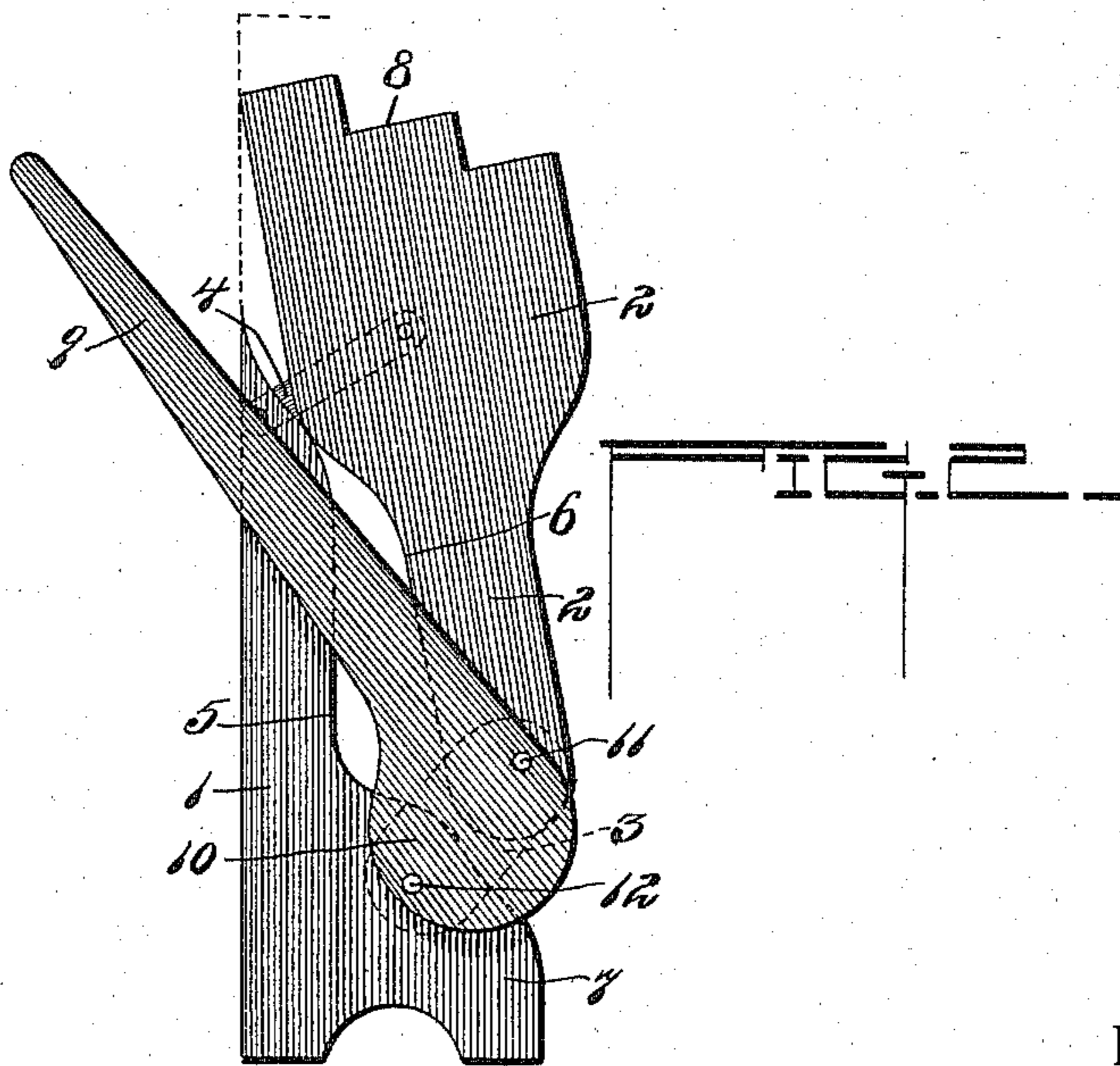
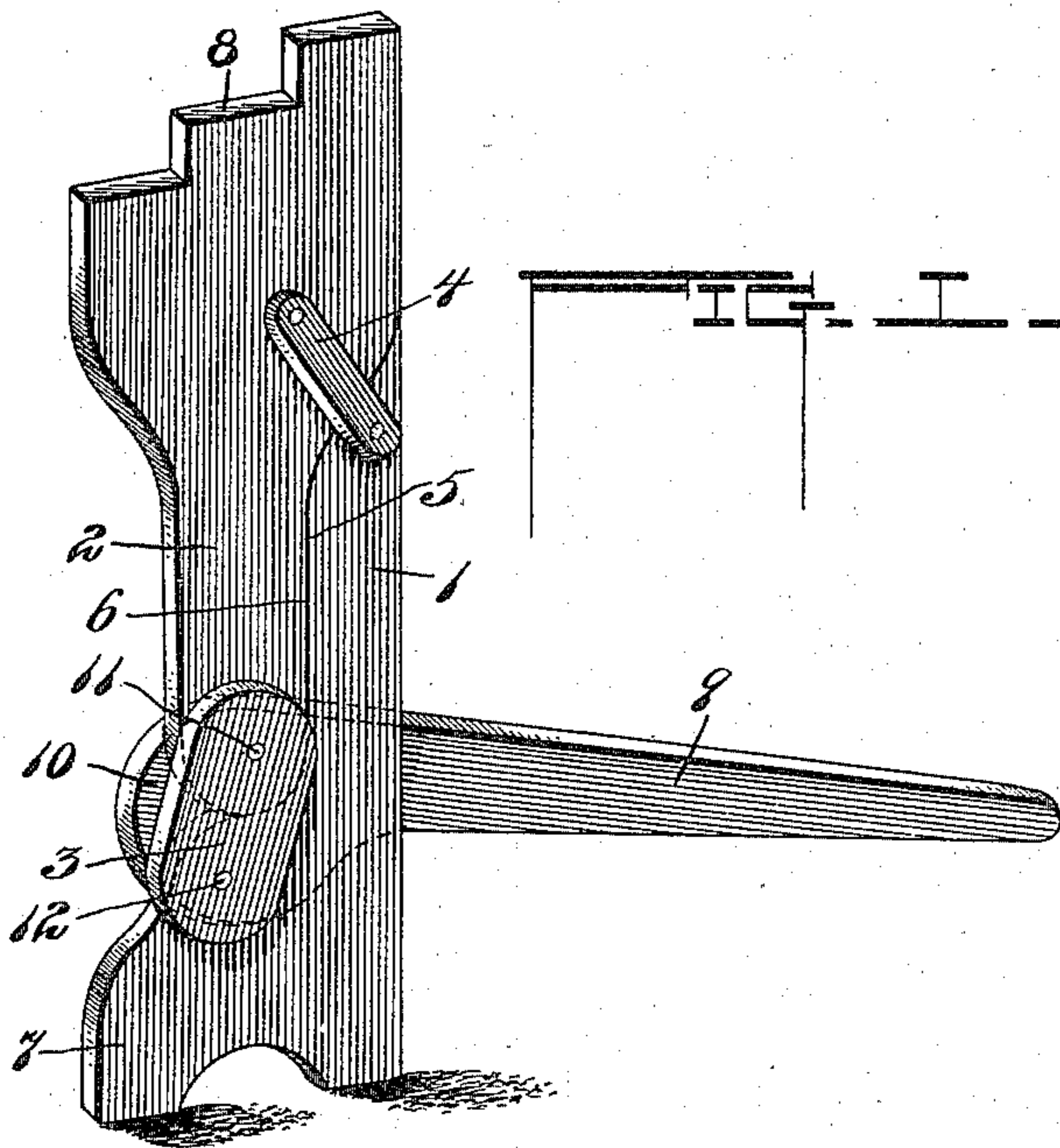


(No Model.)

H. H. HARRIS.  
LIFTING JACK.

No. 580,548.

Patented Apr. 13, 1897.



Inventor

Witnesses

Milton O'Connell,

By his Attorneys,

J. F. Riley

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# UNITED STATES PATENT OFFICE.

HARRY H. HARRIS, OF ALDERSON, PENNSYLVANIA.

## LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 580,548, dated April 13, 1897.

Application filed September 10, 1896. Serial No. 605,419. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY H. HARRIS, a citizen of the United States, residing at Alderson, in the county of Luzerne and State of Pennsylvania, 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 and inexpensive one which will be strong and durable and adapted to be readily operated to raise and lower a  
15 vehicle-axle.

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

In the drawings, Figure 1 is a perspective view of a lifting-jack constructed in accordance with this invention, the lifting-bar being elevated. Fig. 2 is a side elevation of the  
25 same, the lifting-bar being lowered.

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

1 designates a lifting-jack standard, to which is connected a lifting-bar 2 by means  
30 of links 3 and 4. The standard and the lifting-bar, which are constructed of wood, are preferably cut from the same piece of board and have their contiguous inner edges 5 and  
35 6 conforming to the configuration of each other to enable the parts to fit snugly together when the lifting-bar is elevated, as illustrated in Fig. 1 of the accompanying drawings. The edge 5 of the standard 1 is straight and substantially perpendicular intermediate of  
40 its ends. The lower portion of the said edge 5 is concavely curved to form a seat for a corresponding convexly-curved portion of the lifting-bar, and the upper portion of the edge 5 is inclined and slightly curved, as shown.  
45 The lower portion of the standard is enlarged to form a foot 7, and its upper end tapers to a point. The upper end of the lifting-bar 2 is enlarged, as shown, and it is provided with a series of steps 8 or offset shoulders adapted  
50 to receive a vehicle-axle and enabling the lifting-jack to fit axles of different elevations.

The link 4, which is arranged at an inclina-

tion when the lifting-bar is elevated, is pivoted to the latter and to the upper end of the standard, and the link 3, which is disposed at  
55 a slightly opposite inclination when the parts are arranged as shown in Fig. 1, is pivoted to the lower end of the lifting-bar and to the foot of the standard at one side of the lifting-jack. An operating-lever 9 is located at the  
60 opposite side of the lifting-jack and is provided with a head 10, which is pivoted to the lower end of the lifting-bar and to the foot of the standard by the pivots which connect the  
65 link 3 with those parts. When the lifting-jack is arranged as shown in Fig. 1 of the accompanying drawings, with the lifting-bar elevated, the upper pivot 11 of the link 3 and the lever 10 are carried inward a slight distance beyond the vertical plane of the lower  
70 pivot 12, whereby the weight of the vehicle operates to lock the lifting-jack firmly in such position.

It will be seen that by the particular arrangement of the links and the lever the lifting-bar in its upward movement is carried  
75 almost perpendicular and that it has very little lateral swing, which construction and operation are a great advantage in this class of lifting-jacks. This operation is caused by  
80 the lower end of the lifting-bar swinging outward horizontally to a sufficient degree to carry its upper end inward and counteract the outward movement imparted to the upper portion of the lifting-bar by reason of  
85 the upper link swinging downward. As the lifting-bar swings downward on the upper link it is also given a swing on the outer pivot of the latter. The lever being located at the bottom of the lifting-jack may be made of  
90 any desired length and may be made either short or long.

It will be seen that the lifting-jack is exceedingly simple and inexpensive in construction, that it is strong and durable, and that  
95 the lifting-bar when it is carried upward moves almost perpendicular in order to avoid the strain on the lifting-jack and a vehicle incident to forcing the latter horizontally during the lifting operation. It will also be  
100 apparent that the lifting-jack is constructed entirely of wood, except the pivots, and that the lifting-bar and the standard may be economically cut from the same board.

What I claim is—

A lifting-jack comprising a standard provided with an inner edge 5 consisting of a central vertical portion, an inclined slightly-  
5 curved upper portion and a concavely-curved lower portion, the lifting-bar provided with a corresponding edge 6 and having its upper portion arranged to move in a direct vertical line so as to give an axle a direct vertical lift  
10 in order to relieve the lifting-jack and a vehicle of the strain incident to forcing the latter horizontally during the lifting operation, the upper link 4 pivoted to the standard at the upper end thereof and to the upper  
15 portion of the lifting-bar and inclining upward and outward, the lower link pivoted to the standard and to the lifting-bar at the lower end thereof, and the operating-lever having a head arranged on the opposite side

of the lifting-jack and pivoted to the stand- 20  
ard and to the lifting-bar by the pivots of the lower link, said lower link and lever being disposed at a different inclination from the upper link and arranged to swing the lower portion of the lifting-bar horizontally suffi- 25  
ciently to carry the upper portion of the latter inward to counteract the outward movement caused by the upper link, whereby the upper portion of the lifting-bar is capable of the said vertical movement, substantially as 30  
described.

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

HARRY H. HARRIS.

Witnesses:

JOHN C. WILSON,  
HENRY ISAACS.