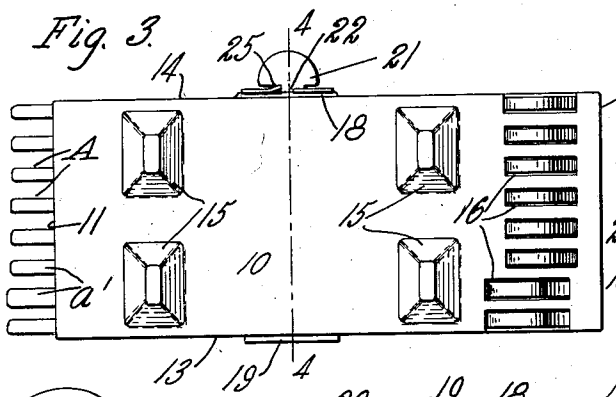
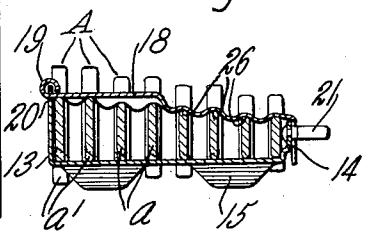


Fig. 4.



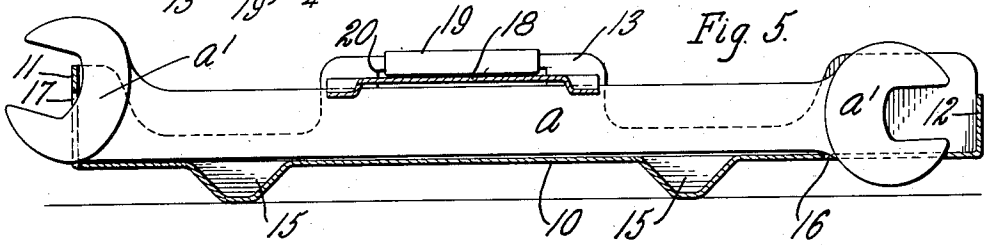


Fig. 5.

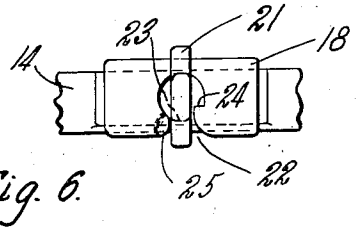


Fig. 6.

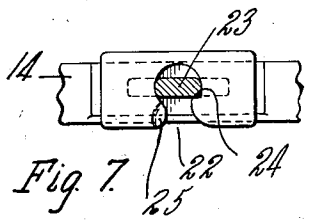


Fig. 7.

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WRENCH SET HOLDER OR UNIT

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Application September 30, 1933, Serial No. 691,656

10 Claims. (Cl. 206—16)

This invention relates to improvements in wrench set units or holders for sets of double ended open end wrenches of that sort which have open jaws at opposite ends connected by an elongated shank or handle, the improved holder being particularly desirable for a set of tappet wrenches of this type. These tappet wrenches are ordinarily relatively thin and of substantially equal length, the different wrenches being provided with jaw openings of appropriate sizes for turning different sized nuts or bolts.

One object of the invention is to provide such a wrench set unit in which the wrenches are retained in order, side by side, in a holder which is constructed so as to releasably retain the wrenches in place and prevent acccidental displacement of the wrenches while, nevertheless, permitting one or more of the wrenches to be readily removed without disturbing or displacing any of the remaining wrenches.

Other objects of the invention are to provide a holder for a set of wrenches which is of simple and inexpensive construction but which will securely retain the several wrenches of the set in the intended order and position and prevent the displacement of the wrenches in the handling or use of the holder or set; also to provide a desirable, inexpensive holder for wrenches which will hold the same out of contact with the bench or supporting surface on which the holder or set may be laid and thus prevent the wrenches from being dislodged or shifted by contact with the supporting surface; also to provide a holder for a set of wrenches which will positively prevent the shifting of the wrenches in the holder either lengthwise or laterally in the handling of the set; also to provide a holder having seats or parts which separately hold the several wrenches in the intended positions in the holder and which holder is provided with a releasable retaining member which positively secures the wrenches in the holder and prevents the removal of the wrenches except by first releasing said retaining member; also to provide a simple reliable fastening or securing device for said releasable retaining member; and also to provide a wrench set unit or wrench set holder having the other features of improvement and advantage hereinafter described and set forth in the claims.

In the accompanying drawing:

Fig. 1 is a plan view partly in section on a reduced scale of a wrench set and holder embodying my invention.

Fig. 2 is an end elevation thereof.

Fig. 3 is a bottom plan view thereof,

Fig. 4 is a transverse section thereof, line 4—4 Fig. 3.

Fig. 5 is a full size longitudinal section thereof, line 5—5, Fig. 1.

Fig. 6 is an elevation showing the securing device for the retaining member showing the same in released position.

Fig. 7 is a similar view, partly in section showing the securing device in its locking or securing position.

The wrench set comprises several wrenches A, each of which has a shank or handle a, provided at opposite ends with slotted enlargements forming nut or bolt engaging jaws a', the jaw openings at opposite ends of the wrench being, as usual, of different sizes suitable for different sized nuts or bolts and being disposed at different angularity to the shank to facilitate the use of the wrench. As shown, one edge of the jaw enlargement at one end of the wrench is substantially flush with the adjacent edge of the wrench shank while the jaw enlargement at the opposite end of the wrench projects laterally beyond said edge of the shank.

The wrenches lie on edge, side by side, or parallel with each other in a holder which is preferably in the form of a shallow tray having a bottom 10 and end walls 11 and 12 projecting upwardly from opposite ends of the bottom, and also preferably having side walls 13 and 14 extending from end to end of the tray at opposite side edges thereof. This holder or tray is preferably made of sheet metal and can be conveniently and inexpensively made from a single piece or blank of sheet metal cut at the corners so as to form end and side portions which are bent up to form the end and side walls of the tray. The end and side walls are preferably welded or otherwise suitably secured together at the corners of the tray. Portions projecting downwardly from the bottom 10 of the tray form feet adapted to rest on a bench or other supporting surface and support the holder with its bottom spaced above said supporting surface. These feet 15 are conveniently formed by down-drawn or pressed integral bosses or portions of the bottom 10.

A series of parallel longitudinal slots 16 are formed in the tray bottom 10 near one end thereof and the end wall 11 at the opposite end of the tray is formed with a corresponding series of parallel vertical slots 17, each slot 17 in the end wall 11 being in the vertical plane of one of the slots 16 in the bottom. The wrenches are placed in the tray with one jaw at one end of each wrench extending endwise through one of the

slots 17 and the bottom jaw at the opposite end of the wrench seated in or projecting downwardly through the alined bottom slot 16. The slots are only sufficiently wider than the thickness of the wrenches to permit the jaws to be readily inserted into and removed from the slots and when the jaws at the opposite ends of the wrenches are seated in the slots as stated, the slots hold the wrenches parallel on edge with the shanks of the wrenches resting on the substantially flat bottom 11 of the tray.

A hinged or movable retaining member or hasp 18, which is releasably secured in a position extending transversely across and over the shanks of the wrenches, retains the wrenches in the holder slots and prevents their removal except by first moving the hasp out of its retaining position. This retaining member preferably consists of a strip of sheet metal which is hinged at one end to one side wall 13 of the tray, as by a hinge loop 19 passing through a slit 20 in the upper edge of the side wall, so that the hasp can swing to and from its retaining position in which it extends across the tray over the wrenches.

A suitable fastening device is provided for releasably securing or locking the hasp 18 in its transverse retaining position. As shown, (see Figs. 6 and 7) this fastening device consists of a turn button 21 pivotally attached to the side wall 14 of the tray and adapted to pass into a notch 22 in the down turned free end of the hasp. The shank 23 of the turn button is of narrow elongated or flattened shape in cross section and the notch 22 in the hasp has a narrow mouth and an enlarged inner portion preferably circular except for an inwardly projecting stop shoulder 24 at one side of the notch. When the button is turned to the upright position shown in Fig. 6 the shank 23 thereof can pass through the narrow mouth of the notch 22 as indicated in Fig. 6, and the button can then be turned through a quarter of a revolution until arrested by the engagement of one end of its flattened shank with the shoulder 24 on the hasp. In this position of the turn button its shank cannot pass through the narrow mouth of the notch 22 and it will securely lock the hasp in its retaining position. One edge of the narrow mouth of the notch 22 is also preferably bulged outwardly at 25, and in turning the button to fasten the hasp the button is forced past this bulge, which by frictional engagement with the turn button acts to hold the button in its locking position and prevent it from being turned so as to release the hasp except by the application of sufficient force to spring the turn button past said bulge.

The hasp 18 is preferably corrugated or grooved parallel with the wrench shanks and when the hasp is secured in its retaining position the upper edge of each wrench shank will seat in one of the grooves 26 in the hasp and these grooves cooperate with the slots in the bottom and end of the tray in retaining the wrenches parallel and on edge in the holder.

When the wrenches are placed in the holder as explained and the hasp is secured in position over the wrench shanks, the wrenches will be securely held in place against removal from the holder. The hasp prevents the wrenches from being lifted to disengage the jaws at one end of the wrenches from the slots in the bottom of the holder and the wrenches cannot be moved lengthwise in the holder since the engagement of the jaws at one end of the wrenches with the slotted wall 11 prevents outward end-wise movement of the wrenches in that direction and the engagement of the jaws at the opposite ends of the wrenches against the outer ends of the bottom slots prevents substantially end-wise movement of the wrenches in the opposite direction. In the event of variations or inaccuracies in the dimensions of the wrenches and holder sufficient to permit some endwise play of the wrenches in the holder the end wall 12 of the holder adjacent the bottom slots 16 will serve as a stop to prevent sufficient endwise movement of the wrenches in this direction to allow disengagement of the jaws at the opposite ends of the wrenches from the slots 17 in the other end wall. Thus the wrenches are securely retained on edge parallel with each other in the holder and can only be removed therefrom by first releasing and swinging the hasp upwardly. When the wrenches are released by opening the hasp the wrenches will still be held by the slots or seats in the same relative position in the holder and when one or more of the wrenches is or are removed the other wrenches will remain loosely in position in the holder so that any one or more of the wrenches can be removed or replaced without disturbing the position of the remaining wrenches.

I claim as my invention:

1. A holder for a set of wrenches having elongated shanks and jaws at the opposite ends of said shanks, said holder comprising a bottom having seats therein adjacent one end of the bottom into which the jaws at one end of the wrenches project downwardly, a wall projecting upwardly at the opposite end of said bottom and having seats into which the adjacent jaws of the wrenches project endwise, and a releasable retaining member which extends transversely over said wrenches and by engagement therewith prevents disengagement of the jaws from said seats.

2. A holder for a set of wrenches arranged parallel with each other and each comprising an elongated shank provided at its opposite ends with jaw enlargements, said holder comprising a bottom having in one end thereof slots into which the jaws at one end of the wrenches project downwardly, an end wall projecting upwardly from the opposite end of said bottom and having slots therein into which the adjacent jaws of the wrenches project endwise, and means for releasably retaining said wrenches in said holder, comprising a retaining member extending transversely over the several wrenches.

3. A holder for a set of wrenches arranged parallel with each other and each comprising an elongated shank and jaws at the opposite ends of said shank, said holder comprising a tray having a bottom and end walls projecting upwardly from opposite ends of the bottom, said bottom having seats therein adjacent one end wall of the tray each arranged to receive the lower edge of the adjacent jaw of one wrench, and said opposite end wall having seats therein each arranged to receive the end of the adjacent jaw of one of said wrenches, said bottom and end seats holding the wrenches on edge side by side, and releasable means for retaining said wrenches in said tray with said jaws entering said seats.

4. A holder for a set of wrenches arranged parallel with each other and each comprising an elongated shank and jaws at the opposite ends of said shank, said holder comprising a tray having a bottom and end walls projecting upwardly from opposite ends of the bottom, said bottom having slots therethrough adjacent one of said end walls and arranged to receive the jaws at the adjacent

ends of said wrenches, and said opposite end wall having slots therethrough arranged to receive the ends of the adjacent jaws of the wrenches, and a releasable retaining member extending across the shanks of said wrenches for retaining the same in the slots in said holder.

5. A holder for a set of wrenches arranged parallel with each other and each comprising an elongated shank and jaws at the opposite ends of said shank, said holder having a bottom provided adjacent one end thereof with seats into which the bottoms of the jaws at one end of the wrenches project, a wall projecting upwardly from the opposite end of said bottom and provided with seats into which the ends of the adjacent jaws of the wrenches project, said end wall limiting lengthwise movement of the wrenches in one direction, a stop arranged adjacent said bottom seats in position to engage the adjacent ends of the wrenches and prevent opposite lengthwise movement of the wrenches sufficient to disengage the jaws from the seats in said end wall except by lifting the wrenches clear of said stop, and releasable retaining means for preventing such lifting of the wrenches.

6. A holder for a set of wrenches having elongated shanks and jaw enlargements at their ends, said holder comprising a bottom having slots therein through which the jaw enlargements of the wrenches project downwardly, means cooperating with said slots for releasably retaining the wrenches parallel with each other in said holder, and feet projecting downwardly from said holder and adapted to hold said bottom spaced from a supporting surface on which the feet rest and prevent the contact of the said jaw enlargements with said supporting surface.

7. A holder for a set of wrenches comprising a body in which the wrenches rest, a movable retaining member extending across said wrenches for retaining the same in said holder, and a fastening device for said retaining member comprising a turn button pivotally mounted on said holder and having a shank of transversely elongated cross section, said retaining member having in one end a notch with a narrow mouth through which said shank is adapted to pass when the turn button is in one position, and said slot having an enlarged inner portion in which said shank is adapted to turn, and a shoulder at one side of said notch arranged to engage said shank to limit the rotation of said turn button.

8. A holder for a set of wrenches comprising a body in which the wrenches rest, a movable retaining member extending across said wrenches for retaining the same in said holder, and a fastening device for said retaining member comprising a turn button pivotally mounted on said holder and having a shank of transversely elongated cross section, said retaining member having in one end a notch with a narrow mouth through which said shank is adapted to pass when the turn button is in one position, and said slot having an enlarged inner portion in which said shank is adapted to turn, and a shoulder at one side of said notch arranged to engage said shank to limit the rotation of said turn button, and said retaining member having a cam portion at one side of said notch arranged to be engaged by said turn button when the latter is turned and to engage said turn button to offer resistance to the rotation thereof.

9. A wrench set unit comprising a set of wrenches each having an elongated shank and jaws at opposite ends of the shank, and a holder in which said wrenches are arranged lengthwise side by side, said holder having at one end thereof bottom seats into which the adjacent jaws of the wrench project downwardly, and end seats at its opposite end into which the adjacent jaws of the wrenches project endwise, said bottom and end seats cooperating to hold said wrenches sidely side on edge, and releasable means for for retaining said wrenches in said seats of the holder.

10. A wrench set unit comprising a set of wrenches each having an elongated shank and jaws at opposite ends of the shank, and a holder in which said wrenches are arranged lengthwise side by side, said holder having at one end thereof bottom seats into which the adjacent jaws of the wrench project downwardly, and end seats at its opposite end into which the adjacent jaws of the wrenches project endwise, said bottom and end seats cooperating to hold said wrenches side by side on edge, and feet projecting downwardly from said holder sufficiently to rest on a supporting surface and support said wrenches out of contact with said surface.

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