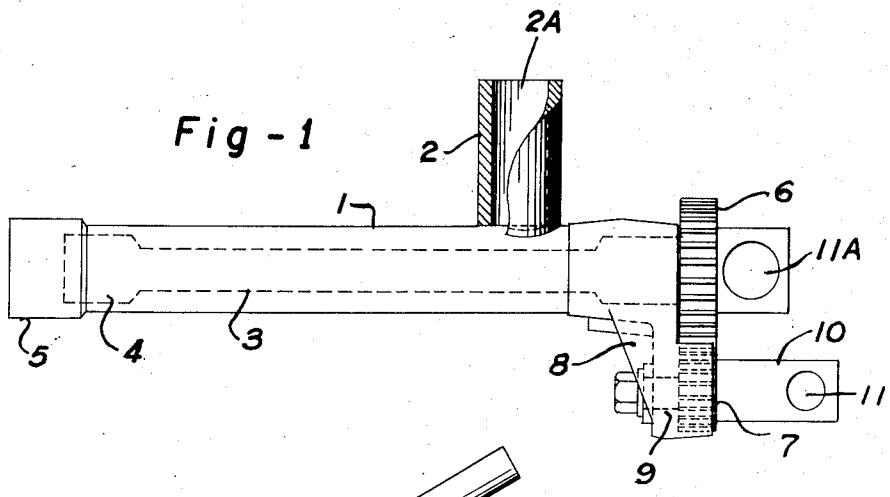
July 21, 1953 V. RESCH 2,645,965

DUAL WHEEL WRENCH

Filed Oct. 13, 1951

Fig - 1



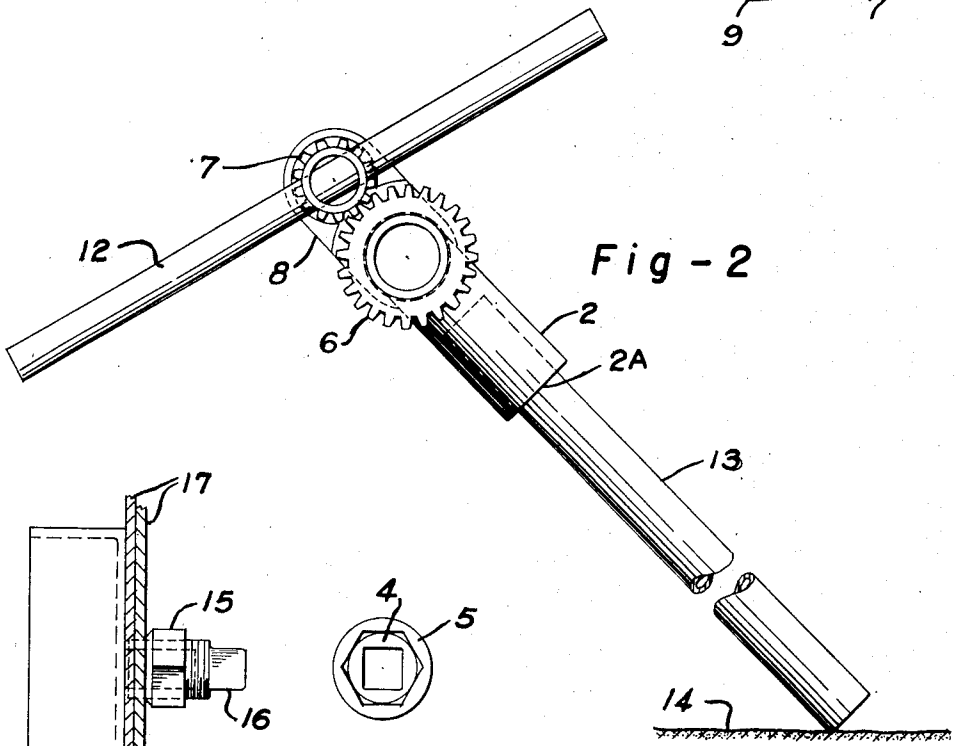




Fig - 2




Fig - 3




Fig - 4

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## DUAL WHEEL WRENCH

Victor Resch, Sacramento, Calif.

Application October 13, 1951, Serial No. 251,164

1 Claim. (Cl. 81—56)

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My invention is an improvement over Patent No. 2,275,633, issued to John Keiser, Windsor, Colorado, March 10, 1942, and under the method taught by this patent the casing moves around the inner shaft nut for the outer wheel and in order to remove the inner nut the wrench imparts a direct rotation, while in removing the outer nut a multiplied leverage will be obtained.

One of the objects of my improvement is to use means so that the multiplied leverage may be used on the inner nut, which in practice becomes the one most difficult to remove and apply, by improving the present dual wheel wrench.

Other objects and advantages reside in the detail construction of the invention, which is designed for simplicity, economy, and efficiency. These will become more apparent from the following description.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth and claimed, it being understood that changes in the precise embodiment of the invention may be made without departing from the scope of the invention.

In the drawings:

Figure 1 is a side view of the existing wrench with the improvement attached.

Figure 2 is an end view in operating position for removing the inner nut.

Figure 3 is a section of a portion of a wheel assembly showing a typical lug arrangement.

Figure 4 is a view of the end of the wrench that attaches to the wheel lug.

Referring to the drawings, the numeral 1 designates a hollow shank member of existing wrench. The numeral 2 is a new member fastened to the shank 1, so that it will be a rigid portion of that part. The numeral 2*a* represents a hole within the member 2 which is adapted to receive therein a handle or rod to obtain multiplied leverage upon the inner nut. The numeral 3 represents the inner shaft of the existing wrench, while the numeral 4 designates a portion of the wrench for turning the inner nut, and the numeral 5 is a portion of the wrench for turning the outer nut. The numeral 6 represents a large gear fastened rigidly to the shaft 3, while the numeral 7 is a smaller gear fastened to the shank 1 through the lever arm at the pivot point 9. The numeral 8 represents a lever arm, while the numeral 9 is a pivot point. The numeral 10 designates a projecting collar fastened rigidly to the gear 7, and the numeral 11 designates a hole which is adapted to receive the lever rod, while 11*a* is a hole for receiving a lever rod for direct rotation. The numeral 12 represents a lever rod while 13 designates an anchor arm which is

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adapted to be inserted into the sleeve 2 when the user is ready to remove the inner nut in order to hold the shank 1 in a stationary position to thereby give an added gear ratio power to the shaft 3. The numeral 14 represents the ground or pavement, while the numeral 15 is the outer nut of the wheel lug while 16 is the inner nut of the wheel lug and 17 is the hub section of the wheel.

In the present operation of the dual wheel wrench which only applies multiple leverage upon the outer nut and direct rotation to the inner nut when tightening the outer nut, it has a tendency to loosen the inner nut; also the action of the wrench in its present operation is that the casing, or hollow shank member, revolves around the inner shaft of the existing wrench, while in the improvement the inner shaft 3 turns within the hollow shank member 1, thus creating a multiple action upon the inner nut, thus you can tighten the inner nut separately before tightening the outer nut.

Having thus described the improvement of my invention, what is claimed and desired secured by Letters Patent is:

A dual socket wrench comprising; a tube; a nut socket on one extremity of said tube; an arm fixed to and projecting diametrically outward at the second extremity of said tube; a rotatable shaft in said tube; a second smaller nut socket on the inner extremity of the shaft within the first nut socket, the outer extremity of said shaft projecting from the second extremity of said tube; a driven gear fixed on the projecting portion of said shaft adjacent the outer face of said arm; a smaller drive gear rotatably mounted on the outer face of the extremity of said arm in mesh with the driven gear; a hollow sleeve projecting concentrically from said drive gear; and a similar sleeve projecting from said driven gear, both sleeves having openings for the passage of a turning bar whereby either gear may be rotated and a hollow pipe containing an opening attached to the tube within which an anchor arm may be inserted.

VICTOR RESCH.

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