

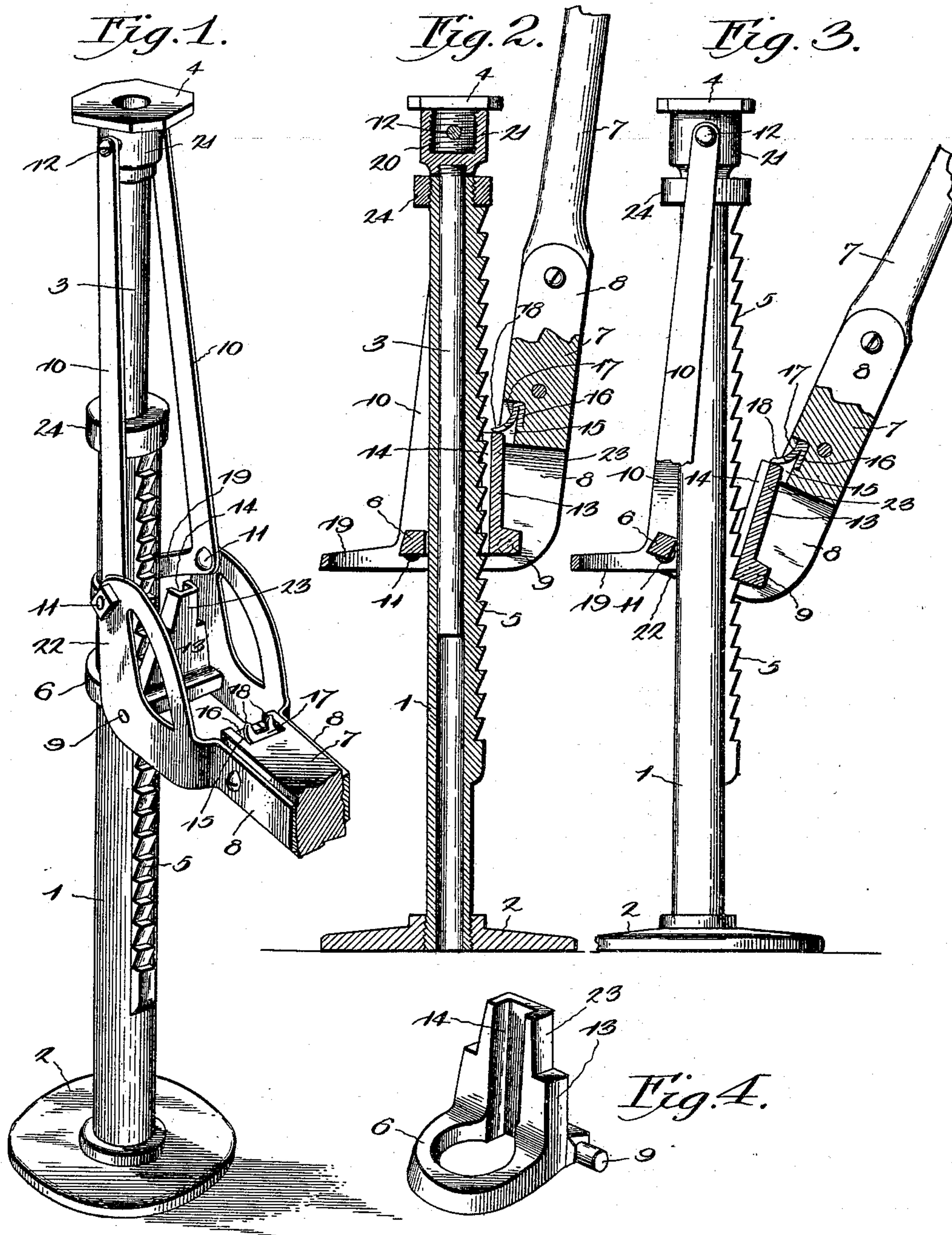
No. 623,050.

Patented Apr. 11, 1899.

M. H. TYLER.
WAGON JACK.

(Application filed June 7, 1898.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

MELVIN H. TYLER, OF MUNCIE, INDIANA.

WAGON-JACK.

SPECIFICATION forming part of Letters Patent No. 623,050, dated April 11, 1899.

Application filed June 7, 1898. Serial No. 682,852. (No model.)

To all whom it may concern:

Be it known that I, MELVIN H. TYLER, a citizen of the United States, residing at Muncie, in the county of Delaware and State of Indiana, have invented a new and useful Wagon-Jack, of which the following is a specification.

This invention relates to lifting-jacks of that class embodying a standard and a telescoping lifting-rod, having an operating-lever connected with the lifting-rod and provided with a movable fulcrum mounted upon the standard.

The object of the present invention is to provide certain new and useful improvements in the construction and mounting of the several parts of a device of this class.

The special features and peculiar advantages of my improvements will be hereinafter more fully described, shown in the drawings, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of my device with the lifting-rod elevated. Fig. 2 is a longitudinal sectional view with the lever in position to adjust upon the standard. Fig. 3 is a side elevation, parts being broken away to show the manner of locking the fulcrum-ring. Fig. 4 is a detail perspective view of the fulcrum-ring.

Corresponding parts in the several figures are denoted by like characters of reference.

Referring to the drawings, 1 designates a tubular standard supported on a base 2 and incasing the lifting-rod 3, which carries at its upper end a lifting-head 4, and the standard is further provided with a rack 5, arranged upon its rear side, preferably extending the full length thereof.

Encircling the standard is a fulcrum-ring 6, carrying the operating-lever 7. The lever is fastened to two side arms 8, which are pivoted to the ring 6 by means of pins 9, formed at each side of the ring and disposed at the rear thereof, and the other ends of the arms 8 are pivoted to connecting-arms 10, as at 11, which are in turn pivoted to the lifting-rod, as at 12. The side arms 8 are each formed with an arm 22, arranged at approximately right angles thereto and at the inner end thereof, providing a bell-crank lever. This construction and arrangement, it will be

readily understood, forms a toggle connection between the operating-lever and the lifting-rod, with the fulcrum-ring 6 as a support therefor. The ring 6 is provided with an upright arm 13 at the rear side thereof, having a slot or groove 14 in its inner face, which is adapted to receive the rack 5 and is reduced in width, as at 23. The lever 7 has a notch 15 formed in the upper face and at the inner end thereof to accommodate a spring 16, which is suitably secured in the notch and is formed by bending the spring upon itself, providing the spring-arm 17, which is deflected somewhat at its outer end and notched, forming a pair of fingers 18. The spring-arm 17 extends only part of the length of the notch 15, thereby leaving room for the reduced part 23 of the arm 13 to be seated therein when the lever is raised. The fingers 18 will engage the top of the arm 13, and thereby lock the fulcrum-ring and operating-lever together, and by reason of the space or notch between the fingers will not interfere with the rack.

The lower ends of the connecting-arms 10 are joined together by means of an approximately semicircular band 19. This band is preferably formed integral with the arms, or it might be separate and connected with the free arms of the bell-cranks.

The lifting-head 4 is formed with the flat head having a threaded shank 20 fitting within the collar 21, which in turn is screwed upon the lifting-rod 3. A suitable cap or nut 24 is screwed or fitted upon the upper end of the tubular standard 1 to give a finished appearance thereto. The pivot-bolt 12, connecting the arms 10 with the lifting-rod, passes through the head and the collar 21, which firmly secures the two together and prevents them from coming loose.

In operating my device the lever is elevated until the fingers 18 of the spring 16 engage with the top of the arm 13, locking the lever and the ring 6 together, and as the lever is further elevated the ring is tilted forward until the arm 13 is brought alongside of the standard with the groove 14, receiving the rack, as shown in Fig. 2, and in this position the device may be readily adjusted. When adjusted to the desired position, the lever is de-

pressed, carrying the arm 13 therewith, which seats the ring upon one of the notches, thereby holding the ring stationary, and as the lever is further depressed the spring is released from the arm 13, and the rod 3 is elevated by action of the toggle connection between the lever and the lifting-rod. The band 19 contacts with the front of the standard 1 and prevents the pivot 11 from being thrown too far beyond the line of the pivot-points 9 and 12, thus automatically locking the lifting-jack in its elevated position.

My invention is formed from metal, with the exception of the operating-lever, which is preferably of wood, and the parts thereof are few in number, being compactly and substantially assembled together into a useful and improved jack.

Various changes in the form, proportion, and minor details thereof may be made without departing from the spirit and scope or sacrificing any of the advantages of a device constructed in accordance with my invention, and therefore I do not wish to be understood as limiting myself to the precise construction and arrangement of parts as herein shown and described.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a lifting-jack, the combination with a tubular standard, and a telescopic lifting-rod, an adjustable fulcrum-ring mounted loosely and capable of sliding upon and adapted to engage the standard, and an operating-lever pivoted upon the fulcrum-ring and having a pivotal connection with the lifting-rod, substantially as shown and described.

2. In a lifting-jack, the combination with a tubular standard having a rack thereon and a lifting-rod telescoping therein, of an adjustable fulcrum-ring mounted loosely upon the standard and adapted to engage the rack, an operating-lever pivoted to the fulcrum-ring, and connecting-arms pivoted to the lever at one end and to the lifting-rod at the other end thereof, substantially as shown and described.

3. In a lifting-jack, the combination with a tubular standard having a rack and a lifting-rod telescoping therein, of an adjustable fulcrum-ring mounted loosely upon the standard and adapted to engage the rack and having an angle-arm extension, an operating-lever pivoted to the ring and provided with a clip adapted to engage with the arm or the fulcrum-ring, and arms pivotally connecting the lever with the lifting-rod, substantially as shown and described.

4. In a lifting-jack, the combination with a tubular standard having a rack provided thereon and a lifting-rod telescoping therein, of an adjustable fulcrum-ring mounted loosely upon the standard, and provided with an angle-arm formed with a groove in the inner face thereof, said fulcrum-ring being adapted to engage the rack, an operating-lever provided with a spring-clip adapted to engage with the

arm of the fulcrum-ring, and arms connecting the lifting-rod and the lever, substantially as shown and described.

5. In a lifting-jack, the combination with a tubular standard having a rack thereon and a lifting-rod telescoping therein, of an adjustable fulcrum-ring mounted loosely upon the standard and adapted to engage the rack, an operating-lever pivoted to the fulcrum-ring and carrying a clip or catch adapted to engage the fulcrum-ring and hold the same out of engagement with the rack, and connecting-arms pivoted to the lever at one end and to the lifting-rod at the other end thereof, substantially as shown and described.

6. In a lifting-jack, the combination of a standard carrying a lifting-rod, an adjustable fulcrum-ring mounted loosely upon and adapted to engage the standard, an operating-lever pivoted upon the fulcrum-ring, and arms pivotally connecting the lever with the operating-rod, and means carried by the lever and adapted to engage the fulcrum-ring and lock the same together at a certain point in the movement of the lever, substantially as shown and described.

7. In a lifting-jack, the combination with a tubular standard having a rack provided thereon, and a lifting-rod telescoping therein, of an adjustable fulcrum-ring mounted loosely upon the standard and provided with an angle-arm formed with a groove in the inner face thereof, said fulcrum-ring being adapted to engage the rack, an operating-lever having approximately L-shaped arms pivoted upon the fulcrum-ring, and provided with a notch or recess formed in the upper face of the lever and adapted to receive the arm upon the fulcrum-ring, a spring seated in said recess and adapted to engage the arm of the fulcrum-ring, and connecting-arms pivoted to the free ends of the L-shaped arms at one end and to the lifting-rod at the other end thereof, substantially as shown and described.

8. In a lifting-jack, the combination with a tubular standard and a telescopic lifting-rod, of a fulcrum-ring loosely mounted upon and adapted to engage the standard, an operating-lever pivoted upon the fulcrum-ring and having a pivotal connection with the lifting-rod, and a band connected to the inner end of the lever and embracing the standard, whereby the lever is limited in its movement, substantially as and for the purpose set forth.

9. In a lifting-jack, the combination with a tubular standard and a telescopic lifting-rod, of a fulcrum-ring loosely mounted upon and adapted to engage the standard, an operating-lever pivoted upon the fulcrum-ring, and connecting-arms pivoted upon the lever and to the lifting-rod and having a band connected to the lower ends thereof and embracing the standard, whereby the lever is limited in its movement, substantially as and for the purpose set forth.

10. In a lifting-jack the combination with a tubular standard and a telescopic lifting-rod,

of a fulcrum-ring loosely mounted upon and adapted to engage the standard, an operating-lever having approximately L-shaped arms, the latter being pivoted to the fulcrum-ring
5 at the vertex of the angle thereof, and connecting-arms pivoted to the lifting-rod at one end and to the free ends of the L-shaped arms at the other end and provided with a band
10 embracing the standard, thereby forming a

stop and limiting the movement of the lever, substantially as and for the purpose set forth.

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

MELVIN H. TYLER.

Witnesses:

C. B. TEMPLER,
E. F. SMITH.