

No. 613,997.

G. W. HUGHS.

Patented Nov. 8, 1898.

LIFTING JACK.

(Application filed Dec. 31, 1897.)

(No Model.)

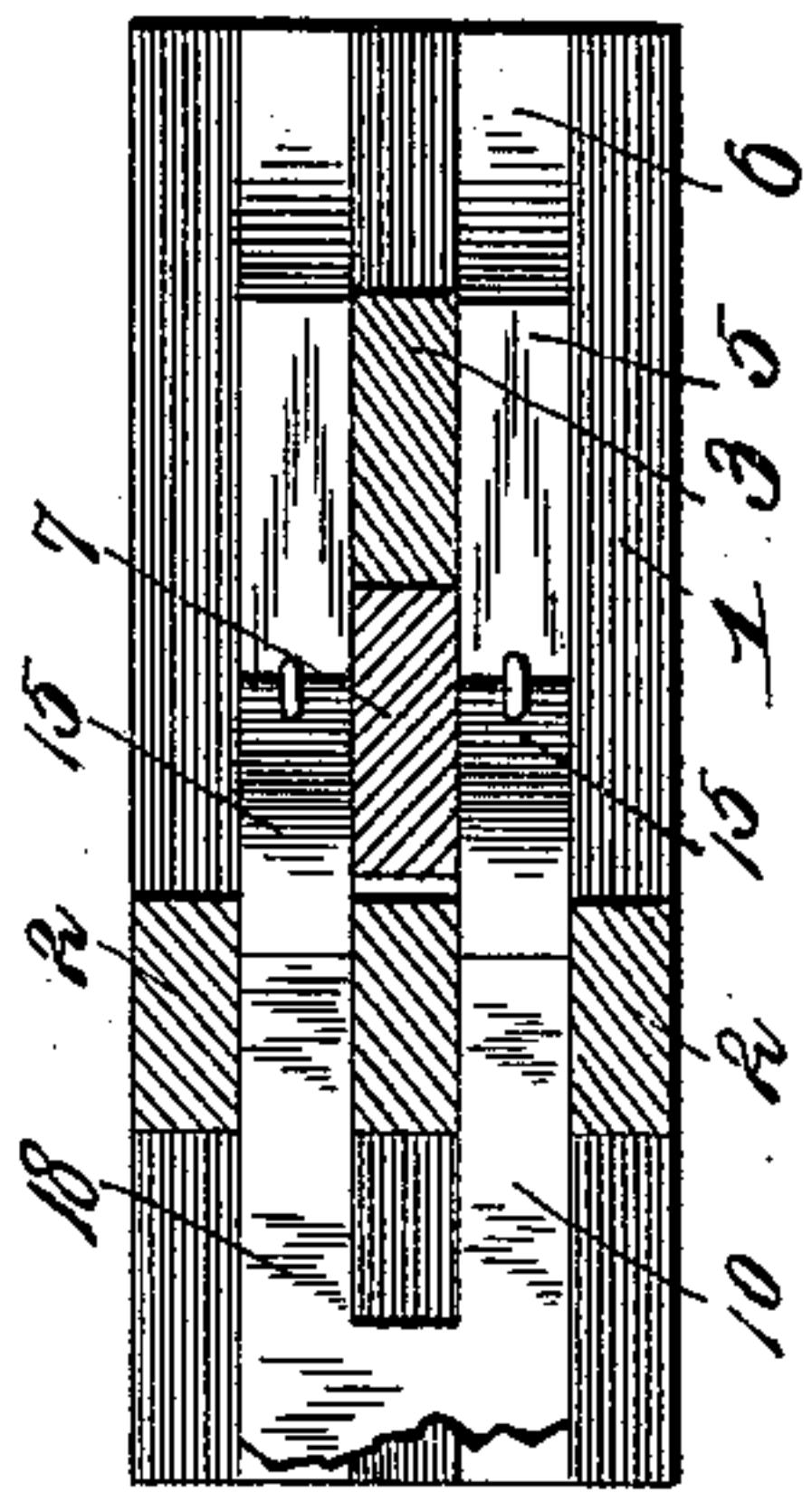


Fig. 3.

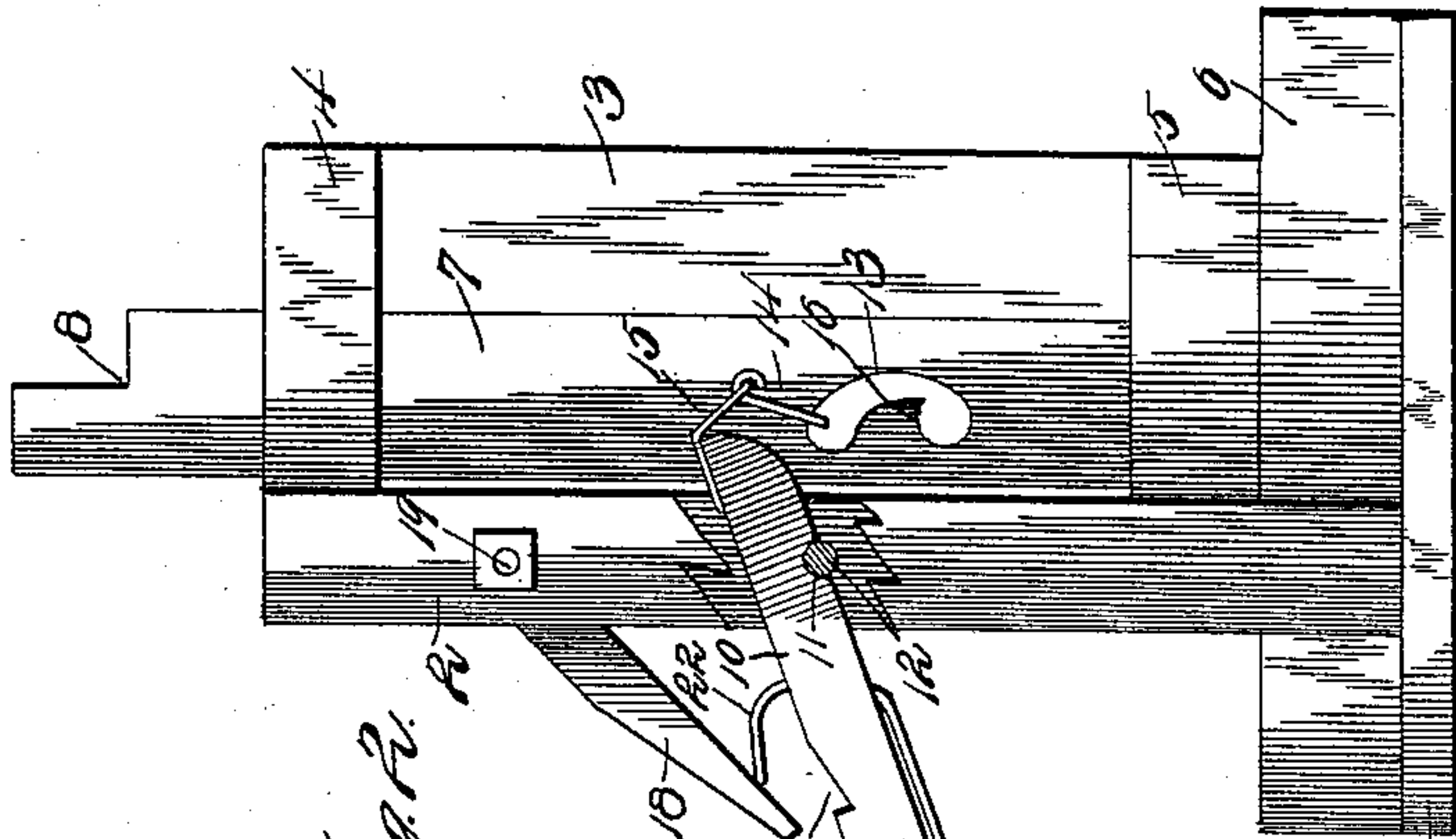


Fig. 2.

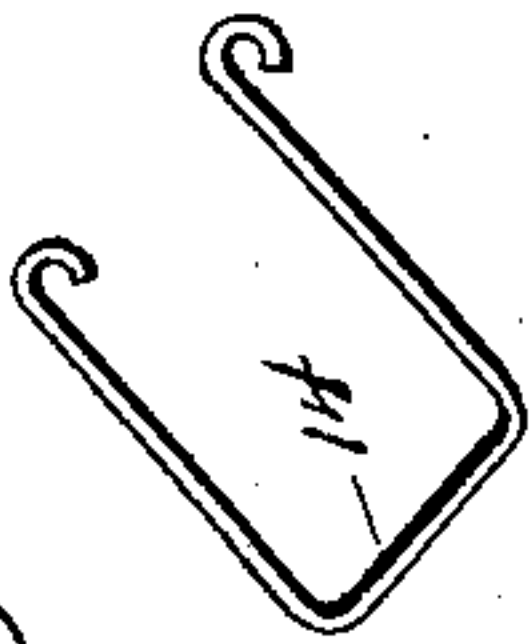


Fig. 5.

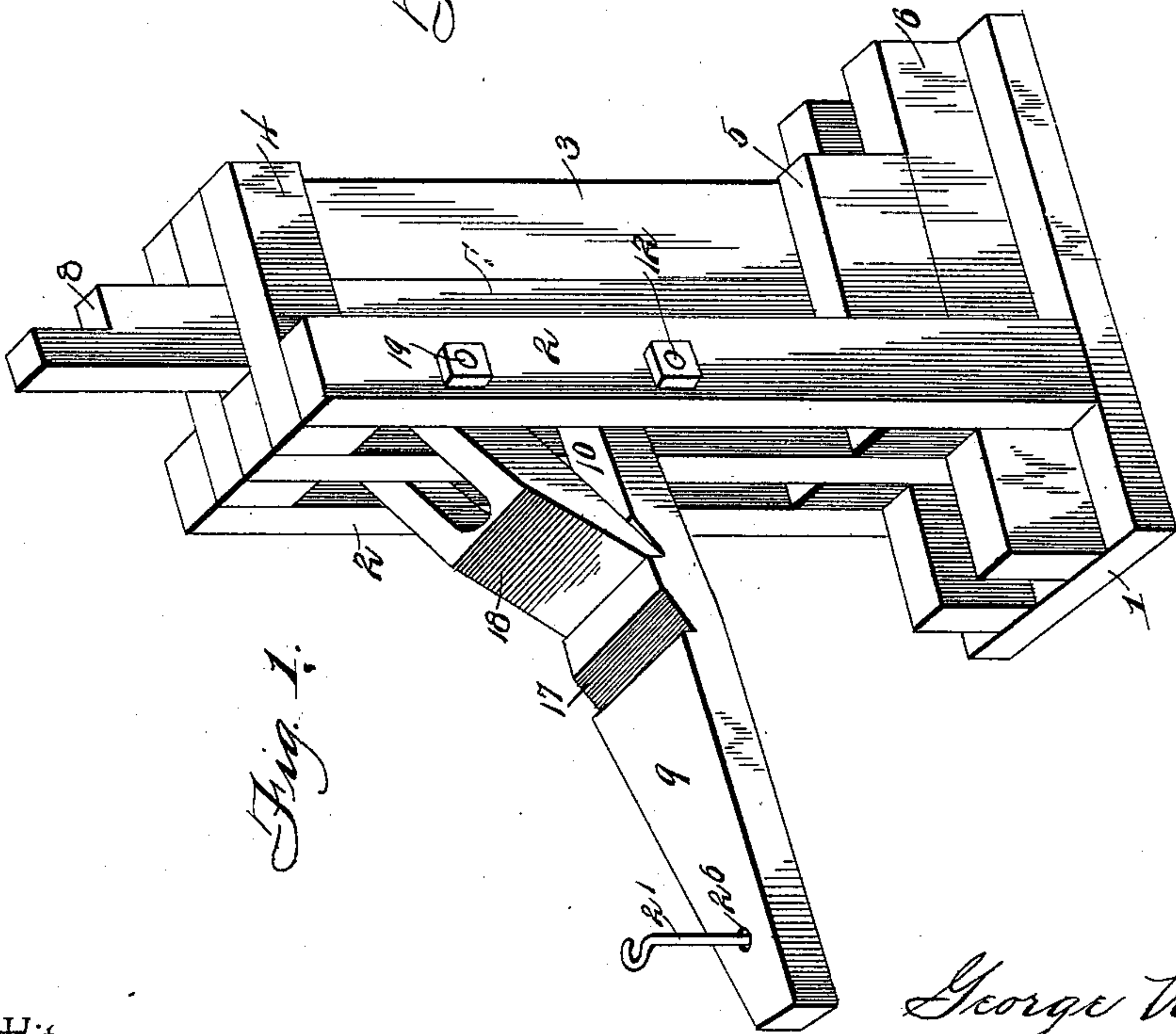


Fig. 1.

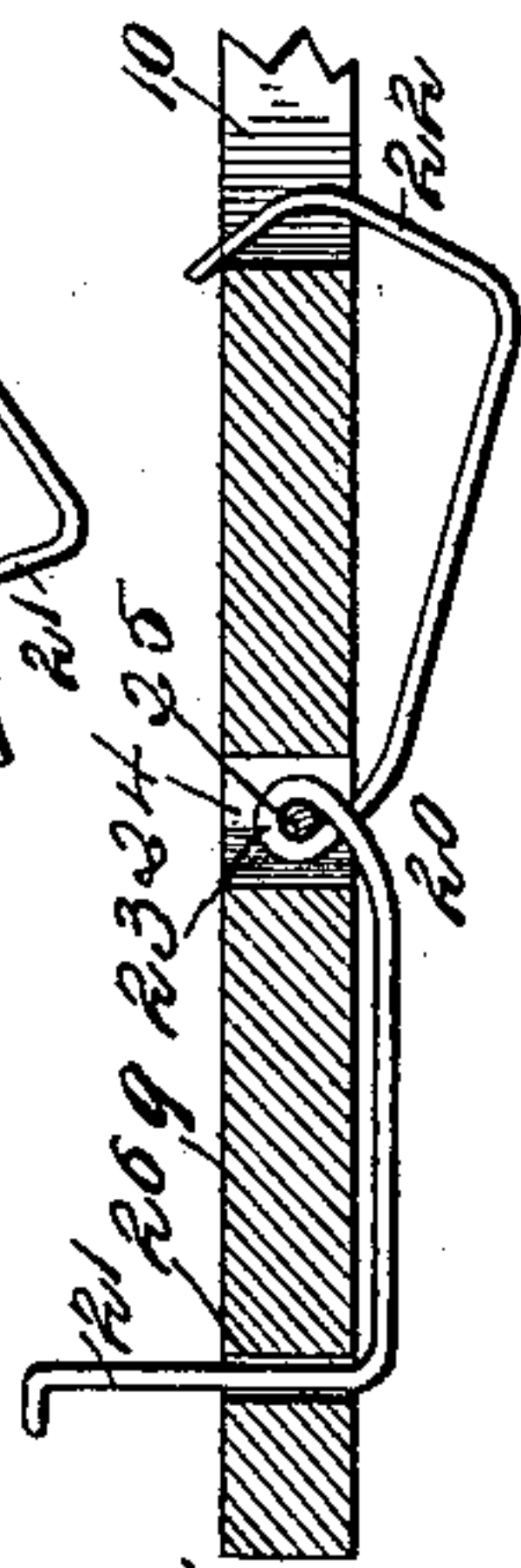


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON HUGHS, OF FORT WORTH, TEXAS.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 613,997, dated November 8, 1898.

Application filed December 31, 1897. Serial No. 664,921. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON HUGHS, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented a new and useful Lifting-Jack, of which the following is a specification.

The invention relates to improvements in lifting-jacks.

10 The object of the present invention is to improve the construction of lifting-jacks and to provide a simple, strong, and durable one adapted to be easily and cheaply manufactured and capable of ready adjustment and
15 easy manipulation.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and
20 pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a lifting-jack constructed in accordance with this invention. Fig. 2 is a side elevation, the pawl being thrown out of engagement with the operating-lever by the latch-lever. Fig. 3 is a horizontal sectional view. Fig. 4 is a detail sectional view taken longitudinally of the operating-lever and illustrating the manner of mounting the latch-lever.
25 Fig. 5 is a detail view of the loop or stirrup.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a frame comprising a base, 35 front vertical standards 2, a rear vertical standard 3, and horizontal connecting-bars 4, 5, and 6. The front vertical standards 2 are arranged at the center and sides of the base and are spaced apart to receive the horizontal connecting-bars, which are also secured to the side faces of the standard 3. The bars 6, which extend the entire length of the base, are arranged at the bottoms or lower ends of the standards. The bars 5 are disposed directly above the bottom bars 6, and the other
45 connecting-bars 4 are arranged at the top of the frame.

In the space between the central standard 2 and the standard 3 is arranged a vertically-movable lifting-bar 7, provided at its upper
50 end with a recess 8 to receive an axle, and connected with a lifting-lever 9, which has

its inner portion bifurcated to provide arms 10. The arms 10, which are arranged in the spaces between the standards 2, are provided
55 at their lower edges with recesses 11 to receive a horizontal fulcrum pin or bolt 12, which passes through the standards 2, near the centers thereof.

The lifting-bar 7 is provided at a point 60 slightly below its center with a slot 13, receiving a link or stirrup 14, which has its sides connected with the arms of the lifting-lever by metal plates or strips 15, secured to the upper edges thereof and extended beyond
65 the same and bent at an angle, as shown. The outer terminals of the strips or plates 15 are provided with perforations to receive eyes of the stirrup or link 14, which is adapted to engage and support the lifting-bar at the
70 upper end of the slot 13, and the latter is curved to provide a lower shoulder 16, which is also adapted to receive the stirrup. The concave side of the curved slot is disposed toward the lever, and the lower shoulder or
75 seat is arranged at the side adjacent to the lever, so that the strain exerted in lifting an axle will not operate to draw the stirrup from the shoulder or seat. The lower shoulder is curved to form a concave seat for the stirrup
80 or loop, and the slot by this particular construction permits the lifting-bar to be adjusted to suit vehicles having their axles at different elevations.

The upper face of the lifting-lever is provided with transverse grooves 17, beveled at
85 their inner sides and forming shoulders at their outer sides adapted to be engaged by a pawl 18, which has its inner portion bifurcated similar to the inner portion of the lever
90 to form arms which are pivoted in the spaces between the standards 2, near the upper ends thereof, by a horizontal pin or bolt 19. The notches or grooves 17 may be varied in number, and the pawl 18 is adapted to en-
95 gage the same automatically as the lifting-bar is moved upward.

In order to enable the pawl to be readily disengaged from the notches or grooves of the lifting-lever, a latch-lever 20 is mounted
100 thereon. The latch-lever 20, which is arranged longitudinally of the lower face of the lifting-lever, is provided at its ends with arms 21 and 22, and it has a central upwardly-

extending eye 23, which is pivoted in a central recess 24 of the lower face of the lifting-lever by a transverse pin 25. The outer arm 21 of the latch-lever extends upward through
 5 a perforation 26 of the outer portion of the lifting-lever and is in convenient position to be depressed by the operator. The inner arm 22 extends upward through the bifurcation of the lifting-lever and is bent at an
 10 angle and adapted to engage the lower face of the pawl and lift the same from the grooves or notches of the lifting-lever when the outer arm 21 is depressed.

The invention has the following advantages: The lifting-jack is simple and comparatively inexpensive in construction. It is strong and durable and easily operated, and it is capable of ready adjustment to adapt it to the height of the axles of a vehicle. The
 20 latch-lever may be readily operated without necessitating the operator changing his position at the handle end of the lifting-lever, and the pawl is adapted to engage the notches or grooves of the lifting-lever automatically
 25 as the lifting-bar is moved upward.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

30 What I claim is—

1. In a lifting-jack, the combination of a frame, a lifting-bar, a lifting-lever fulcrumed on the frame and connected with the lifting-

bar, a pawl pivoted to the frame and located above the lifting-lever and engaging the
 35 same, and the latch-lever disposed longitudinally of the lower face of the lifting-lever, pivoted between its ends to the same and provided at its ends with upwardly-extending
 40 arms passing through the lifting-lever, the inner arm being arranged to lift the pawl, and the outer arm being located at the handle of the lifting-lever, substantially as described.

2. In a lifting-jack, the combination of a frame, a lifting-bar, a lifting-lever provided
 45 at its inner end with arms connected with the lifting-bar, said lever being provided at its outer end with a perforation and having a central recess at its lower face, a pawl pivoted above the lifting-lever and engaging the
 50 same, and a latch-lever disposed longitudinally of the lower face of the lifting-lever, provided at its ends with arms and having a central upwardly-extending eye pivoted in the central recess of the lifting-lever, the
 55 outer arm being arranged in the perforation of the lifting-lever, and the inner arm extending upward between the arms thereof and engaging the pawl, substantially as described.

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

GEORGE WASHINGTON HUGHES.

Witnesses:

J. D. MCKENZIE,
 ELWOOD SMITH.