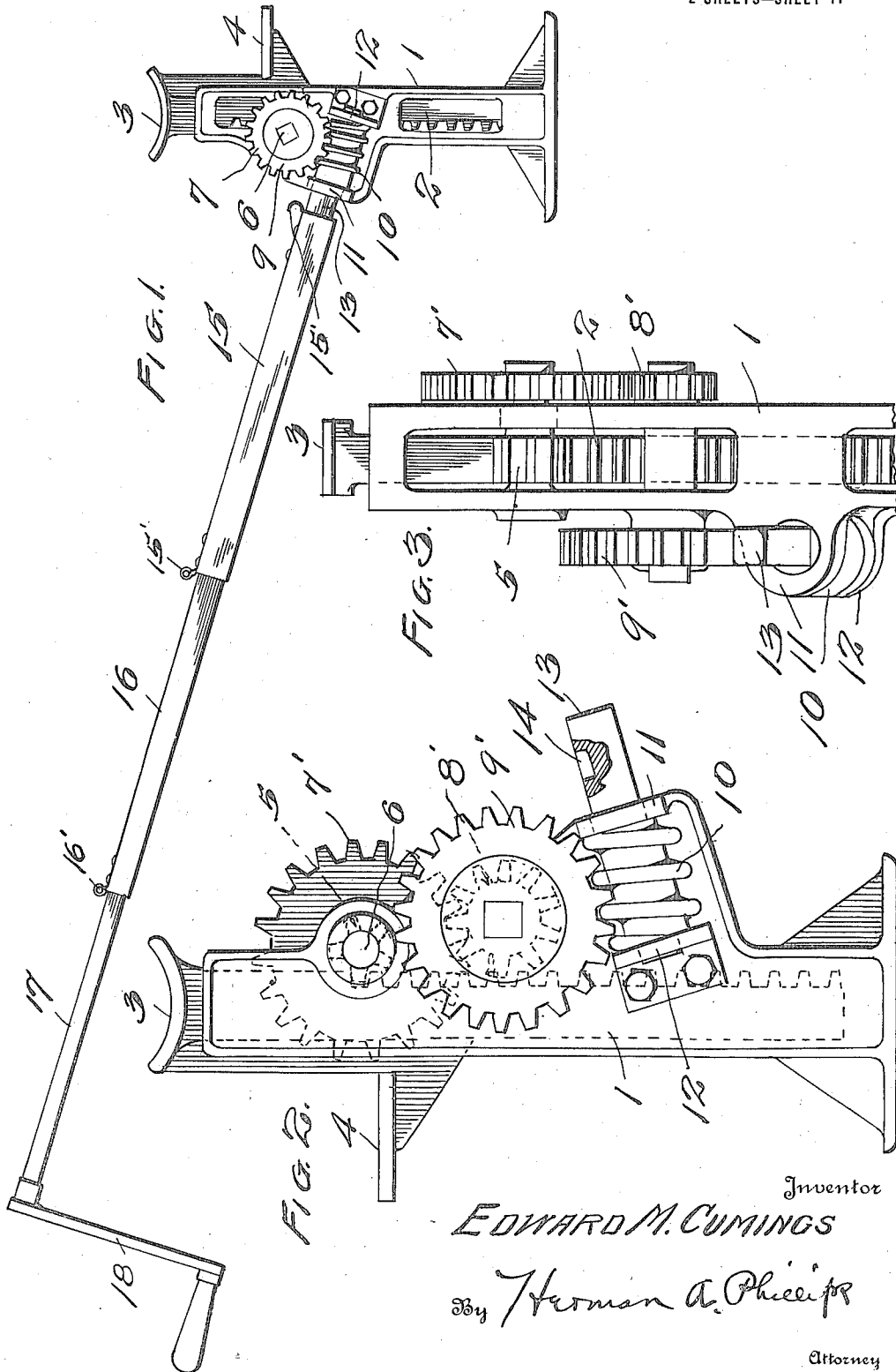


E. M. CUMINGS.
AUTOMOBILE LIFTING JACK.
APPLICATION FILED DEC. 4, 1915.

1,193,126.

Patented Aug. 1, 1916.

2 SHEETS—SHEET 1.

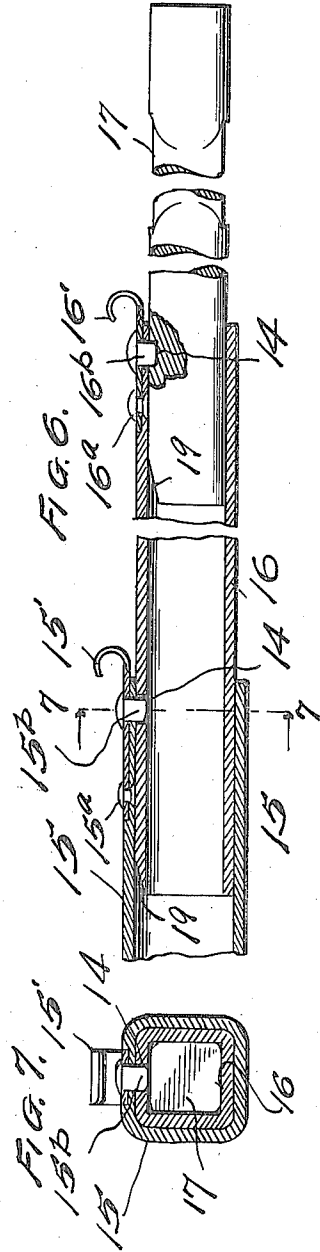
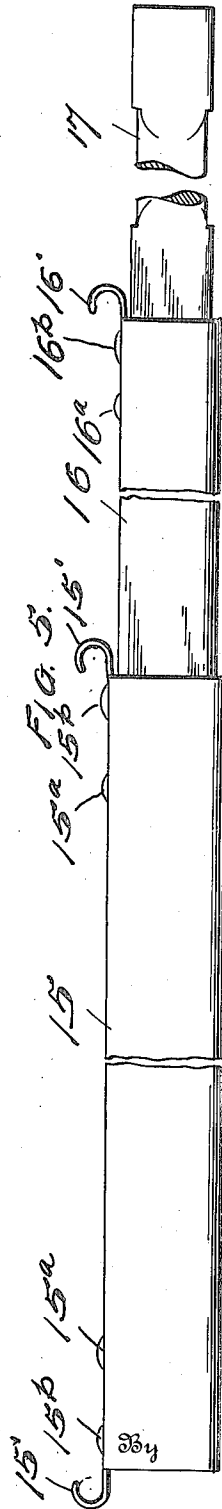
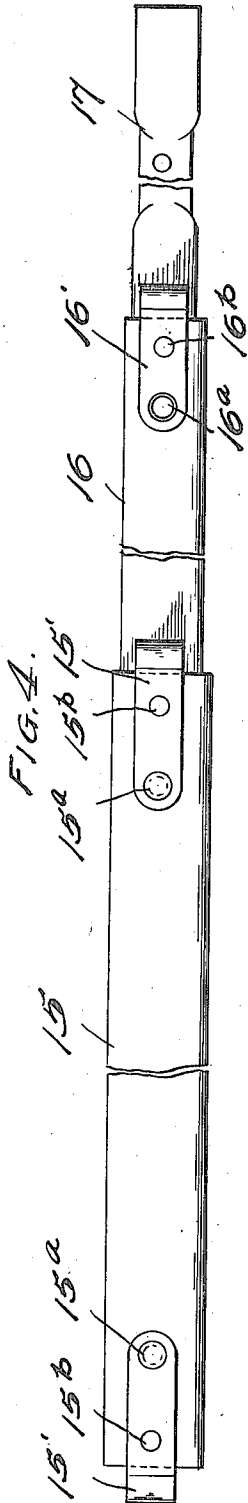


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UNITED STATES PATENT OFFICE.

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AUTOMOBILE-LIFTING JACK.

1,193,126.

Specification of Letters Patent.

Patented Aug. 1, 1916.

Application filed December 4, 1915. Serial No. 65,078.

To all whom it may concern:

Be it known that I, EDWARD M. CUMINGS, a citizen of the United States of America, residing at Flint, in the county of Genesee and State of Michigan, have invented certain new and useful Improvements in Automobile-Lifting Jacks, of which the following is a specification.

My present invention relates to improvements in automobile jacks, designed for lifting automobiles or other vehicles.

The primary object of the invention is the provision of a lifting jack for use in connection with automobiles in order to overcome certain difficulties in the handling of motor cars or automobiles, especially those equipped with gasolene tanks, tire cases or extra wheels or tires, and located at the rear of the motor car. In lifting such motor cars, with their tanks, tires or extra wheels located in the customary position at the rear, it is exceedingly difficult and inconvenient to gain access to the desired parts, usually the rear axle, for lifting the motor car at the rear. To overcome these difficulties I have invented an extensible handle for use in connection with a particular type of lifting jack, by means of which the jack may be made to operate in the desired position, but may be actuated at a convenient point where the tank, tires or other extra paraphernalia or accessories cannot interfere with the proper manipulation of the jack.

The invention consists essentially in certain novel combinations and arrangements of parts, particularly with relation to the extensible handle, as will be hereinafter more fully pointed out and claimed.

In the accompanying drawings I have illustrated one complete example, using two forms of the screw type of jack, of the physical embodiment of my invention, constructed according to the best mode I have so far devised for the practical application of the principles of my invention.

Figure 1 is a side view of a jack with an extensible handle according to my invention, showing the device in operative position. Fig. 2 is a side view of the same jack, but provided with a train of gears, the handle detached, and showing the worm screw and shank to which the handle may be detachably fixed. Fig. 3 is an edge view of the upper portion of the jack of Fig. 2.

Fig. 4 is a side elevation of the handle, except the crank, parts broken away for convenience of illustration. Fig. 5 is a side view of the handle, turned at 90° to the position of the handle in Fig. 4. Fig. 6 is a longitudinal, central sectional view of a portion of the handle. Fig. 7 is a transverse sectional view on line 7—7 of Fig. 6.

In illustrating my invention I have utilized two forms of the screw type of lifting jack, the form shown in Fig. 1 being direct connected and the form shown in Figs. 2 and 3 being provided with a train of gears. In each form, the jack is provided with a hollow, metallic pedestal 1 of proper size and well known shape, in which the rack bar 2 may be reciprocated vertically to lift an automobile or other vehicle, at either of the two points 3 and 4, through the medium of the star pinion 5 on the shaft or journal 6. In the form shown in Fig. 1 the jack is provided with an actuating wheel or pinion 7 on the shaft 6, while in the modified form of the invention in Figs. 2 and 3 a train of gears 7' 8' 9, are utilized. In either form, the actuating pinion 7 or 9', is rotated through the medium of the worm screw 10 which is journaled between the bracket 11, preferably integral with the pedestal 1, and the attached bracket 12 which is bolted to the pedestal, 1. These brackets are located in such position that the screw 10 lies in an inclined plane with its shank end 13, formed with a hole 14, at an elevation. The shank, through the hole 14 is the means of attachment for the extensible telescoping handle.

The extensible handle preferably is made up of several sections, as 15, 16, and 17, the two former being tubular in form, and, as illustrated, rectangular in cross section, while the section 17 is a metal bar for the attachment of the crank handle 18 by which the jack is operated.

Each of the sections as 16 and 17 is provided with an opening, recess or socket 14 serving the same function as the socket 14 in the shank 13, and these sockets are adapted to receive locking bolts or studs as 15^b or 16^b firmly secured to the spring tongues 15' 16' respectively, and these tongues are fastened at one end to their respective sections by the rivets 15^a or 16^a. It will be noted that the section 15 is equipped with two spring tongues and studs, one for the

shank of the worm screw and the other for the telescoping tubular section 16.

The spring tongues are of sufficient length to permit bending away from the tubular section in order that the locking stud or bolt may be withdrawn from its socket so that the telescoping or section of smaller dimensions may be either slipped into the larger section or be withdrawn entirely therefrom. 5
10 If the smaller section is withdrawn, it may readily be inserted into the end of the larger section, and the cam or inclined face 19 in the smaller section pushes out the stud so that the inner section may be slipped into 15 place. When out of use, the sections may be telescoped one within another, or they may be entirely withdrawn and detached from each other. To assemble the parts, the socket end is inserted within the locking end of the 20 adjoining section until the locking stud engages in the socket and the parts are thus secured in working position.

The lifting jack may of course be used without all the sections of the handle being 25 present, when it is unnecessary to use the extensible handle. The sections may be of

different shapes in cross section, but I have found that the rectangular shape is efficient and effective in that the sections of the handle are guided and kept alined at all 30 times, and twisting of the parts is prevented in a simple manner.

The operation of the jack will readily be understood. The handle is revolved by means of the crank handle and through the 35 revolutions imparted to the handle, the worm screw is revolved to actuate the pinions and gears as described.

What I claim is:—

The combination with the operating mechanism of a lifting jack including an actuating worm screw having a shank, of an extensible operating handle comprising a plurality of telescoping tubular sections and a handle bar section, angular in cross area, 45 there being sockets in the shank and sections, and a spring tongue on each section having a locking stud to engage a socket to hold the handle extended.

In testimony whereof I affix my signature. 50

EDWARD M. CUMINGS.