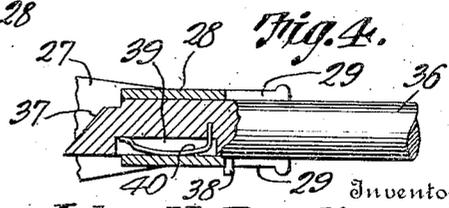
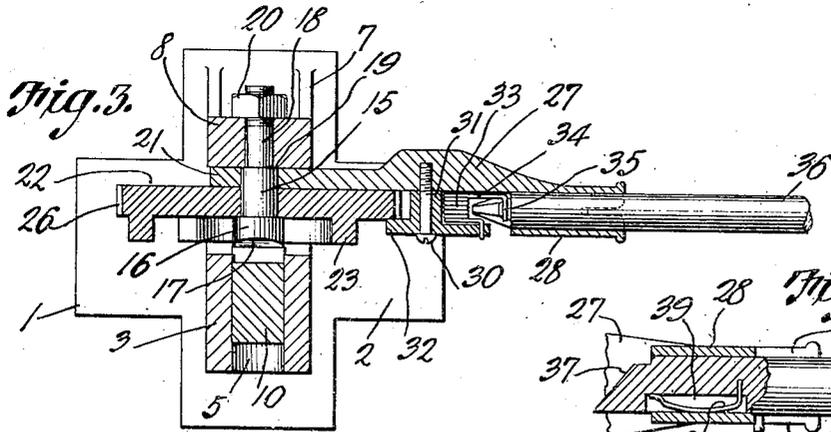
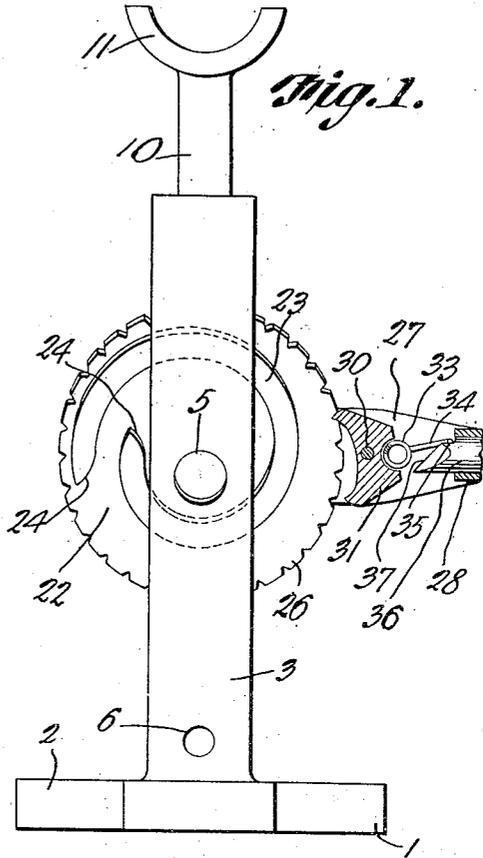
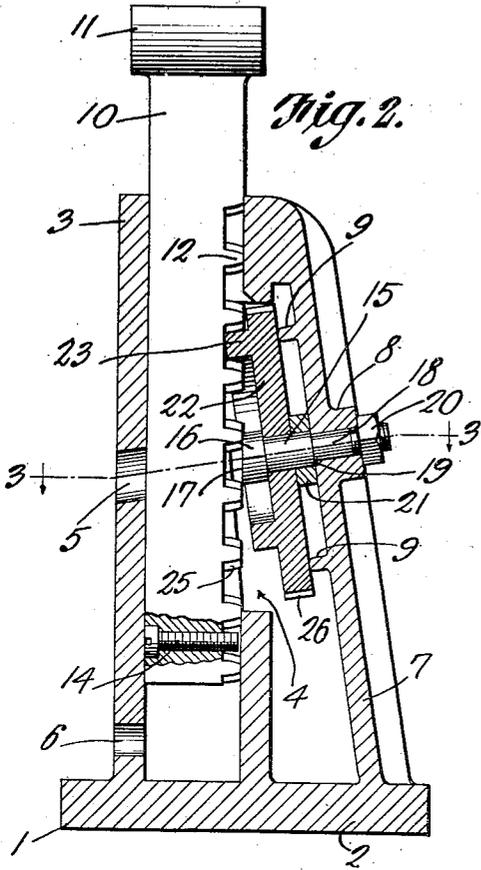


J. K. TOMLINSON.  
 JACK.  
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1,245,400.

Patented Nov. 6, 1917.



Witness  
*J. R. Jones*  
*R. L. Parker*

Inventor  
*John K. Tomlinson*

334 *Cashow & Co.*  
 Attorney

# UNITED STATES PATENT OFFICE.

JOHN K. TOMLINSON, OF RONCEVERTE, WEST VIRGINIA.

JACK.

1,245,400.

Specification of Letters Patent.

Patented Nov. 6, 1917.

Application filed February 6, 1917. Serial No. 146,957.

To all whom it may concern:

Be it known that I, JOHN K. TOMLINSON, a citizen of the United States, residing at Ronceverte, in the county of Greenbrier and State of West Virginia, have invented a new and useful Jack, of which the following is a specification.

The device forming the subject matter of this application is a jack adapted to be employed, primarily, but not necessarily, for raising automobiles and other vehicles.

One object of the present invention is to provide novel means whereby a vertical reciprocatory movement is imparted to the rack bar whereon the vehicle or other object rests immediately.

Another object of the invention is to provide novel means whereby the pawl which actuates the driving wheel, may be shifted.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in side elevation, a jack constructed in accordance with the present invention, parts being broken away;

Fig. 2 is a vertical section of the jack embodying the present invention, parts being broken away;

Fig. 3 is a cross section on the line 3—3 of Fig. 2; and

Fig. 4 is a fragmental longitudinal section taken through the actuating lever and attendant parts.

In carrying out the present invention there is provided a support denoted generally by the numeral 1 and including a base 2 and a standard 3. The standard 3 has an opening 4 at its front side, and in the back of the standard 3, vertically spaced apertures 5 and 6 are formed. The upper part of the standard 3 is connected with the base 2 by means of an inclined brace 7 which may be a channel member, the flanges of the channel member being connected by a

boss 8. The inner side of the brace 7 is provided with projections 9.

Mounted to reciprocate in the standard 3 is a rack bar 10 having a head 11 shaped as desired, to receive the object which is to be lifted. On its inner side, the rack bar 10 has teeth 12. A screw 14 is threaded through the lower end of the rack bar 10 between the lowermost teeth thereof. The purpose of the aperture 6 is to permit the insertion of the screw 14 when the rack bar 10 has been lowered until it rests on the base 2.

The numeral 15 denotes a shaft which may be a bolt including a head 16, the end face 17 of which is vertically disposed. The shaft 15 is arranged at right angles to the brace 7, the brace 7 being inclined as aforesaid. The shaft 15 includes a reduced end 18 passing through the boss 8 and forming a shoulder 19 which abuts against the inner face of the brace 7. A nut 20 is threaded onto the part 18 of the shaft 15 and bears against the outer end of the boss 8, the shoulder 19 engaging the inner face of the brace 7.

Journalled on the shaft 15 and located inside of the brace 7 is a wheel 22. The wheel 22 is provided with a spiral rib 23, operating through the opening 4 and coacting with the teeth 12 of the rack bar 10, the ends of the rib 23 being beveled as shown at 24, and the teeth 12 of the rack bar being beveled laterally, as shown at 25, so that the ends of the rib 23 may cooperate readily with the teeth when the wheel 22 is rotated. The wheel 22 is peripherally provided with ratchet teeth 26.

The numeral 27 denotes a lever, the inner end 21 of which is mounted to swing on the shaft 15. The lever 27 has an integrally formed side socket 28 provided with opposed slots 29 in its ends. The lever 27 carries a pivot element 30 on which is mounted to swing a double-ended pawl 31 provided with a flange 32, one end of which overlaps the inner face of the wheel 22. Connected with the other end of the flange 32 is a helical spring 33 carrying an arm 34 terminating in a transverse finger 35.

One end of a handle 36 is inserted removably into the socket 28. The inner end of the handle 36 is beveled as shown at 37 to cooperate with the finger 35 of the spring 33. The handle 36 carries a laterally projecting pin 38 adapted to be received in either of the slots 29. In the side face of the handle 36 there is a recess 39 in which is seated and retained, a bowed spring 40.

In practical operation, when the handle 36 is moved vertically, the lever 27 is tilted on the shaft 15. One end or the other of the pawl 31, engaging with the notches or teeth 26 in the wheel 22, secures a rotation of the wheel, and the spiral rib 23, cooperating with the teeth 12 of the rack bar 11, brings about a raising or a lowering of the rack bar, depending upon the direction in which the wheel 22 is rotated.

The beveled end 37 of the handle 36 is adapted to engage either above or below the finger 35 on the spring 33, and in this way, the pawl 31 may be tilted, so that the respective ends, at the will of the operator, will coact with the ratchet teeth 26 of the wheel 22, to secure a rotation of the wheel in one direction or in an opposite direction. When the handle 36 is reversed or rotated on its axis, and advanced into the socket 28, the pin 38, coacting with one of the slots 29, prevents a further rotation of the handle 36 and holds the beveled end 37 in such a position that it will coact with the finger 35 of the spring 33. The spring 33 holds the working end of the pawl 31 in operative relation to the peripheral teeth 26 of the wheel 22. The spring 40, coacting with the socket 28, serves to hold the handle 36 removably in the socket. The aperture 5 in the standard 3 permits the shaft 15 to be mounted in place. The projections 9 serve as a support for the wheel 22 and prevent an undue lateral movement thereof in an outward direction. The brace 7 and the wheel 22 are inclined with respect to the vertical, to the end that the spiral rib 23 may coact with the teeth 12, at the upper portion of the spiral only, it being obvious that the device cannot be operated satisfactorily with both the upper and lower portions of the rib 23 engaged simultaneously with the teeth 12 of the rack bar. After the rack bar 10 has been raised until the lower end of the rack bar is above the lower edge of the opening 4, there

is no lateral support for the lower end of the rack bar 10, on the side adjacent the wheel 22, aside from the fact that the inclined end face 17 of the head 16 of the shaft 15 exercises this important function. When the rack bar 10 has been raised to the limit, then the inner end of the screw 14, acting as a stop cooperating with the rib 23, prevents a raising of the rack bar 10 to an undesirable extent.

Having thus described the invention, what is claimed is:—

In a device of the class described, a one-piece support including a base, a tubular standard carried by the base, and an inclined brace extended between the upper portion of the standard and the base, the standard having an opening in its forward side; a rack bar mounted to slide in the standard; a wheel having a spiral rib operating in the opening and engaging the rack bar; a shaft carried by the brace and supporting the wheel, the shaft being provided at its inner end with an enlarged head coacting with the inner face of the wheel; and a stop mounted in the rack bar adjacent the lower end thereof and projecting between certain of the teeth of the rack bar to cooperate with the rib, the back of the standard having separate apertures through which the shaft and the stop may be inserted respectively, the apertures respectively approximating closely in diameter the shaft and the stop, and being widely spaced apart longitudinally of the standard, whereby the back of the standard will present a maximum supporting area to the rear edge of the rack bar.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN K. TOMLINSON.

Witnesses:

IVY E. SIMPSON,  
PHILOMENA A. ROCKELLI.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."