April 21, 1925. 1,534,537

E. S. MILLER

HOLDER FOR SOCKET WRENCH SETS

Filed May 20, 1924

Fig. 1.

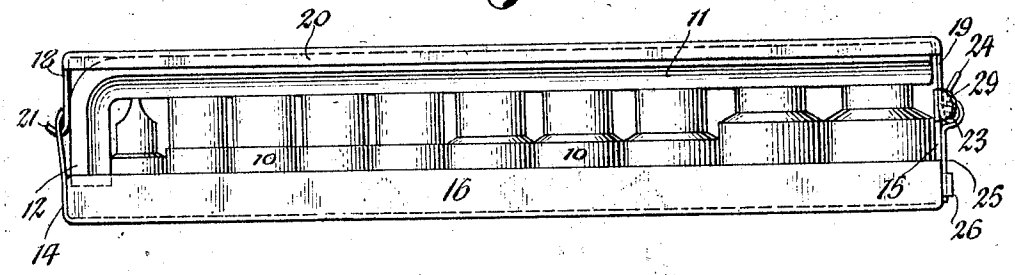


Fig. 2.

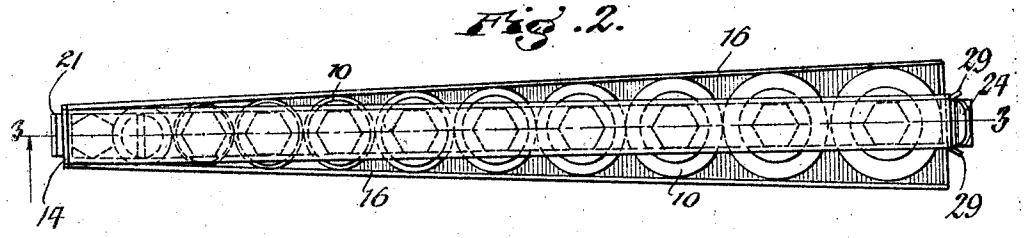


Fig. 3.

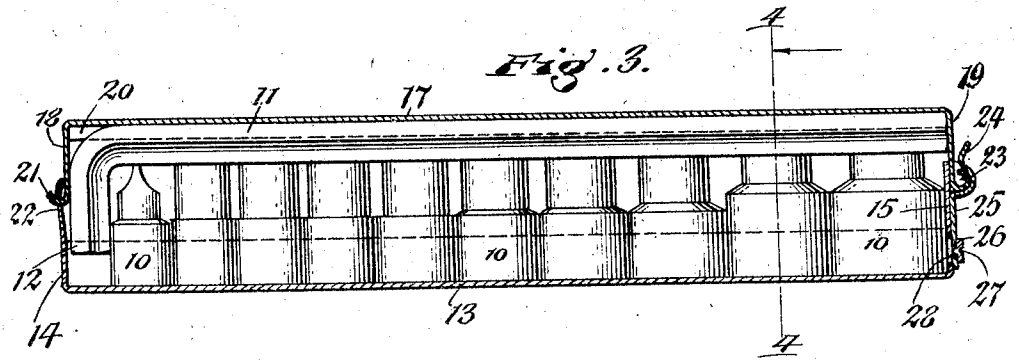


Fig. 4.

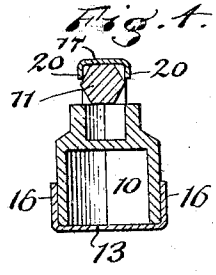


Fig. 5.

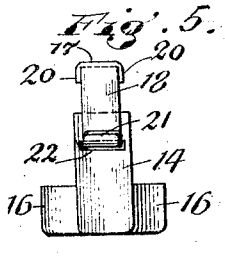
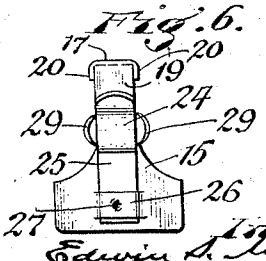


Fig. 6.



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UNITED STATES PATENT OFFICE.

EDWIN S. MILLER, OF BUFFALO, NEW YORK, ASSIGNOR TO THE KEYSTONE MFG. CO., OF BUFFALO, NEW YORK, A CORPORATION OF NEW YORK.

HOLDER FOR SOCKET-WRENCH SETS.

Application filed May 20, 1924. Serial No. 714,586.

To all whom it may concern:

Be it known that I, EDWIN S. MILLER, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Holders for Socket-Wrench Sets, of which the following is a specification.

This invention relates to a holder for carrying a socket wrench set which comprises a plurality of sockets of different diameters adapted to be arranged in a graduated longitudinal row and a handle having a bar adapted to be arranged lengthwise over the row of sockets and provided at one end with a tang which is adapted to be arranged vertically along the outer side of the smallest socket of the row.

It is the object of this invention to provide a holder of this character which is very simple and compact in construction, which will reliably hold the several sockets in position without permitting the same to become displaced while they are stowed away and at the same time provide simple and convenient means for holding the handle in an assembled position over the several sockets so that the whole produces a very compact organization and permits of readily selecting any one of the several sockets and using the same in connection with the handle when required.

A further object of this invention is to so construct the body of the holder that when all of the sockets of the set are placed therein these sockets must necessarily be placed in their proper order in order to fit the body of this holder, thereby facilitating the selection of the particular socket when required and also enabling the several sockets to be fitted in the body of the holder without undue looseness therebetween.

In the accompanying drawings:

Figure 1 is a side elevation of the improved holder for a socket wrench set embodying my invention.

Figure 2 is a top plan view thereof.

Figure 3 is a vertical longitudinal section taken on line 3—3, Figure 2.

Figure 4 is a vertical transverse section taken on the correspondingly numbered lines in Figure 3.

Figures 5 and 6 are end views of the holder viewed from the narrow and wide ends thereof, respectively.

Similar characters of reference indicate like parts throughout the several views.

The socket wrench set intended to be held in an assembled position on my improved holder comprises a plurality of sockets 10 which are all of the same length but of different diameters for adapting them to nuts, bolts and similar articles having corresponding variations in size, and a handle having a longitudinal bar 11 and a tang 12 projecting laterally from the front end of this bar. The several sockets are adapted to be arranged in a longitudinal row and the several members so arranged that the smallest size is at one end of the row and the largest size at the opposite end of this row and the remaining sockets arranged intermediate of the ends so that the whole series is graduated in size from one end to other and together form a practically tapering mass. The handle when not in use is adapted to be placed with its bar 11 lengthwise over the upper ends of the row of sockets with its tang 12 projecting downwardly along the outer vertical side of the smallest socket, as shown in Figures 1 and 3.

My improved holder is designed to hold the row of sockets and the handle in this assembled position. In its general organization this holder comprises a body or lower section which is adapted to receive the row of sockets, and a cover or upper section which is adapted to receive the handle and is detachably connected with the body so that the holder can be closed for confining the wrench members therebetween or opened to release such members preparatory to using them.

The body is preferably constructed of sheet metal and comprises a horizontal flat bottom 13 which tapers so that it is wide at one end and narrow at the other and has its longitudinal edges converging from the wide end of the bottom toward the narrow end thereof, a narrow transverse end wall 14 projecting upwardly from the narrow end of the bottom, a wide transverse end wall 15 projecting upwardly from the wide end of the bottom, and two longitudinal side walls 16 projecting upwardly from the side edges of the bottom and converging from the wide end wall toward the narrow end wall. The height of the side walls is less than the height of the end walls, preferably less than half the height of the end walls, as shown in

Figures 1, 3 and 4, so that when the row of sockets are arranged within the body and rest with their lower ends on the bottom thereof, the upper ends of the sockets are exposed above the side walls thereby permitting the particular size of socket to be readily selected when required.

The cover is also constructed of sheet metal and provided with a horizontal longitudinal top 17, two transverse end walls 18, 19 projecting downwardly from opposite ends of the top 17, and two longitudinal side walls 20 depending from opposite longitudinal edges of the top and forming with the latter a horizontal longitudinal downwardly opening channel which is adapted to receive the upper part of the handle bar 11 and confine the same against lateral displacement with reference to the upper ends of the sockets when these wrench members are assembled in a packed condition ready for storage or shipment, as shown in Figures 1 to 4.

When the wrench handle is arranged within the cover thereof the outer side of the tang 12 engages with the inner side of the end wall 18 and the rear end of its bar 11 engages with the inner side of the transverse end wall 19, thereby confining the handle against endwise movement within the casing or holder.

Various means may be provided for detachably connecting the cover and body of this holder to permit of ready connection or disconnection of the same. In the preferred construction this is accomplished by providing the end wall 18 of the cover at its lower end with an outwardly projecting hook 21 which is adapted to pass outwardly and upwardly through an opening 22 in the upper part of the transverse end wall 14, while the other end wall 19 of this cover is provided at its lower end with a laterally projecting bead or projection 23 which is adapted to engage with a socket formed between the upper part of the outer side of the end wall 15, and a hook shaped spring lip 24 forming part of a catch mounted on the respective transverse wall of the body. This lip is mounted on this transverse wall by providing this lip with a downwardly projecting shank 25 which is slipped at its lower end downwardly through a loop 26 which is punched out of the lower part of the end wall 15 and is held against displacement therein by means of a punch mark 27 projecting inwardly from this loop 26 and entering an opening 28 formed in the lower end of the shank 25. This means of mounting the catch on the respective transverse wall of the body is simple and inexpensive and reliably attaches the catch to the body so that the same will not become detached therefrom in use.

For the purpose of mounting the several members of the socket wrench set in this holder or casing the several sockets are first placed through the open top of the boxlike body with the largest socket at the wide end of the body and the successively smaller sockets arranged in their proper order toward the narrow end of the same, after which the handle is placed with its bar over the ends of the sockets and the tang thereof engaging with the outer side of the smallest socket. The hook 21 of the cover is then engaged with the opening 22 of the end wall 14 and the channel shaped portion of this cover is then swung downwardly so that the concave underside of the same fits over the bar of the handle and at the same time the bead 23 on its rear end wall 19 is pressed downwardly into engagement with the inner side of the spring lip 24, thereby holding the several parts in an assembled position.

For the purpose of facilitating the engagement of the hook 21 with the opening 22, the upper end of the wall 14 is curved slightly inward, as shown in Figures 1 and 3, and in order to prevent the rear end of the cover from swaying unduly in a crosswise direction toward one side or the other of the body two outwardly projecting retaining lugs 29 are provided on the wall 15 which are adapted to engage with opposite vertical edges of the depending end wall 19 of the cover and thereby arrest such lateral movement of the cover at this end and ensure holding the cover and body in their proper relative position.

When it is desired to remove the wrench members from this holder or casing it is only necessary to press the spring member 24 outwardly sufficiently to release the bead 23, after which the cover may be freely detached at its rear end from the corresponding end of the body, thereby affording access to the several wrench members and permitting the removal of the same from the holder and if desired the front end of the cover may also be wholly detached from the body by disengaging the hook 21 from the opening 22.

The holder and the parts mounted therein can be handled and transported without liability of the same becoming dismembered and scattering the parts. This holder and the wrench members mounted therein when thus assembled form a very compact mass which can be readily stowed away in a minimum of space thereby rendering the same particularly useful as part of an automobile tool kit.

I claim as my invention:

1. A holder for a socket wrench set having a plurality of sockets of different diameters adapted to be arranged in a row, said holder comprising a trough shaped body which is of tapering form in the direction of its length and adapted to receive the cor-

responding sizes of sockets in different parts thereof, and a cover adapted to extend lengthwise over the body and the row of sockets and confine the latter therein, said cover being provided at one end with a hook and at its other end with a bead and said body being provided at one end with an opening which receives said hook and at its other end with a spring catch which receives said bead.

2. A holder for a socket wrench set having a plurality of sockets arranged in a row and a handle having a bar adapted to be arranged lengthwise over said row of sockets, said holder comprising a body adapted to receive the row of sockets, and a cover connected with said body and having a channel on its underside which receives the bar of said handle.

3. A holder for a socket wrench set having a plurality of sockets of different diameters arranged in a row, and a handle having a bar adapted to be arranged lengthwise over the row of sockets and provided at one end with a tang which is adapted to be arranged vertically alongside of the smallest socket of the row, said holder comprising a body adapted to receive said row of sockets and having a flat bottom which tapers so that it is wide at one end and narrow at the other end, a narrow transverse end wall projecting upwardly from the narrow end of the bottom and provided at its upper end with an opening, a wide transverse end wall projecting upwardly from the wide end of said bottom and provided on its lower part with an outwardly offset loop having a punch mark, two longitudinal side walls arranged at the side edges of the bottom and converging from the wide end wall toward the narrow end wall, a catch having a vertical shank arranged in said loop and provided with an opening which receives said punch mark and a hook shaped lip arranged at the upper end of the shank, and a narrow cover having a channel shaped underside which receives the bar of said handle and is provided at one end with a depending hook adapted to engage with the opening in said narrow end wall, and on a depending bead at its other end which engages with said hook shaped lip.

4. A holder for a socket wrench set having a plurality of sockets of different diameters arranged in a row, and a handle having a bar adapted to be arranged lengthwise over the row of sockets and provided at one end with a tang which is adapted to be arranged vertically alongside of the smallest socket of the row, said holder comprising a body adapted to receive said row of sockets and having a flat bottom which tapers so that it is wide at one end and narrow at the other end, a narrow transverse end wall projecting upwardly from the wide end of said bottom and provided on its lower part with an outwardly offset loop having a punch mark, two longitudinal side walls arranged at the side edges of the bottom and converging from the wide end wall toward the narrow end wall, a catch having a vertical shank arranged in said loop and provided with an opening which receives said punch mark and a hook shaped lip arranged at the upper end of the shank, and a narrow cover having a channel shaped underside which receives the bar of said handle and is provided at one end with a depending hook adapted to engage with the opening in said narrow end wall, and a depending bead at its other end which engages with said hook shaped lip, the upper end of said wide wall being provided at its opposite vertical edges with outwardly projecting retaining lugs between which the adjacent depending beaded part of the cover is adapted to the confined.

EDWIN S. MILLER.