

April 1, 1941.

E. JOHNSON

2,237,230

JACK

Filed Feb. 16, 1940

Fig. 1.

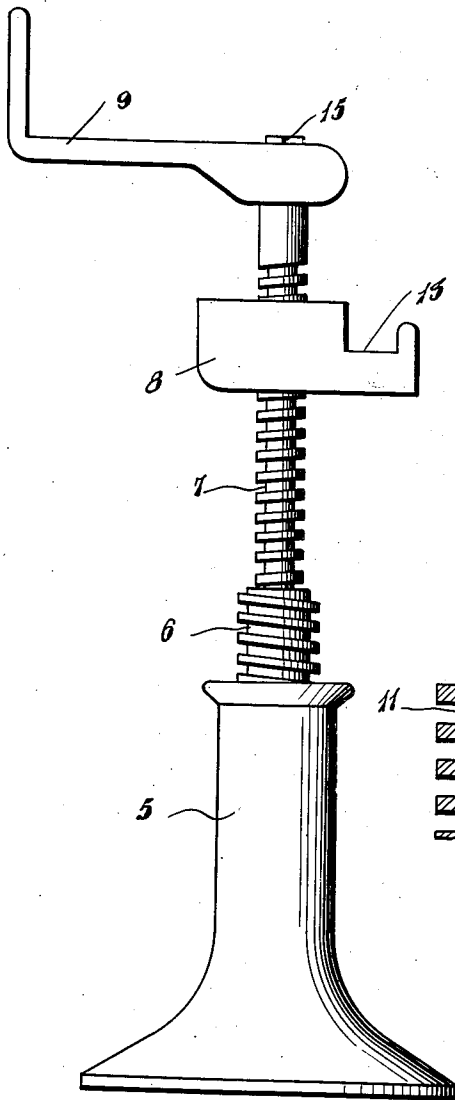


Fig. 2.

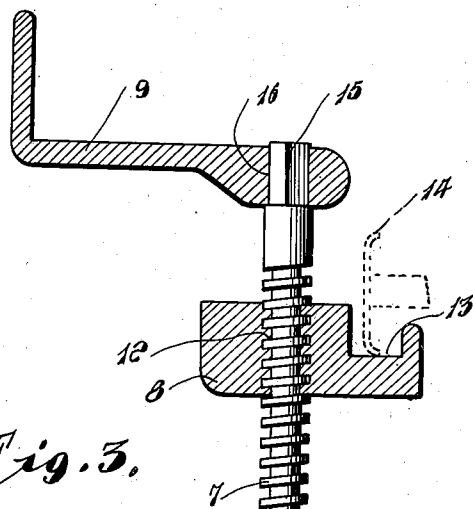
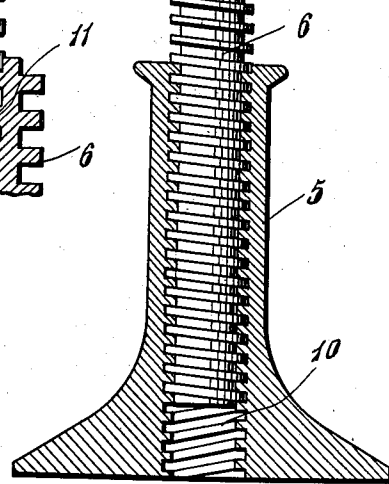
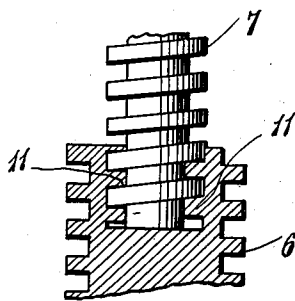


Fig. 3.



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UNITED STATES PATENT OFFICE

2,237,230

JACK

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Application February 16, 1940, Serial No. 319,346

1 Claim. (Cl. 254—98)

This invention relates to certain new and useful improvements in jacks.

The primary object of the invention is to provide a jack for use in raising a motor vehicle wherein the jack is of the screw type and includes coacting screw members, whereby it is possible to obtain twice the amount of jack movement or work support elevation as compared with the use of a single screw for each single rotation of the coacting screws.

A further object of the invention is to provide an automobile jack of the foregoing character and of the type especially designed for bumper engagement and employed for partially separating the leaves of the automobile spring to facilitate the passage of oil or lubricant between the leaves of the spring and to accomplish such separation of the spring leaves with a minimum of effort.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists in general of certain novel details of construction and combination of parts hereinafter more fully described, illustrated in the accompanying drawing, and claimed.

In the accompanying drawing:

Figure 1 is a side elevational view of a motor vehicle jack constructed in accordance with the present invention,

Figure 2 is a vertical sectional view showing a pair of coacting screws with a bumper lift bracket on one screw and the other screw having threaded engagement with a base member or stand, a bumper bar being fragmentarily illustrated by dotted lines, and

Figure 3 is an enlarged fragmentary sectional view showing the threaded connection between the two screw members of the jack.

Referring more in detail to the accompanying drawing, the jack is illustrated as comprising a ground-engaging stand or base 5 in which a screw rod 6 is vertically threaded, the screw rod 6 having the lower end of an upper screw rod 7 of less diameter threaded therein, a bumper bar supporting bracket 8 being threaded on the upper screw 7, while a crank-handle 9 is carried by the upper end of the screw rod 7.

As shown in Figure 2, the ground-engaging stand or base 5 has a vertical bore therethrough that is threaded as at 10 for the threaded reception of the screw rod 6 and said screw rod 6 is preferably formed with left-hand square threads as illustrated.

The upper end of the screw rod 6 has a socket therein, the internal wall of which is threaded as at 11 for the threaded reception of the lower end of the screw rod 7. The threads upon said screw rod 7 are square and right-hand threads

as illustrated. It has been found in practice that like thread dimensions for the screw rods 6 and 7 produce the most efficient results and, as an example only, the threads upon the two screw rods 6 and 7 may be ten threads to each inch.

The bumper bar supporting bracket 8 has an internally vertically threaded bore 12 therein for the threaded passage of the screw rod 7 and said bracket 8 has a pocket 13 in one end thereof laterally of the screw rod 7 for the supporting reception of the bumper bar 14 illustrated by dotted lines in Figure 2.

As shown in Figure 2, the upper end of the screw rod 7 is of polygonal formation to provide a key 15 that is received in a similarly shaped opening 16 in the crank-handle 9.

From the above detailed description of the invention, it is believed that the construction and operation thereof will at once be apparent, it being noted that the lower end of the screw rod 7 is threaded downwardly for its limit of movement in the internally threaded socket 11 at the upper end of the screw rod 6. The bracket 8 is then placed in supporting position with respect to the bumper bar 14, with the latter positioned in the pocket 13 of the bracket. Upon rotation of the crank-handle 9, the screw rod 6 moves upwardly through the threaded bore 10 in the ground-engaging stand or base 5, while the bumper bar supporting bracket 8 restrained from rotation by its interfitting connection with the bumper bar 14 moves upwardly on the screw rod 7 of the crank-handle 9, twice the length of elevation or raising movement of the bumper bar supporting bracket 8 is accomplished as compared with a single screw rising from a supporting base.

While there is herein shown and described the preferred embodiment of the invention, it is to be understood that minor changes may be made in the details of construction, such as will fall within the scope of the invention as claimed.

I claim:

In a jack of the character described, a base having a threaded vertical bore therein, a screw rod combination having a lower end with left-hand threads threaded in the bore of the base and an upper end with right hand threads, a work supporting bracket threaded on the upper right-hand threaded end of the screw rod and a crank-handle on the upper end of the upper screw rod section, said screw rod combination comprising the formation of a threaded socket in the upper end of the lower left-hand threaded section in which the lower end of the upper right-hand threaded section is removably threaded.

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