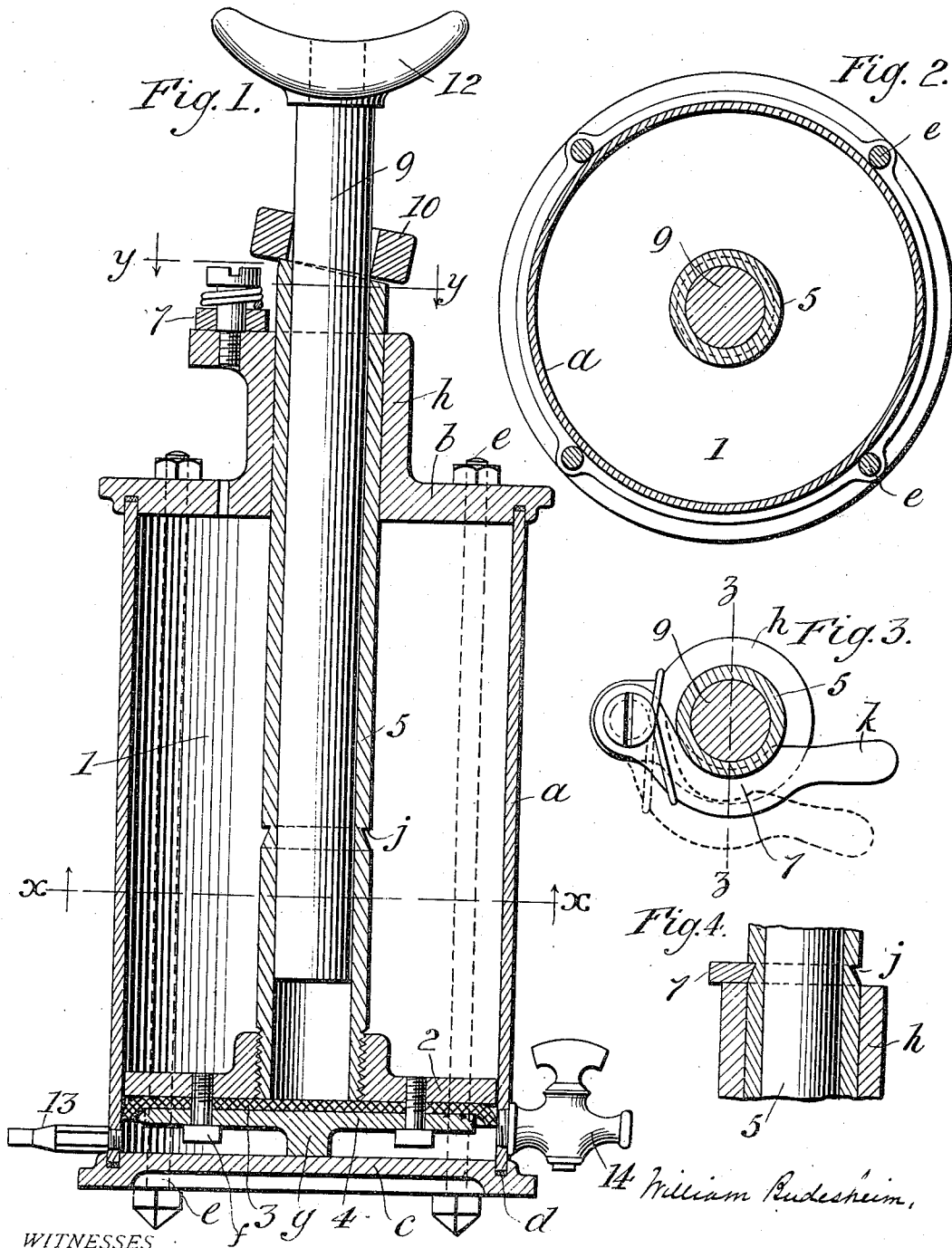


W. BUDESHEIM.
PNEUMATIC LIFTING JACK.
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1,046,145.

Patented Dec. 3, 1912.



WITNESSES

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WILLIAM BUDESHEIM, OF BROOKLYN, MARYLAND.

PNEUMATIC LIFTING-JACK.

1,046,145.

Specification of Letters Patent.

Patented Dec. 3, 1912.

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To all whom it may concern:

Be it known that I, WILLIAM BUDESHEIM, a citizen of the United States, and resident of Brooklyn, in the county of Anne Arundel and State of Maryland, have invented certain Improvements in Pneumatic Lifting-Jacks, of which the following is a specification.

This invention relates to a pneumatic lifting jack adapted for a variety of purposes among which is the elevation of the axles of automobiles, when bursted tires are to be removed and new ones substituted therefor; and it is particularly useful where great range of elevation is required, and compactness in bulk when not in use a matter of importance, as will hereinafter fully appear.

In the further description of the said invention which follows, reference is made to the accompanying drawing forming a part hereof, and in which:—

Figure 1 is a central sectional elevation of the improved jack, and Fig. 2 a section taken on the broken line $x-x$ in Fig. 1. Fig. 3 is a section taken on the broken line $y-y$ in Fig. 1; and Fig. 4 a section taken on the broken line $z-z$ in Fig. 3.

Referring now to the drawing, 1 is a cylinder the circumferential wall a of which is by preference, constructed of a piece of iron tubing, and the upper and lower heads respectively represented by b and c , formed of disks which are grooved to receive the ends of the wall a . Between the wall a and the bottom of the groove in the head c is placed a gasket d to produce an air-tight joint; and although a similar gasket is shown in the groove in the head b , it is not necessary. The heads b and c are held tightly to the wall a by the bolts e the heads of which are made pointed to prevent lateral movement of the lower end of the jack when the same is in use.

2 is a piston, and 3 is a cup leather secured to the underside of the piston by the disk 4 and the screws f . The bottom of the disk 4 is provided with a central projection g to prevent the piston seating on the lower head, and covering the apertures in the wall a of the cylinder, whereby air is admitted to and discharged from the cylinder. Screwed into the piston 2 is the tubular piston rod 5 which extends upward through a suitable boss h on the upper head b ; and in order that the piston when elevated to a predetermined height will be held thereat independently of

the compressed air by which it has been raised, the said piston rod is circumferentially notched as shown at j , and the boss h provided with a spring-held pawl 7 adapted to automatically enter the notch. The pawl 7 has a handle k whereby it may be withdrawn from the notch in the piston rod, when the piston is to be lowered in the cylinder.

9 is a second piston rod not necessarily tubular, adapted to have a sliding movement in the hollow rod 5, and to be elevated independently of the same, prior to its application to the axle to be raised, should such extension be required.

A simple device to support the inner piston rod within the outer one, and effect a common movement of the two devices when the jack is in operation, consists of a ring 10 having a bore slightly greater than the diameter of the inner piston rod, so as to "bite" the same; and to render the ring reliable for the purpose under all conditions, the end of the outer piston rod upon which the ring rests, is made angular or inclined with respect to a horizontal line, as shown in Fig. 1. It will be understood that the ring 10 does not in any manner interfere with the independent elevation of the inner piston rod and should it rise with the same, it can easily be made to seat itself upon the inclined end of the tubular rod, by simply placing it in a horizontal position when it will fall by gravity.

12 is a shoe fastened to the upper end of the inner piston rod upon which the axle (not shown) of the automobile rests when the jack is in use.

13 is a pipe leading to a source of supply of air under pressure which may consist of an air pump, or a tank containing compressed air; and 14 is a cock whereby the air which has served as the means whereby the piston has been raised, may be allowed to escape and admit of the piston falling by its own gravity, or by the weight of anything resting on the shoe.

I claim as my invention—

In a pneumatic lifting jack, the combination of a bottomed cylinder having an inlet and an outlet for compressed air and a head, a piston in the cylinder, a hollow cylindrical rod which extends from the piston through the head and has an inclined end and a circumferential notch, a horizontally moving spring-held pawl pivoted to the head, adapt-

ed to engage with the notched rod, a second
independently sliding rod situated within
the first, and a gravity ring on the inner rod
which rests loosely on the inclined surface
5 of the outer rod, and when so seated takes
an inclined position and thereby bites the in-
ner rod and prevents its having any down-

ward motion independently of the outer rod,
substantially as specified.

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