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N. L. WENTLING

2,465,048

WRENCH HEAD FOR TIGHTENING WING NUTS

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Fig. 1

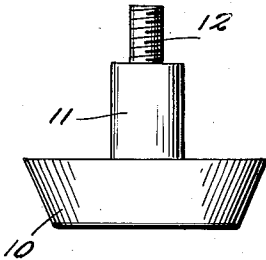


Fig. 2

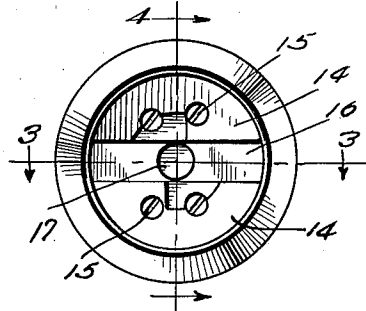


Fig. 3

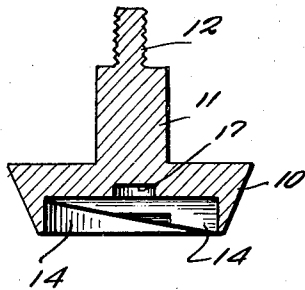


Fig. 4

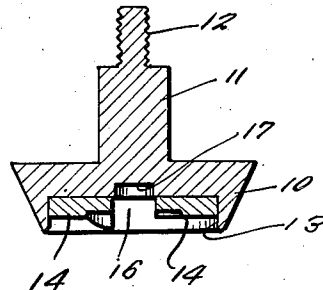


Fig. 5

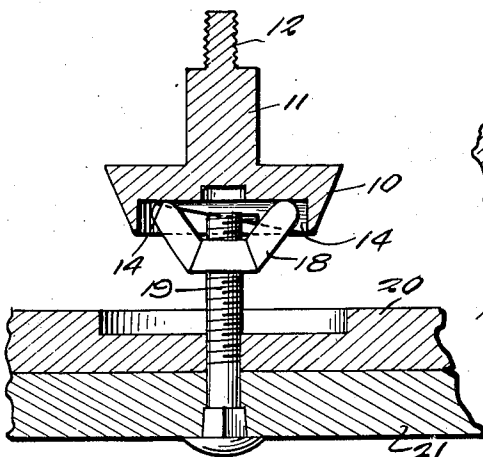
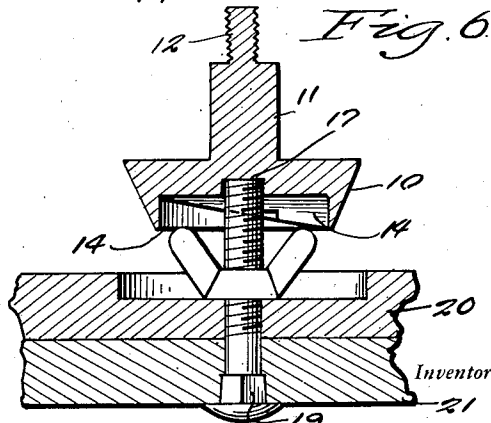


Fig. 6



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## UNITED STATES PATENT OFFICE

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WRENCH HEAD FOR TIGHTENING  
WING NUTSNorval L. Wentling, Cumberland, Md., assignor of  
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Application October 19, 1944, Serial No. 559,358

1 Claim. (Cl. 81-121)

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This invention relates to a wrench head and more particularly to such a wrench head adapted to be driven by a rotating tool such as a torque screwdriver or the like.

A primary object of this invention is the provision of an improved wrench head adapted to be rotated by a rotating tool to tighten wing nuts, such as utilized in association with packing crates or the like.

An additional object of this invention is the provision of such a device which will tighten the wing nuts in an improved, speedy and efficient manner.

Still another object of this invention is the provision of such a device which, when the wing nut is tightened, to automatically ride off the same, in order to preclude damage to the nut or threads.

Still another object of the invention is the provision of such a device adapted for the tightening of wing nuts in a more efficient, speedy and reliable manner, adapted to save time in any industrial operation requiring the use of wing nuts and associated bolts.

Other objects will in part be obvious and in part be pointed out as the description of the invention proceeds and shown in the accompanying drawings, wherein there is disclosed a preferred embodiment of this inventive concept.

In the drawings—

Figure 1 is a side elevational view of one form of device embodying the instant invention.

Figure 2 is a bottom plan view of the device shown in Figure 1.

Figure 3 is a sectional view taken substantially along the line 3-3 of Figure 2.

Figure 4 is a sectional view taken substantially along the line 4-4 of Figure 2.

Figure 5 is a sectional view similar to Figure 3 showing the device in association with a wing nut and bolt, and

Figure 6 is a view similar to Figure 5 showing the wing nut after tightening.

Like reference numerals refer to like parts throughout the several views of the drawings.

In the drawings there is shown at 10 a body portion of inverted frusto-conical shape, from the base of which extends a shank 11 terminating in a threaded extremity 12, adapted to be engaged by any suitable rotating tool (not shown), such, for example, as a torque screwdriver.

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Cut into the inverted apex of frusto-conical body portion 10 is a cylindrical recess 13 positioned within which are two oppositely disposed, arcuate, cam surfaced members 14 which may be secured in position as by screws or rivets 15. Members 14 are so spaced as to leave a slotted aperture 16 therebetween, in the center of which is a cylindrical aperture or hole 17. It will be noted that at their lower extremities members 14 are substantially flush with the bottom of recess 13, tapering throughout their lengths to a height substantially equal to the depth of the recess.

When it is desired to secure wing nut 18 to a bolt 19, securing two members 20 and 21 in related assembly, for example, the device is placed in the position shown in Figure 5, the wing nut having first been positioned on the extremity of the bolt 19. The wings of the wing nut extend transversely of the slot 16, and the device is rotated in any desired manner. As the nut is tightened to the position shown in Figure 6, the extremity of the bolt 19 engages in the bottom of the slot 16 or in the aperture 17, and gradually forces the device upwardly with respect to the wings of the wing nut 18. Thus, as the nut is tightened the wings are gradually pushed farther and farther out of the slot 16, until finally when the nut is completely tightened as shown in Figure 6, the tips of the wing nut are sufficiently clear of the extremities of the cam surfaces 14, to permit the device to slip.

It will be readily apparent that the device may be made of any desired material, and in a variety of shapes and sizes, to accommodate any desired type or form of wing nut utilized in any operation requiring the same.

From the foregoing it will now be seen that there is herein provided a device accomplishing all the objects of this invention and others including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment herein shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

In a device of the character described, a body portion having a cylindrical recess therein, two

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spaced oppositely disposed semi-circular cam surfaced members detachably secured in said recess and forming a slotted aperture therebetween adapted to receive the wings of a wing nut, there being an axial opening intersecting said recess and having a bottom wall for engagement with the end of a bolt associated with said wing nut, whereby continued rotation of the wing nut by the device will force the end of the bolt into engagement with said bottom wall to cause the wing portion of the nut to ride free of the slotted aperture on said cam surfaced members.

NORVAL L. WENTLING.

**4****REFERENCES CITED**

The following references are of record in the file of this patent:

**UNITED STATES PATENTS**

| Number    | Name            | Date          |
|-----------|-----------------|---------------|
| 169,489   | Smeaton .....   | Nov. 2, 1875  |
| 347,262   | Wood .....      | Aug. 10, 1886 |
| 1,196,839 | Bodene .....    | Sept. 5, 1916 |
| 1,394,539 | Danielson ..... | Oct. 25, 1921 |
| 1,832,185 | Cochrane .....  | Nov. 17, 1931 |