

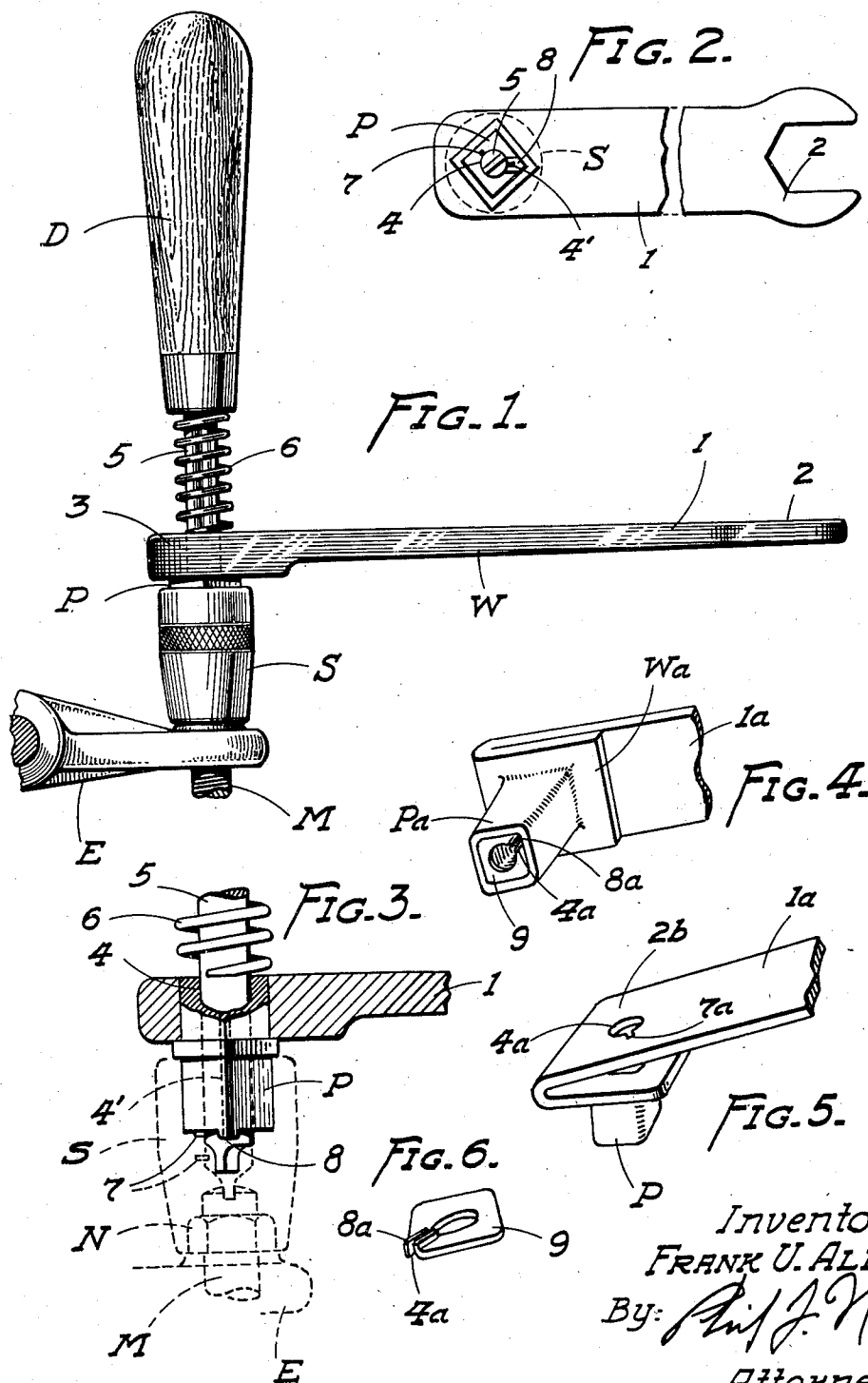
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REGULATING TOOL

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REGULATING TOOL

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1 Claim. (Cl. 81—3)

This invention relates to implements particularly useful in the adjusting of mechanical assemblies while same are active in the performance of their operative functions.

5 The objects of the invention are:—

The providing of a tool whereby two adjustable elements may be regulated while in motion in order to better determine a desired relationship that is sensed more accurately during active operation.

10 The offering of a manual tool which provides, in a unitary assembly, the necessary wrench and screw-driver combination essential for certain mechanical adjustments.

15 The providing of a dual function implement which may be divided upon occasion for purposes other than the double functioning attribute for which the assembly is primarily intended.

20 The device is fully disclosed in the accompanying drawing, and pointedly set forth in the appended claim which latter particularly sets forth the features described in the associated specification.

The drawing is indexed as follows:—

25 Fig. 1 is a general view of the invention showing its use in adjusting a rocking element of an engine or similar shifting means.

Fig. 2 is a bottom plan view of Fig. 1.

30 Fig. 3 is an enlarged fragmentary sectional detail.

Fig. 4 is a modification showing an integral pressed metal form.

Fig. 5 is a further disclosure of Fig. 4.

35 Fig. 6 is an element used in the modified form.

Similar characters of reference apply to like parts throughout the several views. The design chosen is illustrative of the invention, but the aspects may vary from what is here shown, it is respectively remarked, without departing from the spirit of the invention.

40 Referring to the drawing, a wrench assembly W comprises a lever arm 1 whose free end may terminate in a suitable wrench-head 2, or other formation common to the arts wherein this invention may apply. The opposite end 3 of said lever arm will provide a centrally bored, square, and rigidly associated plug P, adapted to fit the commercial wrench, or nut sockets S, obtainable in sets for various sized nuts N. The bore 4 of said plug is axially perpendicular to the lever arm of the aforesaid wrench assembly, offers a bearing wherein reciprocates the shank 5 of a screw-driver D. Around the shank 5, between the lever arm 55 1 and ferrule of said screw-driver, is disposed

a cushioning spring 6. To prevent the spring 6 from separating the wrench and screw-driver elements, a dowel 7 projects from the shank 5 which shoulders against the bottom face of the plug P. The two principal tool elements, wrench and screw-driver as individual entities may, however, be separated, but only when this separation is intentional. Normally the dual assembly will remain as one, because of the aforesaid dowel 7, or similar means. There are several ways by which 65 the screw-driver may be released, but the suggestions disclosed in the drawing will be sufficient to the purpose here intended. The bore 4 has a groove or key-way 4' which will permit the dowel 7 to be drawn from the plug P. To prevent other 70 than intended separation, the said groove is guarded against any casual entrance of the dowel by a boss 8 protruding from the bottom face of plug P, wherein the said groove occurs centrally of same. This boss is rounded off as shown, so 75 that the dowel 7 will slip off said boss unless removal is purposeful. The resiliently cushioned screw-driver may be depressed and turned to align, both, dowel and groove when removal of the screw-driver, as an individual tool, is desired. 80 The spring will ordinarily keep the dowel against the bottom face of the plug P, in which position the boss 8 forms a guard about the groove, leaving unintentional parting a remote possibility. Frequently, there occurs jam-nuts having set- 85 screws therein when it is convenient to hold a nut with the wrench portion, while adjusting the locking screw with the detached screw-driver.

Figs. 4, 5, and 6 illustrate a similar means wherein the economy of manufacturing in 90 pressed-metal allows the attaining of the equivalent features in unitary forms.

The wrench assembly Wa is a sheet-metal strap stock wherefrom the plug Pa is an integral shell or square tube extrusion. In this form the 95 lever arm 1a, has a portion 2b which is punched to offer an opening 4a; the latter has a notch 7a which aligns with one corner of the squared extrusion Pa when the folded portions are flattened together. The end of the plug Pa is closed with 100 a washer 9 which, in turn, has a slot 7b formed by bending the metal so as to arrange a guard 8a thereabout, which approximates the provision offered by the aforesaid boss 8. In other respects 105 the tools are similar; the shank 5 of the screw-driver D being disposed in the plug Pa, with the opening 4a and washer 9 functioning as a reciprocative-bore or guide for said shank.

The manipulating of the tool will be obvious. 110

The occasions for its use are in the adjustment of a regulating screw, rod, or like element M with the screw-driver D while loosening and holding the jam-nut N with the wrench W. As shown 5 the adjustment relates to an engine part, or rocking lever E, while said lever is rapidly oscillating. The spring 6 holds the screw-driver out of the way automatically which latter may be easily depressed to pick out a screw-slot whose location 10 above the nut N will vary. The wrench W is held on the said nut after locating same, by downward pressure on the member D while the tool travels up and down with the rocking parts. The conveniences residing in an implement of the concerned design permits of making necessary ad- 15 justments under all conditions. The cap-like nut-socket S may be readily slipped over the end M as a hood, even in the dark; the screw-slotted end being freely enterable into the socket, thus 20 maintaining a guiding relationship to aid in registering the socket portion around the oscillating

nut. It is only while a motor is warm and running that adjustments can be made with any degree of precision.

Having described the invention what is claimed and desired to protect by United States Letters Patent, is:— 80

In a regulating tool the combination; an integral lever arm and squared plug formation; separated and axially aligned bearing means having dowel-slots, at the plug and arm formations, 85 for a normally inseparable screw-driver element; said element provided with a shank dowel; said element rotatively free in the plug portion only when depressed; said means allowing detachment of said element when the latter is depressed 90 and purposely rotated to dispose said dowel in registry with the aforesaid slots; said squared plug devised to accommodate commercial nut-sockets.

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