Sept. 13, 1932. E. C. KOSTER 1,877,466

WRENCH SET UNIT

Filed June 29, 1928

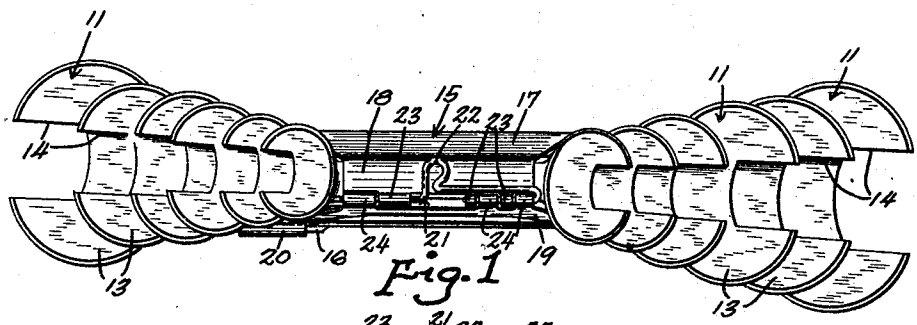


Fig. 1

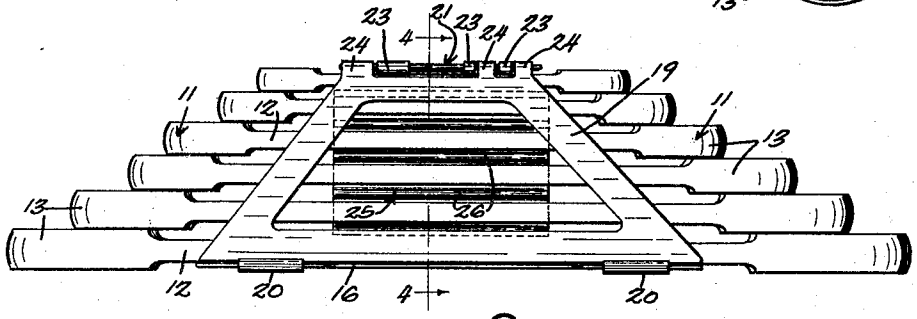


Fig. 2

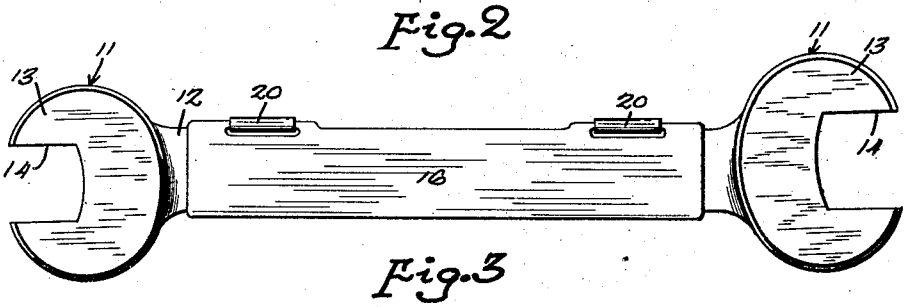


Fig. 3

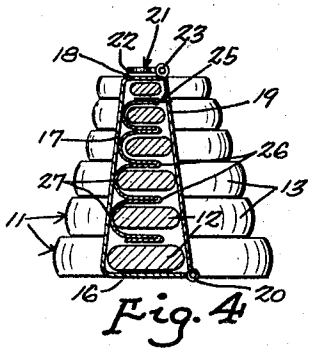


Fig. 4

EDWARD C. KOSTER
Inventor
by Smith and Freeman
Attorneys

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UNITED STATES PATENT OFFICE

EDWARD C. KOSTER, OF SHAKER HEIGHTS, OHIO, ASSIGNOR TO THE VLCHEK TOOL COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO

WRENCH SET UNIT

Application filed June 29, 1928. Serial No. 289,103.

My invention relates to wrench set units, and the principal object of my invention is to provide a wrench set assembled in a package in a manner convenient for merchandising. In the drawing accompanying this specification and forming a part of this application I have shown, for purposes of illustration, one form which my invention may assume, and in this drawing:

Figure 1 is a top plan view of the embodiment of my invention herein shown,

Figure 2 is a side elevation thereof,

Figure 3 is a bottom plan view thereof, while

Figure 4 is a section taken on the line 4—4 of Figure 2.

In the embodiment of my invention herein shown I have assembled six fixed-size wrenches 11 each comprising a shank 12 terminating at its ends in enlargements 13 containing recesses 14 formed to fit nuts of standard size and one slightly larger than the other to fit a nut of the next larger size than that fitted by the other. In addition I have selected these six wrenches 11 so that each is slightly larger than the preceding, both larger in length of the shank 12 and larger in size of the recesses 14, and I have made the selection in such manner that the small recess 14 of the second wrench 11 fits the nut of next larger size than that fitted by the large recess 14 of the first wrench 11, and so on, so that the twelve recesses 14 of the six wrenches 11 fit nuts of twelve consecutive sizes.

After assembling these six wrenches in this manner I secure them so assembled by means of a binder 15 having its base 16 disposed beneath the bottom of the largest wrench 11 adjacent the junction of its shank 12 with its two enlargements 13, having one side 17 formed integral with the base 16 and extending up one side of the six wrenches 11 and crossing the shank 12 of each wrench 11 adjacent the junction of that shank 12 with the enlargements 13 of that wrench 11 and terminating adjacent the edge of the top face of the top wrench 11, having a top 18 formed integral with the one side 17 and lying above the top face of the shank 12 of the top wrench 11, and having the other side 19 hinged to the other edge of the base 16 at 20, extending up the other side of the six wrenches 11 and crossing the shank 12 of each wrench 11 adjacent the junction of that shank 12 with the enlargements 13 of that wrench 11 and terminating adjacent the edge of the top wrench 11, and releasably secured in closed position by a latch 21 provided with an operating handle loop 22, sliding in bearings 23 rolled from the free edge of the top 18, and movable into keepers 24 rolled from the top edge of the hinged side 19.

In the embodiment of my invention herein shown and described I show the six wrenches 11 additionally secured and supported by means of a spacer unit 25 convoluted from a single sheet to provide flanges 26 extending between each adjacent pair of wrenches 11 and united by back-sections 27 welded to the fixed binder side 17 to secure the entire spacer unit 25 rigidly and permanently to the fixed binder side 17 and therefore to the binder 15 as a whole.

It will be obvious that with the construction herein shown and described the retraction of the latch 21 will permit swinging of the hinged binder side 19 to open the binder 15 and permit removal of any desired wrench 11, and that with the side 19 closed and the latch 21 seated the binder operates to hold the wrenches 11 in a single unitary package secured against both separation and material shifting, also that by the addition of the spacer unit 25 the wrenches 11 are additionally secured at all times, but particularly when the binder 15 has been opened.

Of course it will be understood that the spacer unit 25 need not be employed if this additional securing and supporting may be omitted.

In either event, however, it will be clear that the embodiment of my invention herein shown and described accomplishes at least the principal object of my invention.

At the same time it also will be understood by those skilled in the art that the embodiment of my invention herein shown and described embodies advantages other than those specifically pointed out or suggested herein, and also that this embodiment of my inven-

tion may be variously changed and modified without departing from the spirit of my invention or sacrificing the advantages thereof.

Therefore it will be understood that the disclosure herein is illustrative only, and that my invention is not limited thereto.

I claim:—

1. A wrench set unit, comprising a plurality of wrenches each having enlargements at opposite ends and assembled side by side, and a holding device for said wrenches including plate means cooperating with said wrenches and adapted to interabut with the enlargements of said wrenches to prevent substantial longitudinal shifting thereof relative to said holding means, said plate means having a series of corrugations adapted to receive the handles of said wrenches, and forming seats therefor.

2. A wrench set unit, comprising a plurality of wrenches of graded sizes, and assembled side by side, each having enlargements at opposite ends, and a holding device for said wrenches including plate means cooperating with said wrenches and adapted to interabut with the enlargements of said wrenches to prevent substantial longitudinal shifting thereof relative to said holding means, said plate means having a series of corrugations of varying depth and width to accommodate the different sized handles of said wrenches.

3. A wrench set unit, comprising: a plurality of wrenches stacked side by side, each having enlargements at opposite ends; binder means extending about said wrenches and having means interabutting with said enlargements to prevent any substantial longitudinal shifting of said wrenches with respect to said binder means; said binder means having a portion thereof hinged and openable; interengaging ears upon the openable portion and said binder means, and a slidable locking member detachably engageable with said ears.

4. A wrench set unit, comprising a plurality of wrenches each having enlargements at opposite ends and assembled side by side, and a holding device for said wrenches including plate means cooperating with said wrenches and adapted to interabut with the enlargements of said wrenches to prevent substantial longitudinal shifting thereof relative to said holding means, said plate means having a series of corrugations adapted to receive the handles of said wrenches, said corrugations extending along the central portion of said holding device, terminating short of the ends of said holding device, extending between said wrenches, and forming seats therefor.

5. A wrench-set-holder comprising: a plate means having a series of corrugations adapted to serve as pockets to receive the various wrenches of a set, and a restraining plate having a movable connection with said plate means at one end of its series of corrugations, and means whereby said restraining plate may be detachedly secured to said plate means at the opposite ends of said series of corrugations.

6. A wrench set unit, comprising a plurality of wrenches of different sizes assembled side by side, each having enlargements at opposite ends, and binder means extending about said wrenches and adapted to interabut with the enlargements of said wrenches to prevent substantial longitudinal shifting thereof relative to said binder means, said binder means having a series of corrugations of varying depth and width to accommodate the different sized handles of said wrenches, the depth of each corrugation being less than the width of each wrench handle, and an openable portion of said binder means adapted to engage the portions of said handles projecting from said corrugations.

7. A wrench set unit, comprising: a plurality of wrenches stacked side by side; binder means extending about said wrenches and holding said wrenches so stacked, said binder means having a portion thereof hinged and openable; interengaging ears upon the openable portion and said binder means, and a slidable locking member detachably engageable with said ears.

In testimony whereof I hereunto affix my signature.

EDWARD C. KOSTER.