

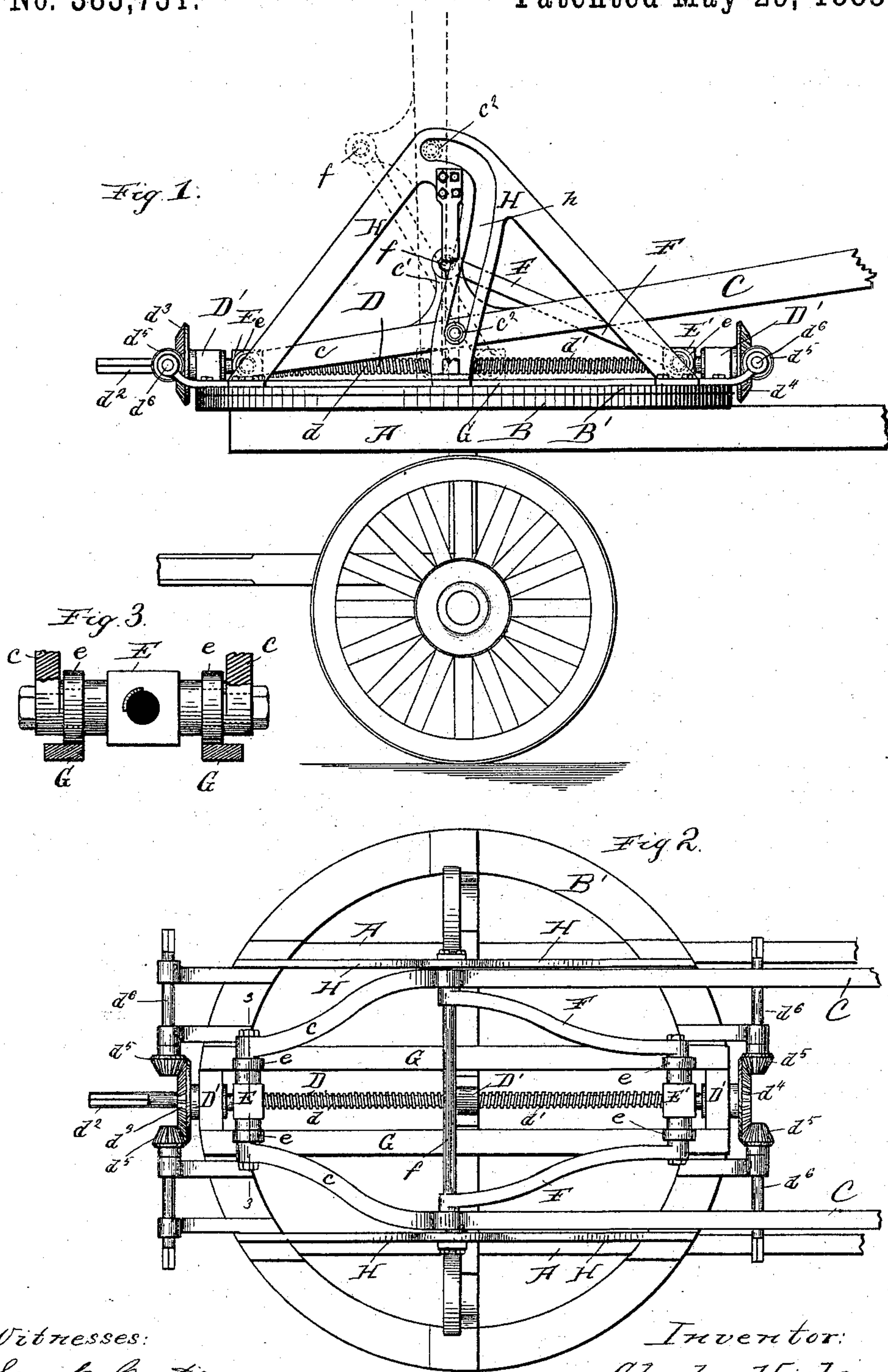
(No Model.)

C. HICKS.

TURN TABLE EXTENSION LADDER TRUCK.

No. 383,731.

Patented May 29, 1888.



Witnesses:

Lew. C. Curtis.

S. M. Sunday.

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UNITED STATES PATENT OFFICE.

CHARLES HICKS, OF CHICAGO, ILLINOIS, ASSIGNOR TO EVERETT B. PRESTON, OF SAME PLACE.

TURN-TABLE EXTENSION-LADDER TRUCK.

SPECIFICATION forming part of Letters Patent No. 383,731, dated May 29, 1888.

Application filed March 8, 1888. Serial No. 266,599. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HICKS, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have
5 invented a new and useful Improvement in Turn-Table Extension-Ladder Trucks, of which the following is a specification.

My invention relates to turn-table extension-ladder trucks used by fire-departments,
10 and more particularly to improvements in the mechanism for raising and lowering the main or pivoted ladder.

The invention consists in the novel devices and novel combinations of devices herein
15 shown and described, and more particularly pointed out in the claims.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Fig-
20 ure 1 is a side elevation of a device embodying my invention. Fig. 2 is a plan view, and Fig. 3 is a section on line 3 3 of Fig. 2.

In said drawings, A represents the wheeled truck; B, the stationary ring of the turn-table
25 secured thereto; B', the revolving ring of the turn-table, and C the main ladder. The extension-ladders are not shown, as my invention does not relate thereto.

D is a screw having right and left threads d
30 d' . It is journaled in suitable bearings, D', on the turn-table.

E E' are nuts threaded upon the screw, to one of which, E, the side bars, c , of the ladder are pivoted, and to the other of which, E', the
35 lifting-links F F are pivoted. The links F F are pivoted to the ladder side bars, c , said side bars being furnished with upwardly-projecting ears or brackets c' , through which the pivot-shaft f passes. The nuts E E' are made
40 long or in the form of cross bars, and are furnished with friction-rollers e , which ride upon the guide bars or supports G G, secured to the upper ring of the turn-table. The toggle-arm links F F are made somewhat longer than the
45 distance from the pivot-shaft f to the pivot-nut E, so that when the nuts are brought together by operation of the screw the ladder may be raised to a vertical position, as indicated by the dotted lines in Fig. 1.

50 The upwardly-projecting lugs c' on the lad-

der serve to prevent the toggle-arms F c or their three pivots, E f E', from approximating too close to a straight line when the ladder C is in its lowermost position. As will be observed from Fig. 1, I do not lower the ladder
55 quite to a horizontal position, the outer end of the ladder being preferably elevated about four feet above the level of the truck-frame, as is customary, by the standards or supports at the back end of the truck-frame.

H H are guide braces or supports secured to the turn-table at each side of the ladder. These guide-braces are furnished with a slot,
60 h , curved to the path of the roller or projection c^2 on the ladder, through which the roller
65 or projection c^2 projects, so as to guide and steady and brace the ladder when raised and while being raised.

If the nut cross-bars E E' should be somewhat lengthened and the guide-bars G G correspondingly separated, the slotted braces H
70 H may be omitted; but it is preferable to employ these slotted braces. The screw has a squared end, d^2 , to receive a crank, and it is also furnished with bevel-gears d^3 d^4 , which
75 mesh with bevel-gears d^5 on the four crank-shafts d^6 .

Instead of a ladder, my invention may be used for raising a water-tower or other pivoted
80 structure.

I claim—

1. The combination, with a turn-table truck, of guide-bars G G, right-and-left screw D, nuts E E', ladder C, pivoted to one of said nuts, and
85 link F, pivoted to the other of said nuts and to the ladder, substantially as specified.

2. The combination, with a turn-table truck, of guide-bars G G, right-and-left screw D, nuts E E', ladder C, pivoted to one of said nuts, and
90 link F, pivoted to the other of said nuts and to the ladder, said link F being longer than the distance between the two pivots on the ladder, substantially as specified.

3. The combination, with a turn-table truck, of guide-bars G G, right-and-left screw D, nuts E E', ladder C, pivoted to one of said nuts, and
95 link F, pivoted to the other of said nuts and to the ladder, and guide-braces H H, secured to the turn-table on each side of the ladder, substantially as specified.

4. The combination, with a turn-table truck,
of guide-bars G G, right-and-left screw D, nuts
E E', ladder C, pivoted to one of said nuts, and
link F, pivoted to the other of said nuts and to
5 the ladder, said nuts E E' being furnished with
friction-rollers to roll on said guide-bars G G,
substantially as specified.

5. The combination, with a truck, of a right-
and-left screw, a pair of nuts, a structure piv-
10 oted to one of said nuts, and a link pivoted at
one end to said structure and at the other to
the other of said nuts, substantially as specified.

6. The combination, with a turn-table truck,

of guide-bars G G, right-and-left screw D, nuts
E E', ladder C, pivoted to one of said nuts, and 15
link F, pivoted to the other of said nuts and to
the ladder, and guide-braces H H, secured to
the turn-table on each side of the ladder, said
guide-braces H H having slots *h h* to receive
a pivot projection or roller, *c*², on the ladder, 20
substantially as specified.

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Witnesses:

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