Jan. 8, 1957 G. W. D. COOK 2,776,744

HOLDER FOR A CONVENTIONAL SET OF L-SHAPED WRENCHES

Filed May 18, 1954

Fig. 1.

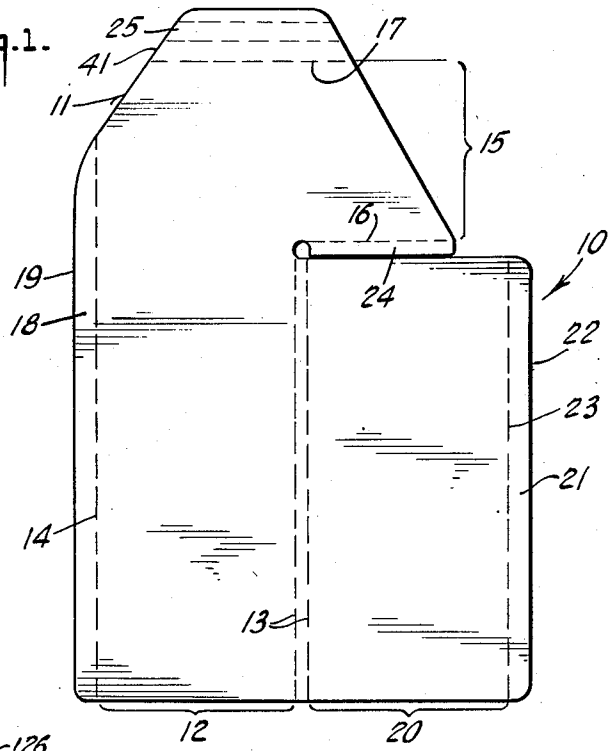


Fig. 2.

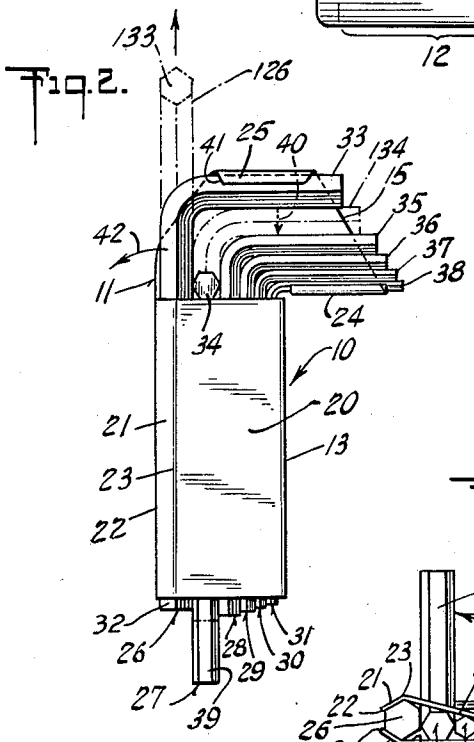


Fig. 3.

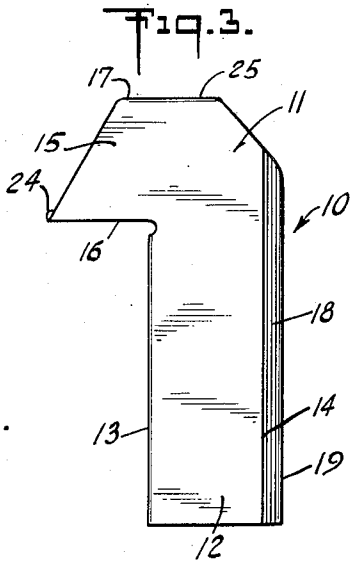
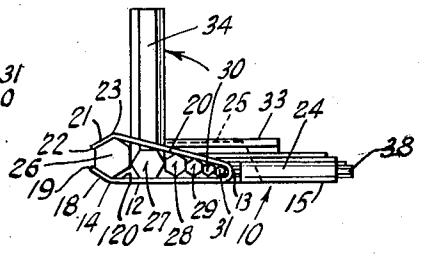


Fig. 4.



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HOLDER FOR A CONVENTIONAL SET OF L-SHAPED WRENCHES

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2 Claims. (Cl. 206—16)

The present invention relates to holders for conventional sets of L-shaped wrenches and, more particularly, of the Allen type wherein each wrench is normally hexagonal in section.

A general object of the present invention is to provide such a holder into which a graduated set of such wrenches may be fitted and securely clasped and held or racked, to be effectively retained against loss and misplacement while being readily manipulated therein or removed therefrom for efficient use.

A more specific object of the present invention is to provide such holder means in the form of a clip and clasp structure whereby the graduated set is snugly held in a generally flat plane while permitting one of the middle or intermediate wrenches to be manipulated so as to allow ready freeing of the other wrenches from the holder.

A further object of the present invention is to provide such a holder in a form which may be readily constructed, such as by being cut from a single sheet of metal with portions thereof then being bent to provide the clip and clasping means, and which permits efficient use and operation thereof.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises the features of construction, combinations of elements, and arrangement of parts, which will be exemplified in the constructions hereinafter set forth, and the scope of the invention will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawing, in which:

Fig. 1 is a plan view of a blank which may be employed to advantage in the construction of a preferred embodiment of the holder of the present invention;

Fig. 2 is a plan view of an embodiment of the holder of the present invention as formed by suitably bending the blank of Fig. 1, and illustrating the retention therein of a conventional set of Allen wrenches;

Fig. 3 is a plan view from the opposite side of the holder shown in Fig. 2; and

Fig. 4 is a bottom end view of the holder and racked wrenches shown in Fig. 2.

Referring to the drawing, in which like numerals identify similar parts throughout, it will be seen that an embodiment of the holder of the present invention may be patterned similar to that shown in Fig. 1, preferably being cut out of or punched from a metallic sheet having some resiliency, such as steel. The blank **10** has a base means **11** which preferably is in the form of a generally L-shaped section having an elongated portion **12** defined by bend lines **13** and **14**. Another base portion **15** is disposed substantially normal to elongated portion **12** and is defined by bend lines **16** and **17**. The bend line **14** defines a relatively narrow outside marginal

flange **18** adjacent an outside edge **19** to be turned up or outward along the outside margin of the elongated base portion **12** to provide a clasp structure having an upwardly curved lip, as will be best understood from Fig. 4. The bend defined at **13** may comprise a pair of closely spaced bend lines, and they define a relatively wide marginal portion **20** from the elongated base portion **12**. The portion **20** is, in the construction of the holder, lapped back over the elongated base portion **12** to form a top clip panel, with a relatively narrow marginal flange **21** defined between its edge **22** and a bend line **23**. The edge **22** of flange **21** is turned down or inward toward edge **19** but spaced appreciably therefrom to provide a longitudinal slot of appreciable width. Panel **20** forms a clip cover of certain resiliency for the base portion **12** to clasp snugly therebetween in the resulting laterally-tapered space **120** a set of the ends of a graduated group of Allen wrenches, as illustrated in Figs. 2 and 4.

The bend line **16** along the inside edge of the second base portion **15** defines a marginal flange **24** which is turned up to engage along the outer side of the smaller end of the smallest wrench. Likewise, bend line **17** defines along the outside edge of the base portion **15** another marginal flange **25** which is turned up to engage along the outer side of the smaller end of the largest wrench. As will be understood from Figs. 2 and 4, the marginal flanges **24** and **25** are bent outwardly or upwardly into C-shaped clasping flanges, respectively to engage the shorter ends of the two outside wrenches, and may be shaped complementary thereto as will be understood from the dotted bend lines in flange **25** as depicted in Fig. 1.

It will be understood from Figs. 2 and 4 that a graduated set of Allen wrenches may be securely mounted or racked in the embodiment of the holder illustrated in the drawing and such set of wrenches may comprise the larger one **26**, the next smaller one **27**, and gradually increasing smaller ones **28**, **29** and **30**, down to the smallest **31**. An Allen wrench usually has an elongated end, such as that illustrated at **32** for the larger wrench **26**, and a shorter, right-angled end **33**. The clip cover means, provided by the upturned marginal flange **18**, the overlying panel **20** and its downturned marginal flange **21**, resiliently clasps the elongated ends of the set of Allen wrenches to hold them snugly in their relative juxtaposed positions against the base portion **12**. Likewise, the two C-shaped marginal flanges **25** and **24** respectively grasp the shorter end **33** of the largest wrench **26** and the shorter end **38** of the smallest wrench **31** to snugly clamp therebetween in juxtaposed relation or in frictional contact the other smaller ends **34**, **35**, **36** and **37** of the other intervening wrenches, all in a generally common plane.

In order to manipulate one or more of the wrenches in the holder **10** for use, one may swing or rotate by force a shorter end **34** of wrench **27** outwardly from between the ends **33** and **35** of the adjacent wrenches and then slide its longer end **39** downwardly for projection, as illustrated in Fig. 2, to be socketed in the hexagonal recess of an Allen set screw. Of course, shorter end **34**, extending out at right angles from the holder, as illustrated in Fig. 4, may also be employed in that position to manipulate such a set screw. Such screw operations can be performed without removing the wrench from the holder, if desired. The outward swinging of the shorter end **34** of the intermediate wrench **27** from the dot-dash position **134**, illustrated in Fig. 2, to a position substantially normal thereto is permitted by virtue of the resiliency of the clip cover panel **20** which will spring away from base portion **12** with

rotation of wrench end **39** and then back to clamp the latter in its second position.

Further, the snug clasp of the shorter ends of the wrenches between the C-shaped flanges **24** and **25** assures frictional retention thereof in a generally common plane adjacent the face of the base portion **15** during normal handling but permits such forced outward swinging of any one of the intermediate short ends to allow wrench manipulation. If, for example, the short end **34** of the wrench **27** is swung upwardly from the dot-dash position **134** and then its longer end **39** slid forward through the clip comprising base portion **12** and clip cover panel **20** to the position indicated in full lines in Fig. 2, a space is left between the shorter ends **33** and **35** of the adjacent wrenches **26** and **28** to permit the end **33** of the outside largest wrench to be moved down in the direction of the dot-dash arrow **40** to adjacent the shorter end **35** of wrench **28**, thereby freeing end **33** from the C-shaped marginal flange **25**. This, of course, then allows the shorter end **33** of the largest outside wrench **26** also to be swung out through ninety degrees (90°) to extend normally from the base **11** of the holder **10**. If, then, the space between end **41** of C-shaped marginal flange **25** and the plane of the marginal flange **18** is of a width greater than the width of the longer end **32** of outside largest wrench **26**, that space may serve as a way or notch through which wrench end **32** may be readily withdrawn axially backwards from the space **120** between base portion **12**, clip panel **20** and clasping flange **18**, as illustrated in dot-dash lines at **126** and **133** in Fig. 2. After the largest wrench **26** is then freed from the holder **10**, the others, of course, can then be removed easily so that the entire set may be readily freed from the holder. It is to be understood, of course, that freeing of the largest wrench **26** in the manner indicated is not limited to that manipulation of the next adjacent wrench **27**, since similar manipulation of any of the other intermediate wrenches may provide sufficient space to allow the shorter end **33** of the largest outside wrench to be moved down from beneath the outside marginal flange **25** a distance sufficient to allow it thereafter to be swung out to the normal position for subsequent withdrawal.

As is best seen from Fig. 4, the space between the edge **19** of the upturned base portion flange **18** and the downturned edge **22** of the cover panel marginal flange **21** is in the form of a longitudinally-extending slot of appreciable width. The holder of the present invention is to be made from a blank of resilient material, such as metal or plastic of some rigidity. Thus those opposed marginal flange edges **19** and **22** may be spread apart with resilient spring of the sections which define the laterally-tapered space **120** if suitable leverage is applied. For example, the longer end **32** of the largest wrench **26** may be quickly freed from the space **120** by applying lateral force to the wrench end **32** in the vicinity of the juncture thereof with its shorter end **33** in the direction of the arrow **42** in Fig. 2 (after freeing end **33** from the C-shaped flange **25** in the manner described above). This may be done by simply rotating the shorter end **33** through about 180° to the outer side and then pulling thereon. Such pull levers the wrench end **32** through the elongated side slot between the edges **19** and **22**, and this method of demounting the larger wrench may be preferred by some to axial withdrawal up through the corner notch. Likewise, the other wrenches may be successively levered through the side slot in similar fashion. Thus, in order to free the shorter ends of the wrenches from between the C-shaped flanges **24** and **25** flanking the shorter arm of the L-shaped base portion, one swings upwardly through about 90° the shorter end of any one of the intermediate wrenches and moves it inward toward the cover panel **20** permitting the shorter end **33** of the largest wrench **26** to be moved inward free from the flange **25**. Thereafter, this shorter end of the larger wrench **26** can then be swung upwardly to permit removal of the longer end **32** of the largest wrench either by axial withdrawal through the corner notch or by leverage out through the side slot, as may be desired. This frees the other wrenches in the holder so that their loose disposition permits ready removal by a variety of manipulations.

It will thus be seen that the objects set forth above, among those made apparent from the preceding description, are efficiently attained and, since certain changes may be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description, or shown in the accompanying drawing, shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A holder for and a set of graduated Allen wrenches comprising, in combination, an L-shaped substantially flat base plate having front and back faces and an elongated portion and a second portion extending laterally to one side from and substantially normal to said elongated portion with both portions disposed in a common flat plane, resilient clip means on said elongated base portion spaced outwardly from the front face thereof and providing therebetween a laterally-tapered space snugly receiving and clasping the longer ends of said set of wrenches racked therein in graduated order, and clasping means on opposed marginal edges of said second base portion parallel with and engaging only the outer sides of the shorter ends of the smallest and largest of said wrenches on the opposite sides of the racked set with the remainder of the set snugly held therebetween by frictional interengagement while permitting any one of the latter intermediate shorter wrench ends to be force rotated to a normal extending position relative to the general plane of the racked set to provide an intermediate space to which an adjacent wrench shorter end may be slid to free a wrench shorter end from one of said marginal clasping means for removal of wrenches from the holder, said wrenches having their longer and shorter ends seating on the faces of said portions of said base means and arranged together in a general common flat plane, said resilient clip means being connected to the inside marginal edge of the elongated portion of said L-shaped base plate and lapped back over the latter toward the outside edge of this elongated portion to provide the intervening laterally-tapered space, the outside edges of said elongated portion and said clip means being turned inwardly toward each other but being appreciably spaced to provide a relatively wide longitudinal slot along the outer side of the tapered space through which the juxtaposed longer end of the larger wrench may be levered.

2. A holder for and a set of graduated Allen wrenches comprising, in combination, an L-shaped base plate having an elongated portion and a second portion arranged substantially at right angles to the latter with both lying substantially in a common plane, an upturned marginal clasping flange flanking the outside edge of said elongated base portion receiving thereagainst the longer end of the largest of a set of graduated Allen wrenches, a relatively wide clip panel extending from the inside marginal edge of said elongated base portion outward and over toward said marginal clasping flange and having a downturned marginal clasping flange opposed to and spaced from the latter to provide a longitudial slot of appreciable width, said elongated base portion and said clip panel providing therebetween a laterally-tapered space snugly receiving and resiliently clasping the longer ends of said set of wrenches racked therein in graduated order,

a marginal clasping flange turned up along the inside edge of said second base portion receiving therein the shorter end of the smallest of the set of wrenches, and another marginal clasping flange turned up along the outside edge of said second base portion receiving therein the shorter end of the largest of the set of wrenches, the distance between said marginal clasping flanges flanking said second base portion being such that said flanking flanges clamp snugly therebetween the juxtaposed shorter ends of the set of wrenches in frictional face-to-face engagement for maintenance in a common racked plane while permitting an intermediate one of said wrench shorter ends to be swung outwardly for providing intervening space between adjacent wrench shorter ends to permit the shorter end of the largest wrench to be moved inward

free from engagement with the outside marginal clasping flange of said second base portion, whereby the longer end of the larger wrench may be levered through said slot with resilient separation of the turned edges defining the slot.

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