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TRUCK PLATFORM LADDER

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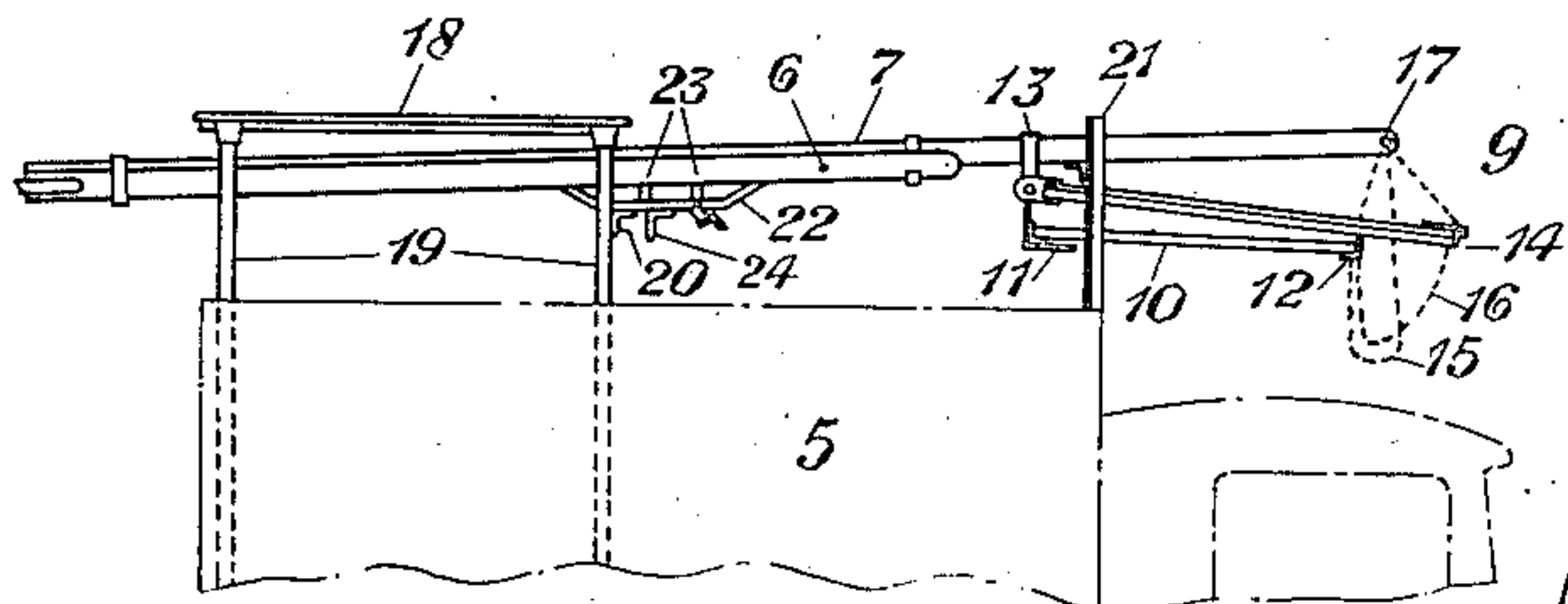


Fig. 4

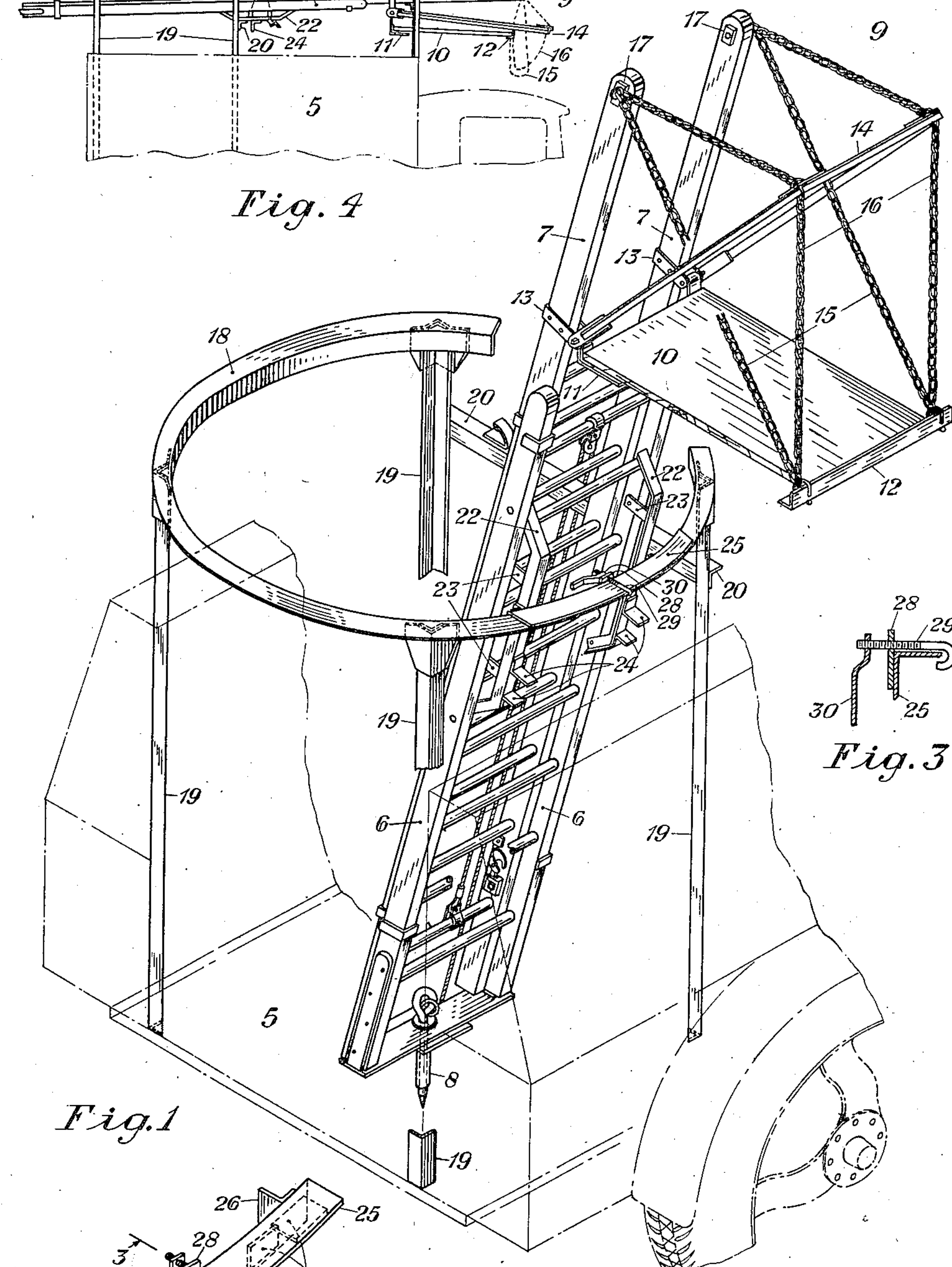


Fig. 1

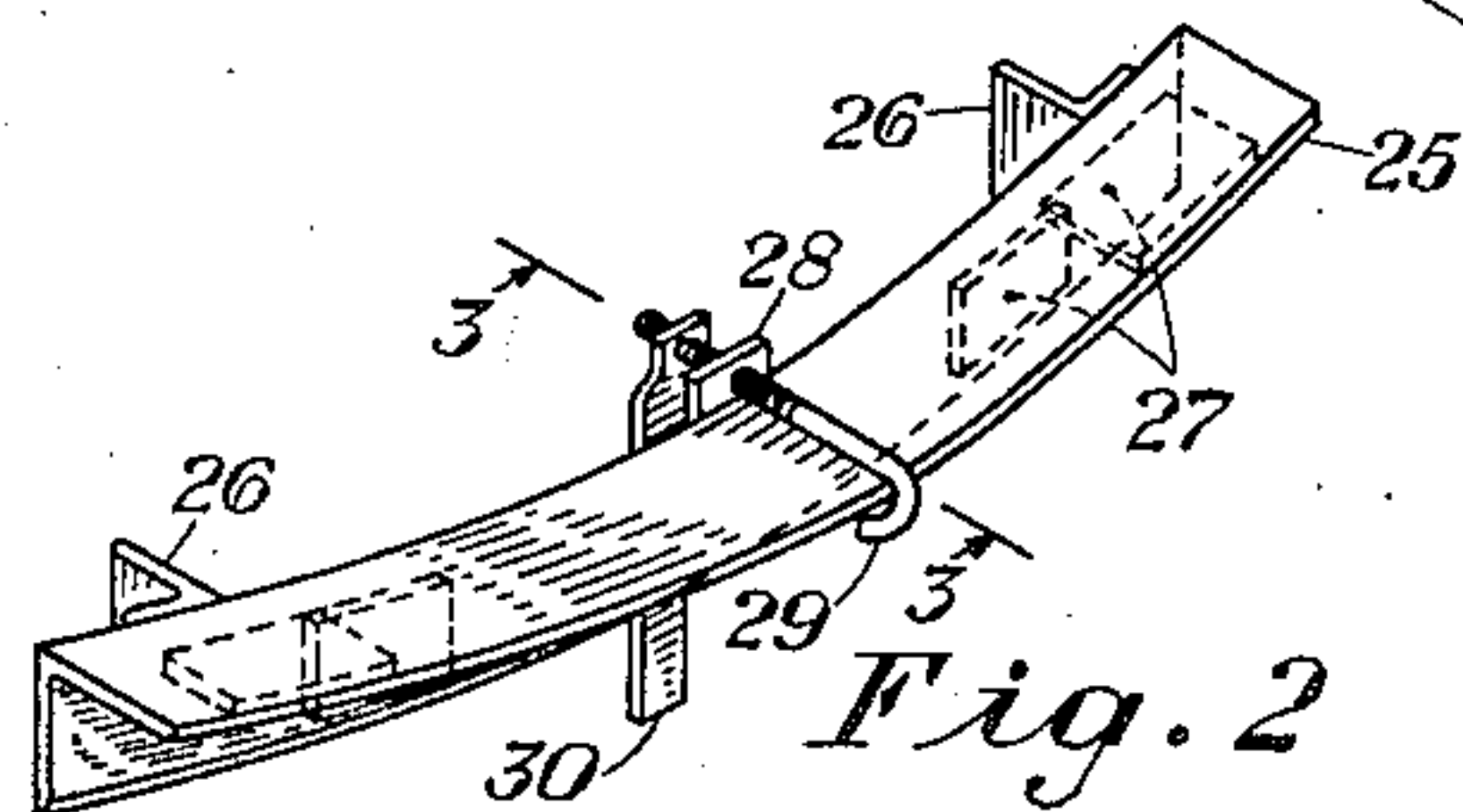


Fig. 2

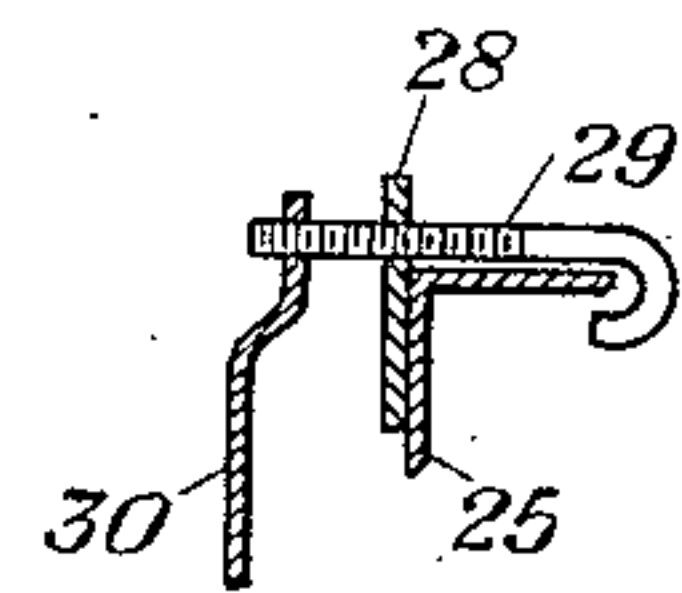


Fig. 3

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TRUCK PLATFORM LADDER

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3 Claims. (Cl. 228—6)

This invention relates to truck ladders and platforms which are more particularly adapted for use in connection with the construction and maintenance of electrical transmission lines.

It is an object of this invention to provide a ladder and platform of the above character which may be quickly elevated for use or lowered to a collapsed position for transportation.

A further object is to provide means whereby the ladder and platform may be rotated in raised position to any degree in accordance with work requirements and supported and locked in the desired rotated position.

These and further objects will be apparent from the following description when considered in connection with the accompanying drawing in which one embodiment of the invention is illustrated.

Referring to the drawing, Figure 1 is a perspective view of the improved device shown as mounted on a truck platform and in raised position; Fig. 2 is a perspective view of a detail showing a segment associated with the ladder support and an arrangement for locking the ladder in the desired rotated position; Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2, and Fig. 4 is a side elevation of the improved device in horizontal and collapsed position mounted on a truck for transportation.

In the drawing, the improved device is shown mounted on a truck platform 5 near the rear end thereof. The device includes a ladder, indicated in the present instance as being of an extensible type and having a lower portion 6 and an upper portion 7. The ladder is adapted to be raised and lowered in a manner well known in the operation of extensible ladders. The ladder is pivotally mounted on the truck platform 5 by means of a pin 8 which extends through apertures in the base plate of the lower portion 6 of the ladder and through the truck platform and a protective plate seated thereon. When so pivoted, the ladder may be rotated to any desired degree as may be required, and supported and locked in that position, as will be presently described. The upper portion 7 of the ladder carries a collapsible platform 9, having a floor 10 upon which a workman may stand when the platform is in an extended position. The floor is held between two angular members 11 and 12 secured thereto. The member 11 is pivotally connected to brackets 13, 13, which are secured to the upper portion 7 of the ladder, and a frame 14 of substantially inverted U-shape has its legs also pivotally connected to said brackets. The frame assumes an inclined position as shown in Fig. 1

when the platform is extended, and chains 15 and 16 on each side of the platform serve to hold it in extended position and also provide with the horizontal bar of the frame 14 a guard for the protection of workman when standing upon the platform. The chains 15 are secured to bolts 17, which pass through the tops of the side rail portions of the ladder element 7, and extend diagonally to points near the ends of the angular member 12 where they are suitably fastened. The chains 16 are adjustably held at one of their ends by the bolts 17 and said chains pass through apertures in the corners of the frame 14, and thence, downwardly to the common fastening points to which the chains 15 are secured. The platform is thus held in extended position from which position it may be readily collapsed in an obvious manner when desired.

A support is provided for the ladder and platform which includes a ring 18 which has a broken-away portion lying toward the front of the truck. This ring is made of suitable metal and is shown as being of angular cross-section. The ring is supported on standards 19 which may be disposed as illustrated in Fig. 1. These standards are suitably fastened at their lower ends to the truck platform and at their upper ends are riveted to the ring 18. A cross-bar 20 which may be of tabular, angular or other construction is affixed to the two forward standards and serves with a cross-bar extending between two uprights 21, positioned on the sides and at the forward end of the truck, to support the ladder and platform in a horizontal or lowered position, as shown in Fig. 4. The cross-bar 20 extends beneath the broken-away portion of the ring 18 to permit the ready adjustment of the ladder and platform from an erected position, as shown in Fig. 1, to a horizontal and lowered position, as shown in Fig. 4. The lower portion 6 of the ladder has a bracket 22 attached to each of the inner surfaces of its side rails in such manner that no interference occurs in the extensible movement of the upper portion 7 of the ladder thereon. Each of the brackets 22 has a pair of straps 23 extending therefrom to the inner surface of the side rails of the ladder portion 6 to form braces, and each of said brackets is also provided with a pair of lugs 24 which project outwardly therefrom. The cross-bar 20 lies between these lugs when the ladder is in carried or horizontal position so that longitudinal movement of the ladder is prevented, while the standards 19 and the up-rights 21 which extend above and lie at the ends of the supporting cross-bars for the ladder prevent any

substantial transverse movement of the ladder in its carried or horizontal position.

A segment 25 which is made of suitable metal is slidably mounted on the ring 18, and this segment is provided with a flat top portion from which a vertical flange extends, as is more clearly shown in Fig. 2. The top and flanged portions of the segment are adapted to slidingly engage like surfaces on ring 18. Two angular clips 26 are attached to the segment 25 near its ends and also are attached to the brackets 22 carried by the ladder portion 6 so that the segment and ladder move together. These clips may have pieces of brake lining 27 applied thereto to provide suitable friction between the contacting surfaces of the segment 25 and the ring 18. A lug 28 suitably attached to the vertical surface of the angular segment 26 extends upwardly from its flat top surface and an aperture is provided in this extended portion for the reception of a threaded bolt 29 upon which a handle 30 is rotatably mounted. The other end of the bolt terminates in a hook. When the bolt is in position, the hooked portion extends over the outer edges of the segment and ring 18 and the main portion of the bolt lies on the top flat surface of the segment. Thus, when the handle 30 is rotated on the bolt 29 in a direction toward the lug 28 and engages therewith, a clamping action is provided which securely locks the segment and ring together, and, as the segment is secured to the ladder portion 6, as previously outlined, the ladder is held in locked position at any point on the ring 18 to which it may be rotated.

When it is desired to transport the ladder and platform, the pin 8 is withdrawn from its position as shown in Fig. 1, and the platform is collapsed by disconnecting chains 16 from the bolts 17. The chains are then pulled toward the ladder causing the floor 10 and associated elements to assume the position shown in Fig. 4. The chains 16 are adjusted with respect to the bolts

17 to hold the platform elements in the collapsed position.

While the arrangements of this invention have been illustrated as embodied in a certain specific form which has been deemed desirable, it will be understood they are capable of embodiment in many and widely varied forms without departing from the spirit of the invention as defined in the appended claims.

What is claimed is:

1. In mechanism of the character described, the combination of a truck, a ladder pivotally mounted thereon in raised position, and an arcuate track substantially encircling and adapted to support said ladder above its pivotal mounting in any desired rotated position.

2. In mechanism of the character described, the combination of a truck, a ladder pivotally mounted thereon in raised position, an arcuate track substantially encircling and supporting said ladder above its pivotal mounting in any desired rotated position, and means for locking the ladder to the arcuate track in the position selected.

3. In mechanism of the character described, the combination of a truck, a ladder adapted to be pivotally mounted thereon in erected relation in one position and to be dismounted and carried in horizontal and lowered relation in a second position, a platform carried by the ladder and adapted to be extended in the first-mentioned position of the ladder and collapsed in the second position of the ladder, a framework including an arcuate track substantially encircling and adapted to support the ladder above its pivotal mounting in any rotated position in erected relation, and means co-operating with said framework to form a support for the ladder in its dismounted and lowered position.

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