June 8, 1937. C. E. SUNDBERG 2,083,130

WRENCH SET HOLDER

Filed July 30, 1935

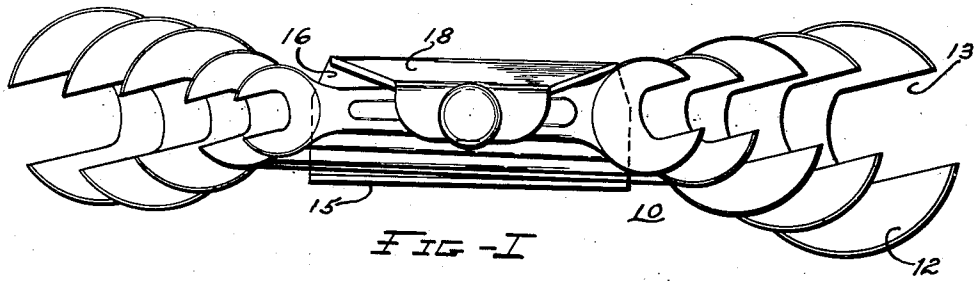



FIG-1

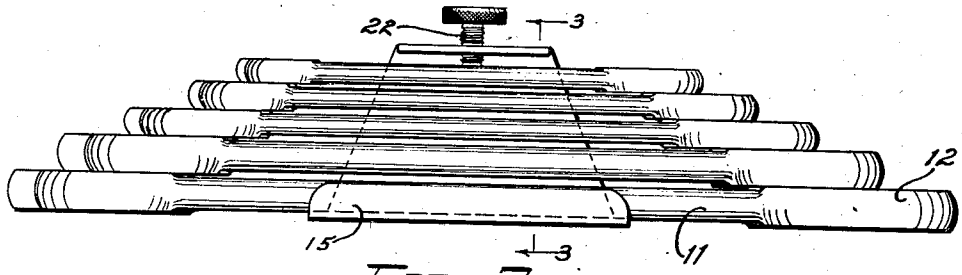



FIG-2

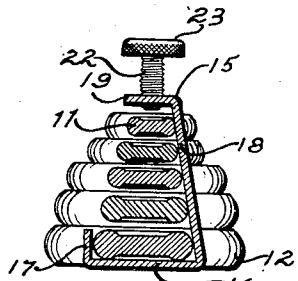



FIG-3

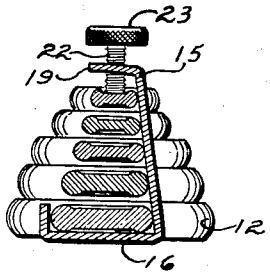



FIG-4

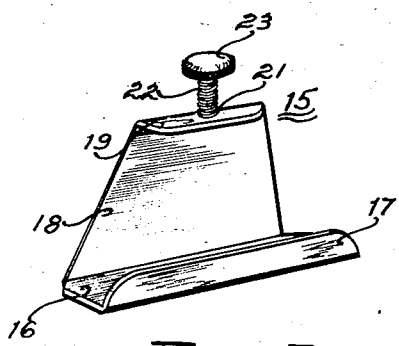



FIG-5

Inventor

Carl E. Sundberg

By J. Richmond S. Hayes

His Attorney

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# UNITED STATES PATENT OFFICE

2,083,130

## WRENCH SET HOLDER

Carl E. Sundberg, Jamestown, N. Y., assignor to J. P. Danielson Co., Inc., Jamestown, N. Y., a corporation of New York

Application July 30, 1935, Serial No. 33,835

4 Claims. (Cl. 206—16)

This invention relates to an improvement in wrenches of the flat double ended type and more particularly to wrench sets secured as an assembled unit in a holder.

It has become increasingly desirable to merchandise flat double ended wrenches in kits or sets. Each of these sets includes a plurality of graduated wrenches in superposed relation, being secured by a holder which exposes the ends of the wrench for examination by a purchaser. It is evident that a holder for wrench sets of this type must be economical to manufacture in order that the cost thereof will not be reflected in an increase in the cost of the wrench set. It is also essential that the holder be of simple and rugged structure since it will otherwise function only as a merchandise display and not be capable of indefinite use. It has heretofore been the practice to assemble wrench sets through the use of holders having several jointed or hinged parts which require some form of latch or fastener to releasably connect the parts and prevent inadvertent disassembly of the set. In many instances it has been found that jointed holders have become bent or broken after a short period of use, or that it was too much trouble for the user of the set to attempt to reassemble the wrenches exactly in their proper position to assure latching or fastening the holder.

The present invention was developed to provide a wrench set holder of extremely low cost, simple to operate, having no hinged parts, and which would take the set of wrenches in their properly arranged position or in practically any other position the user of the set happened to place them in the holder. These and other objects and advantages of the invention are set forth in the following specification and disclosed in the accompanying drawing in which:

Figure 1 is a plan view of a wrench set assembled in a holder embodying one form of the invention;

Figure 2 is a side elevation of the holder and wrench set shown in Figure 1;

Figure 3 is a vertical sectional view taken substantially on the line 3—3 of Figure 2 showing the set screw released to permit removal of the wrenches;

Figure 4 is a sectional view similar to Figure 3 showing the set screw turned down to frictionally secure the wrenches in place; and

Figure 5 is a perspective view of the holder.

Referring to the drawing, it will be noted that in the particular embodiment chosen for illustration, the wrench set or kit comprises a series of flat double ended wrenches 10 having substantially straight shanks 11 and enlarged heads 12 at opposite ends thereof. The respective heads have openings 13 of varying sizes and the respective shanks are graduated in length, width and thickness according to the size of the opening 13. Although in the present instance only five wrenches are shown, it will be understood that the holder may be made larger or smaller to accommodate a greater or lesser number of wrenches, and also that the shanks of the wrenches need not be straight since the base of the holder may be made to conform to the shape of any curved wrench.

The wrenches are stacked in superposed relation within a holder generally indicated by the reference numeral 15. The holder comprises a base or seat 16 which is walled on one side by a flange 17. The flange 17 may be of varying height and may serve to prevent direct lateral removal of one or more wrenches. A side wall 18 in conjunction with the flange 17 makes somewhat of a channel of the holder. The wall 18 is of a height slightly greater than that of the set of wrenches, being preferably inclined inwardly toward the center of the base wall 16, and terminates in a horizontal flange 19. A threaded opening 21 is made centrally of the flange 19 and a set screw 22 inserted therein. An enlarged knurled head 23 of the screw 22 facilitates use thereof.

As will be understood from a consideration of the drawing, Figures 3 and 4, the uppermost wrench is the smallest and is adapted to be engaged by the lower end of the screw 22. As the screw is advanced to frictionally secure the wrenches against displacement two changes may occur. The flange 19 of the holder will move slightly upwardly placing a tension on the side wall 18 and thus creating sufficient pressure on the threads of the screw to prevent inadvertent rotation thereof and the consequent disassembly of the set. The topmost wrench, being the smallest, is formed with a comparatively thin shank. Pressure of the screw 22 upon this shank tends to bow it and create a further tension against inadvertent rotation of the screw 22.

While the wrenches are arranged in the holder with the largest at the bottom and the smallest at the top at the time of initial packaging, it is not necessary, except for appearance, that, when assembled, they need be replaced in this order, since the spring like walls of the holder will produce a sufficient tension to prevent inadvertent rotation of the screw 22 even though the

smaller wrench is not utilized for this purpose as heretofore described. As a matter of fact, the wrenches may be replaced in the holder in any haphazard position so long as they are laid flat one upon the other.

Although applicant has shown and described only one form of holder or kit for sets of flat double ended wrenches it will be understood that the particular shape of the holder, the number or shape of wrenches receivable, and size of the elements of the holder may be varied without departing from the spirit and scope of the invention as defined in the hereunto annexed claims.

Having thus set forth my invention what I claim as new and for which I desire protection by Letters Patent is:—

1. A wrench set comprising a plurality of superposed wrenches, a holder embracing said wrench set, said holder comprising a base adapted to underlie the bottom wrench of the set, a side wall projecting upwardly from said base, a flange on said side wall overlying said base, a set screw projecting through a threaded opening in said flange and movable to engage the topmost wrench of said set.

2. A wrench set comprising a plurality of superposed wrenches, a holder embracing said wrench set, said holder comprising a base adapted to underlie the bottommost wrench of said set, a side wall projecting upwardly from said base, a flange on said side wall overlying said base, a set screw projecting through a threaded opening in said flange, said screw being movable to engage the topmost wrench of said set and cause said holder to be slightly distorted out of shape whereby to create pressure abutment of said wrenches with each other and with said holder.

3. A wrench set comprising a plurality of superposed wrenches, a holder embracing said wrench set, said holder comprising a base adapted to underlie the bottommost wrench of said set, a side wall projecting upwardly from said base, a flange on said side wall overlying said base, adjustable means in said holder, said means being movable to engage the topmost wrench of said set and cause one of said wrenches to be slightly bowed whereby to create pressure abutment of said wrenches with each other and with said holder.

4. A wrench set comprising a plurality of superposed wrenches, a distortable holder embracing said wrench set, said holder comprising a base adapted to underlie the bottommost wrench of said set, a side wall projecting upwardly from said base, a flange on said side wall overlying said base, a set screw projecting through a threaded opening in said flange, said set screw being movable to engage the topmost wrench of said set and slightly distort said holder whereby to prevent inadvertent displacement of the wrenches of said set from said holder.

CARL E. SUNDBERG.