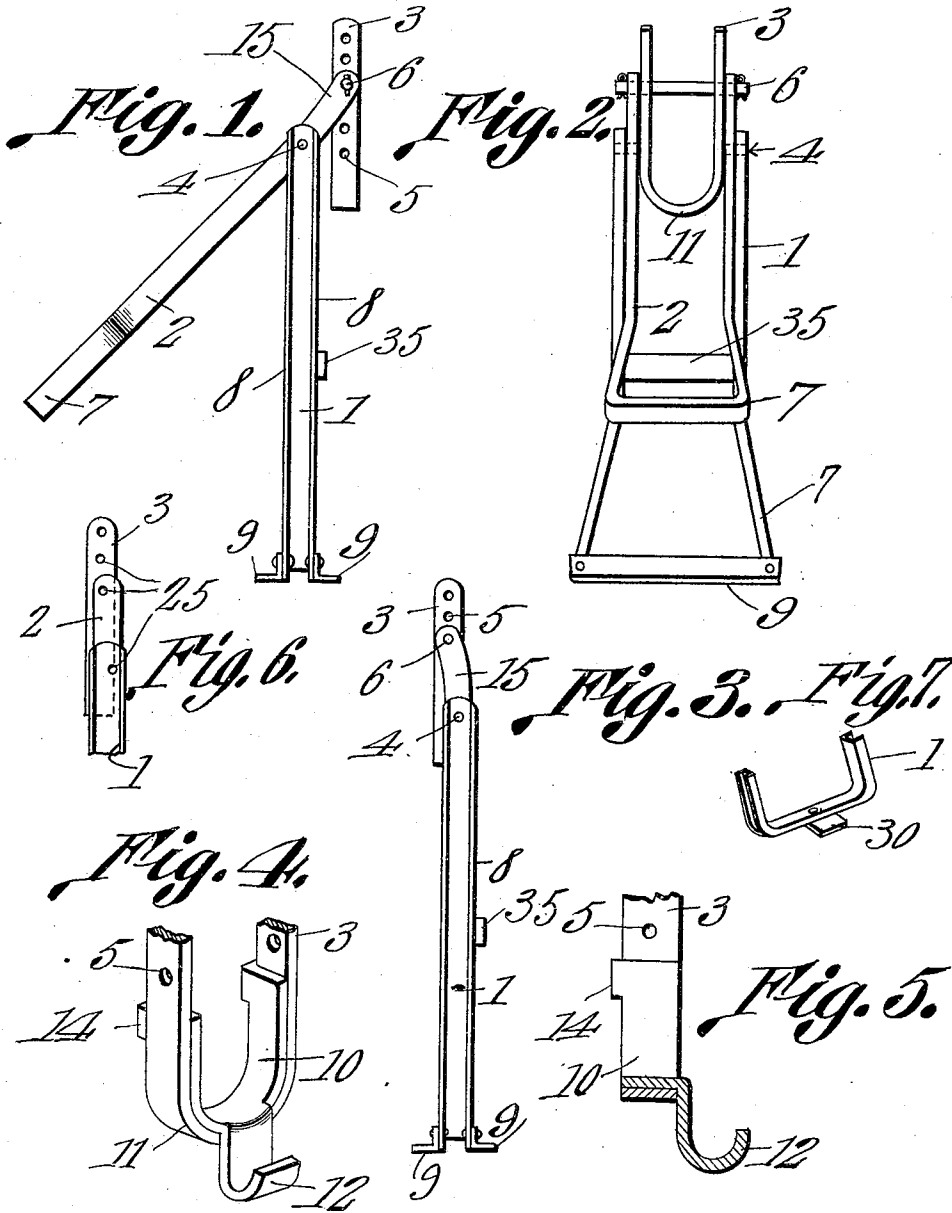


G. M. BEARD.
 AUTO TIRE PROTECTOR JACK.
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975,600.

Patented Nov. 15, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE M. BEARD, OF LAGRANGE, INDIANA.

AUTO-TIRE-PROTECTOR JACK.

975,600.

Specification of Letters Patent.

Patented Nov. 15, 1910.

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To all whom it may concern:

Be it known that I, GEORGE M. BEARD, a citizen of the United States, residing at Lagrange, in the county of Lagrange and State of Indiana, have invented a new and useful Auto-Tire-Protector Jack, of which the following is a specification.

It is the object of this invention to provide, in a simple, merchantable and inexpensive form, a vehicle jack which may be employed to elevate automobiles, provided with pneumatic tires, so that the automobile, when not in use, may be supported upon a plurality of these jacks, instead of upon the tires.

Another object of the invention is to provide a compact jack of the character above mentioned, and to provide an attachment for such a jack, whereby the jack may be disposed at different angles with respect to the vehicle which is to be elevated.

In the drawings,—Figure 1 is a side elevation of the jack in lifting position; Fig. 2 is an elevation of the jack showing that side thereof which is disposed toward the operator; Fig. 3 is an edge elevation of the jack when the component parts are disposed within one another, and longitudinally aligned; Fig. 4 is a fragmental perspective of the inner member or yoke portion of the jack, showing a removable hook therein; Fig. 5 is a longitudinal section of the inner member or yoke, showing the auxiliary hook mounted in place; Fig. 6 is a fragmental side elevation showing a modification of the device; and Fig. 7 is a fragmental perspective, showing a still further modification.

In carrying out the invention, three bail shaped members are provided. The outer of these bail shaped members, hereinafter referred to as the support, is denoted by the numeral 1. The intermediate of these bail shaped members, acting as a lever, is denoted by the numeral 2. The inner of these bail shaped members, hereinafter referred to as the yoke, is denoted by the numeral 3. These members 1, 2 and 3 are adapted to be aligned longitudinally, as seen in Fig. 3, and the construction is such that the intermediate member 2 will fit within the outer member 1, the inner member 3 fitting within the intermediate member 2.

The lever 2 is pivotally connected, intermediate its ends, with the support 1, as shown at 4. In the yoke 3 there are a plurality of openings 5, adapted to receive a pin 6 or the like, whereby the yoke may be connected pivotally to the end of the lever 2. This pin 6 may be retained in place by means of cotter pins, as shown, or in any other desired manner.

Adjacent their lower ends, the lever 2 and the support 1 flare laterally, as seen at 7, the yoke 3, however, being a U shaped element, the arms of which are parallel. By thus causing the support to flare laterally, the jack is given a relatively wide supporting base, the effective bearing area of the same being increased by a pair of angle plates 9. One flange of each of which said plates, is secured to the support, the other flange thereof being flush with the bottom of the support. By referring to Fig. 7 of the drawings, it will be seen that a flat plate 30 may be bolted, riveted, or otherwise secured to the lower portion of the member 1, to replace, when desired, the angle members 9. The support 1 is preferably fashioned from channel iron, and the upright flanges of the angle plates 9 are bolted or otherwise secured to one of the flanges 8 of the support. The lever 2 is of sufficient length so that when it is moved into alignment with the support 1, the lower end of the lever will abut against the transverse stop 35, upon the support 1. It is to be noted that the upper end of the lever 2 is bent rearwardly to a slight degree, as seen at 15, so as to hold the lower end of the lever normally against the stop 35 when the device is in use, and thus maintain the yoke 3 in proper position. This bending of the lever is not absolutely essential. As shown in Fig. 6, the same result may be effected by disposing the openings in the parts 1, 2 and 3, slightly out of alignment with each other, as seen at 25.

The pin 6 may be mounted successively in the openings 5, in order to adjust the position of the yoke 3.

One jack is placed adjacent each wheel of the vehicle, and upon the outside thereof, the hub of the vehicle wheel being engaged in the curved portion 11 of the yoke 3,

whereupon the free end of the lever 2 may be depressed, into contact with the stop 35. By this operation the yoke 3 will be elevated, lifting the vehicle off its tires, so that it is supported entirely upon the jacks. When the jack is in operative position, the elements 1, 2 and 3 will be alined, as shown in Fig. 3, thus causing the jack to occupy but a minimum space.

A jack constructed as hereinbefore described is adapted to lift a vehicle in situations where there is ample space upon both sides of the vehicle. It may, however, happen that the vehicle is inclosed in a relatively narrow building, so that there will not be room between the hub of the vehicle and the wall of the building for the manipulation of the lever 2. In such case, the lever 2 must be manipulated in a plane parallel to the wheel of the vehicle. In order to meet this situation, I have devised a simple auxiliary hook, the outline of which is seen most clearly in Fig. 4, this hook being adapted to be assembled with the yoke 3. The auxiliary hook consists of a U shaped body portion 10, adapted to fit within the part 11 of the yoke 3. From one end of the body 10, a curvilinear finger 12 extends across one edge of the yoke 3; and upon the upper ends of the body portion 10, there are outstanding lugs 14, adapted to engage the opposite edge of the yoke. When this auxiliary hook is mounted in the yoke 3, the hub of the vehicle, or, if desired, the axle thereof, may be engaged in the curvilinear finger 12, whereupon the lever 2 may be operated in a plane parallel to the wheel of the vehicle, the vehicle being thus readily lifted, even when confined within a small space.

From the foregoing it will be seen that in order to lift the vehicle under all conditions, it is not necessary to have two separate and distinct sets of jacks. The jack, when disposed as shown in Fig. 1, may be employed for operation at right angles to the plane of the wheel; but should space conditions prevent this operation, the auxiliary hook shown in Fig. 4 may be slipped into the yoke 3, whereupon the jack may be operated in a plane parallel to the vehicle wheel. The auxiliary hook may be fashioned from cast metal at a trifling expense, and by its use, the utility of the jack will be greatly increased.

Owing to the fact that the lever 2 is bail shaped and flared at its free end, as shown at T, the lever will conveniently receive the foot of the operator so that the jack may be worked in that manner.

The inner member 3 of the jack is adapted to receive the hub of the vehicle wheel, to prevent the hub from moving in the jack, parallel to the plane of the wheel of which the hub is a part. From the foregoing, ob-

viously, the member 3 must be relatively narrow. The intermediate member 2 receives the inner member 3, and in order to hold this member 3 against sliding sidewise, the upper end of the member 2 must fit closely about the member 3. By reason of the fact that the member 2 is broadened or flared at its lower end, as denoted by the numeral 7, the foot of the operator may be inserted into the member 2. Thus, although the member 2 at its upper end is adapted to engage the inner member 3 to prevent the same from sliding upon the pin 6, the lower end of the member 2 is wide enough to receive the foot of the operator.

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

1. A vehicle jack consisting of a bail shaped yoke; and a removable attachment therefor, consisting of a bail shaped body adapted to fit within the yoke, there being a curvilinear finger upon the body depending upon one side of the yoke, and lugs upon the body adapted to interlock behind the other edge of the yoke; a support; and means upon the support for raising and lowering the yoke.

2. A device of the class described consisting of three bail shaped members adapted to fit within one another in longitudinally alined relation, the inner of said members being adjustably pivoted to the ends of the intermediate member, and the intermediate member being pivoted between its ends to the outer member; a stop upon the outer member to engage the intermediate member when the members are alined; and a hook adapted to be removably seated in the inner member to project substantially at right angles thereto.

3. A device of the class described comprising three bail shaped members, fitting one within the other, the inner member being adjustably pivoted to one end of the intermediate member and adapted to receive a vehicle hub, the intermediate member being pivoted between its ends to the outer member and constituting a lever for the manipulation of the hub-engaging member; and a bar connecting opposite points upon the outer member to serve as a stop for the intermediate member when the hub-engaging member is elevated.

4. A device of the class described comprising three bail shaped members fitting closely one within the other, the inner member being adjustably pivoted to one end of the intermediate member and being adapted to receive a vehicle hub to hold the same against movement parallel to the plane of the wheel of which the hub is a part, the intermediate member being pivoted between its ends in the outer member, and constitut-

ing a lever for the manipulation of the hub-
receiving member; the outer member being
flared adjacent its lower end, to broaden the
base of the device, and the intermediate mem-
5 ber being flared adjacent its lower end to
receive the foot of the operator.

In testimony that I claim the foregoing as

my own, I have hereto affixed my signature
in the presence of two witnesses.

GEORGE M. BEARD.

Witnesses:

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