

No. 764,677.

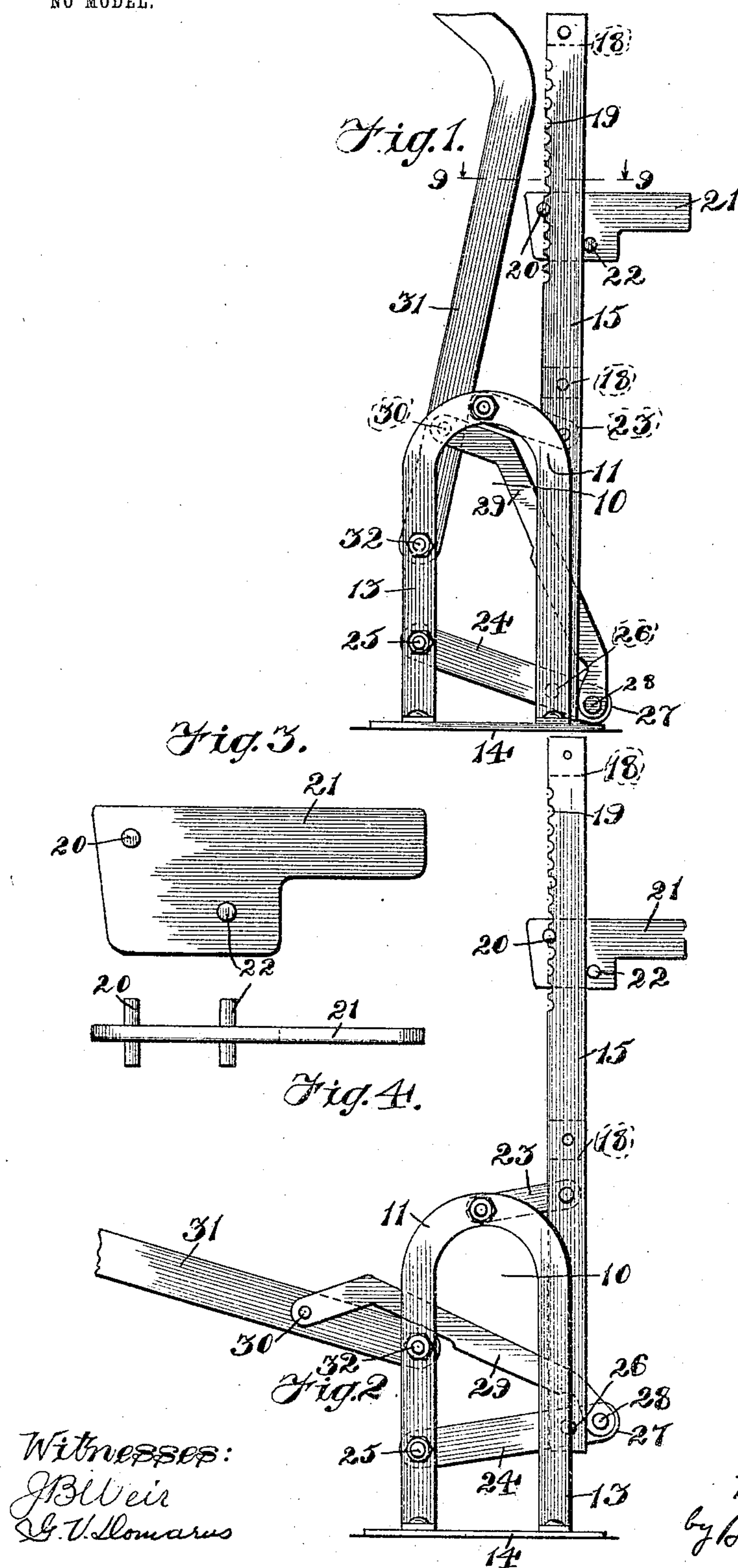
PATENTED JULY 12, 1904.

M. C. RICHARDS.
LIFTING JACK.

APPLICATION FILED JULY 14, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 5.

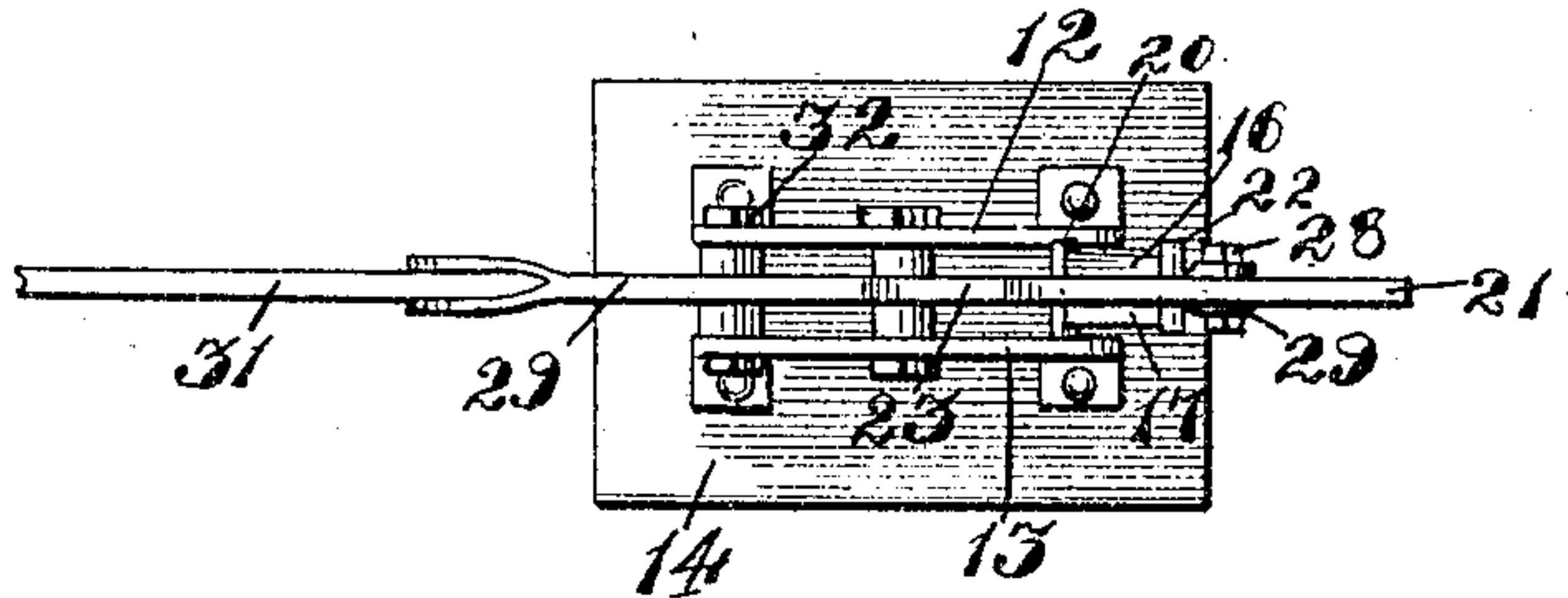


Fig. 6.

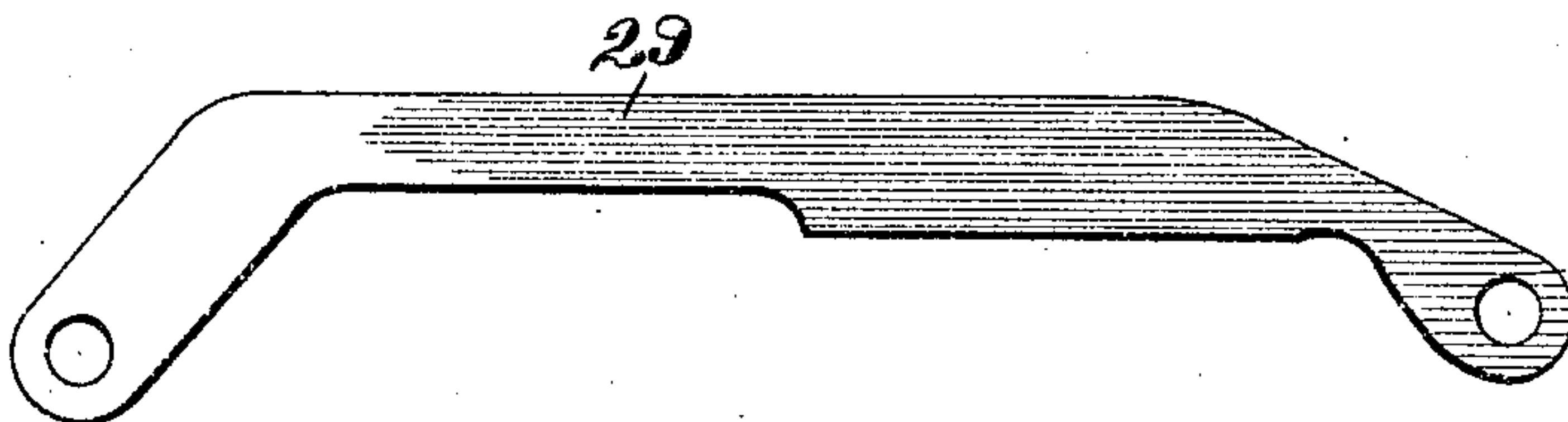


Fig. 7.

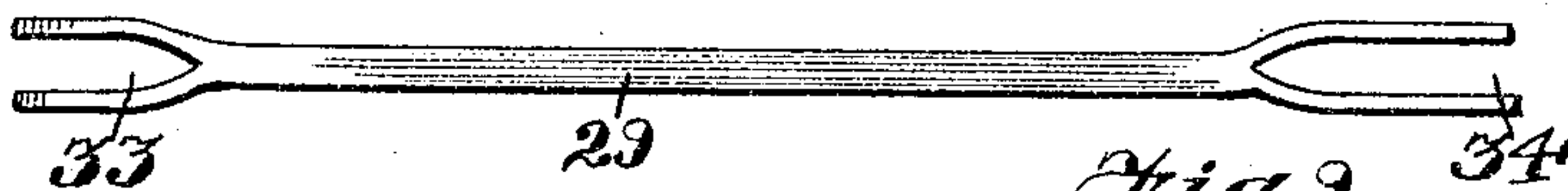


Fig. 9.

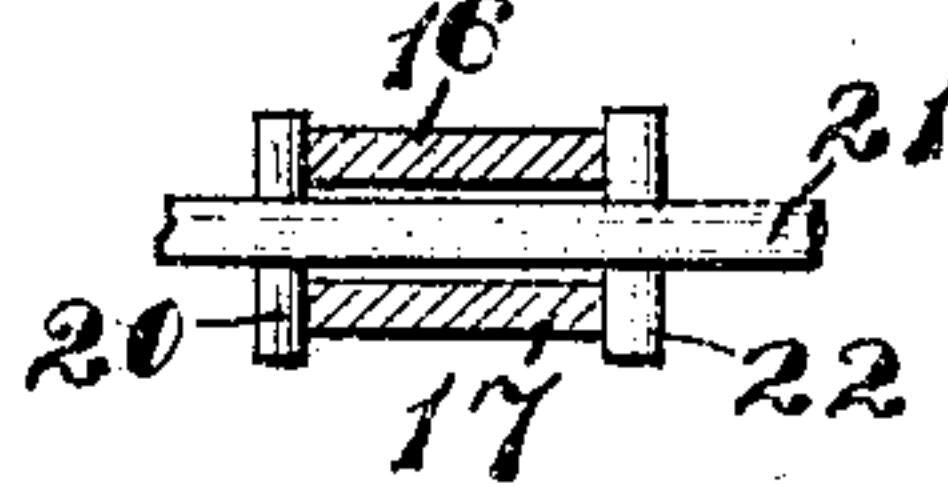


Fig. 10.

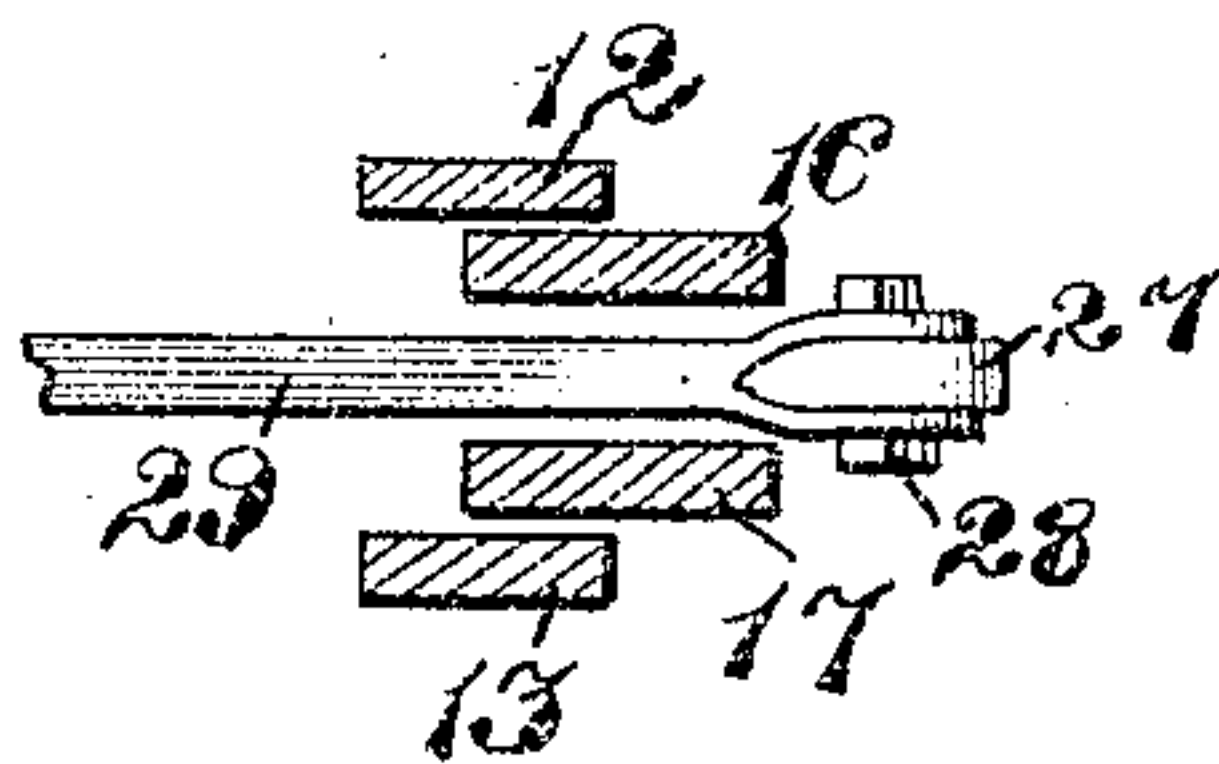
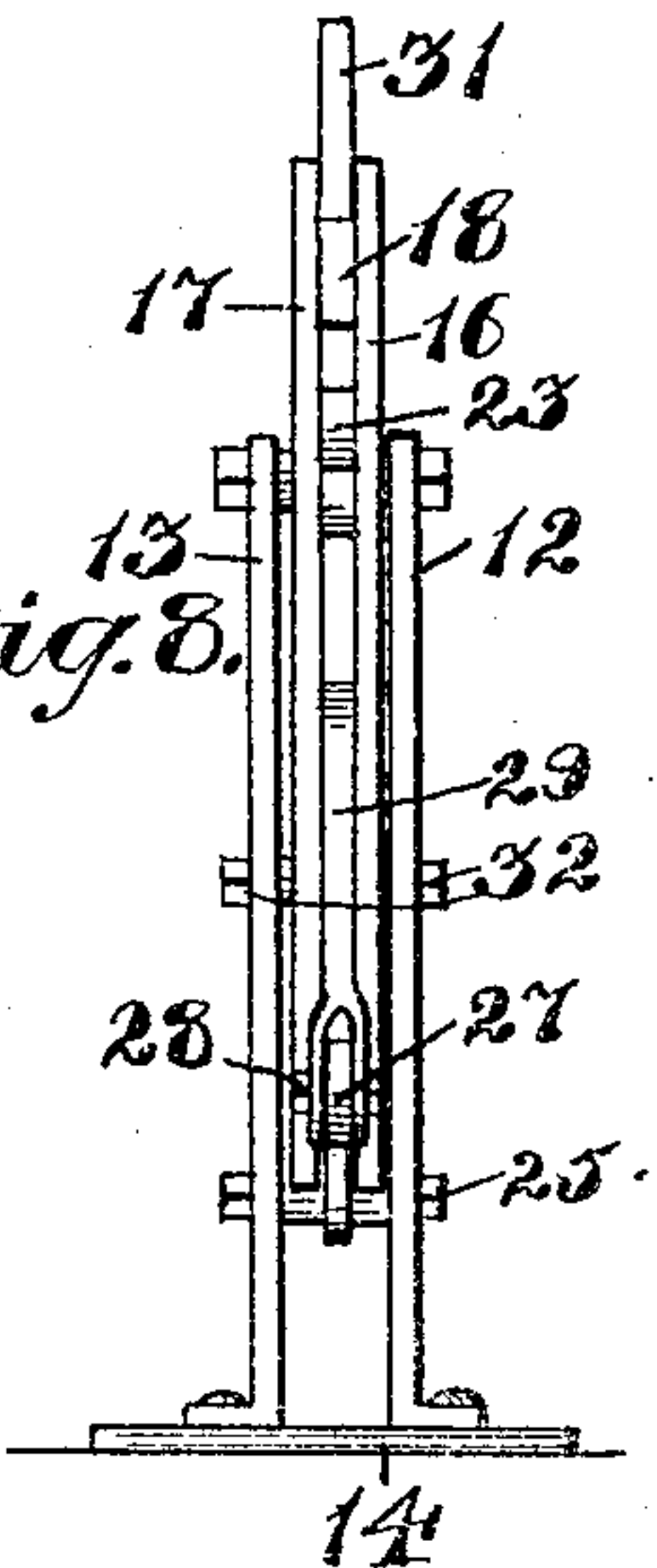


Fig. 8.



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UNITED STATES PATENT OFFICE.

MARCIUS C. RICHARDS, OF AURORA, ILLINOIS, ASSIGNOR TO WILCOX MANUFACTURING COMPANY, OF AURORA, ILLINOIS, A CORPORATION OF ILLINOIS.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 764,677, dated July 12, 1904.

Application filed July 14, 1903. Serial No. 165,496. (No model.)

To all whom it may concern:

Be it known that I, MARCIUS C. RICHARDS, a citizen of the United States, residing at Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to lifting-jacks, and particularly to jacks designed for use in connection with carriages, wagons, &c., and has for its object to provide an improved lifting-jack of simple and economical construction in which certain advantages are secured over prior constructions. Such advantages consist principally in an arrangement by which when the lifting-bar is in its elevated position it is automatically locked therein and in an arrangement of the lever mechanism for raising and lowering the lifting-bar, so that the highest degree of efficiency is secured. These advantages are secured by the construction and arrangement of parts hereinafter described, and illustrated in the drawings.

What I regard as new is set forth in the claims.

In the accompanying drawings, Figure 1 is a side view showing the lifting-bar in its lowest position. Fig. 2 is a similar view showing the lifting-bar locked in its elevated position. Figs. 3 and 4 are details of the adjustable support carried by the lifting-bar. Fig. 5 is a plan view of the jack. Figs. 6 and 7 are side and edge views, respectively, of the connecting-link by which the operating-lever is connected with the lifting-bar. Fig. 8 is an edge view of the lifting-jack. Fig. 9 is a cross-section of the lifting-bar on line 9 9 of Fig. 1, and Fig. 10 is a cross-section of the standard on line 10 10 of Fig. 2.

Referring to the drawings, 11 indicates the standard, which, as shown in Figs. 1 and 8, is composed of two parallel curved bars 12 and 13, spaced a short distance apart and mounted on a suitable base-plate 14, being secured thereto by rivets, or in any other suitable manner. The bars 12 13 are spaced apart to provide for mounting the operating parts of the

lifting-jack between them, thus providing a very firm and substantial construction.

15 indicates the lifting-bar, which, as best shown in Figs. 8 and 9, is composed of two straight parallel bars 16 and 17, which are also spaced a short distance apart, spacing-blocks 18 being provided between them, as indicated in dotted lines in Fig. 1. The bars 16 and 17 of the lifting-bar 15 are provided with a series of notches 19 in their inner edges near their upper ends, as shown in Fig. 1, to receive the ends of a cross-pin 20, carried by a movable support 21, which is adapted to be adjusted upon the lifting-bar and serves to support the axle of the vehicle or other article to be lifted.

22 indicates a second cross-pin provided in the support 21, adjacent to the opposite edges of the bars 16 and 17, as best shown in Fig. 9. The cross-pins 20 and 22 are in different horizontal planes, so that by tilting the support 21 it may be raised or lowered upon the lifting-bar to adjust it to any desired height. This form of support, however, is not herein claimed. The lifting-bar 15 is connected with the standard 11 by means of a short upper link 23, pivoted between the bars 16 and 17, as shown in Fig. 2, and also pivoted between the bars 12 and 13 of the standard, at the upper portion thereof, as shown in Fig. 2. The link 23 is of such length that the lower end of the lifting-bar is at all times between the vertical portions of the bars 12 and 13 at one side of the standard, as shown in Fig. 2, so that the lower end of the lifting-bar is prevented thereby from being displaced laterally.

24 indicates a long lower link which extends between the bars 12 13 of the standard at both sides thereof, being pivoted at 25 to the standard and at 26 to the lower end of the lifting-bar, between the members 16 17 of which it extends, as shown in Fig. 2. The pivots connecting the links 23 and 24, respectively, with the standard are at different distances from the lifting-bar, the pivot 25 of the lower link 24 being farther therefrom.

27 indicates one end of the link 24, which extends beyond the pivotal point 26 and is

connected by a pivot 28 with a link 29, the opposite end of which is connected by a pivot 30 with an operating-lever 31. As shown in Fig. 2, the operating-lever 31 is pivoted at 5 32 between the members 12 13 of the standard 11, preferably about midway of the height of the standard. The end portions of the link 29 are bent, as shown in Fig. 6, and they are preferably bifurcated, as shown at 33 and 34 10 in Fig. 7, so as to embrace the lever 31 and the projecting end of the link 24. The object of bending the end portions of the link 29 is to provide for the alining of the pivots 30, 32, and 28 when the lifting-bar is in its uppermost position, as illustrated in Fig. 2. By 15 connecting link 29 with the lifting-lever 31 between the ends of said lever and providing for the alinement of the pivotal points above mentioned I secure the automatic locking of 20 the lifting-bar when in its uppermost position, which is an important advantage in lifting-jacks of this character. Furthermore, by mounting the lifting-bar on the swinging links 23 and 24, as described, when the lifting-bar 25 is raised or lowered it moves in a substantially vertical line between the members of the standard. Consequently the supporting parts are not subjected to undue strain in the operation of the jack. I am thus enabled to 30 construct the lifting-bar of lighter materials than has heretofore been practicable, and this also is an important advantage in implements of this description.

That which I claim as my invention, and desire to secure by Letters Patent, is—

1. A lifting-jack, comprising a standard

composed of parallel curved bars spaced apart and secured upon a suitable base, a lifting-bar projecting between the members of said standard, links connecting said lifting-bar with 40 said standard, an operating-lever fulcrumed upon said standard between the members thereof, and a link extending between the members of said standard connected at one end to said operating-lever and at the other 45 end to one of said first-mentioned links, substantially as described.

2. A lifting-jack, comprising a standard composed of parallel curved bars spaced apart and secured upon a suitable base, a lifting-bar 50 projecting between the members of said standard, links connecting said lifting-bar with said standard, an operating-lever fulcrumed upon said standard between the members thereof, and a link extending between the 55 members of said standard, connected at one end with said operating-lever and at the other end with a projecting portion of one of said first-mentioned links, substantially as described 60

3. A lifting-jack, comprising a standard, a lifting-bar, links pivotally connecting said lifting-bar with said standard, an operating-lever fulcrumed at one end upon said standard, and a bent link pivotally connected to said lever 65 between its ends and connected with said lifting-bar, substantially as described.

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