

(No Model.)

E. D. EATON.
HAND TRUCK.

No. 461,820.

Patented Oct. 27, 1891.

Fig. 1

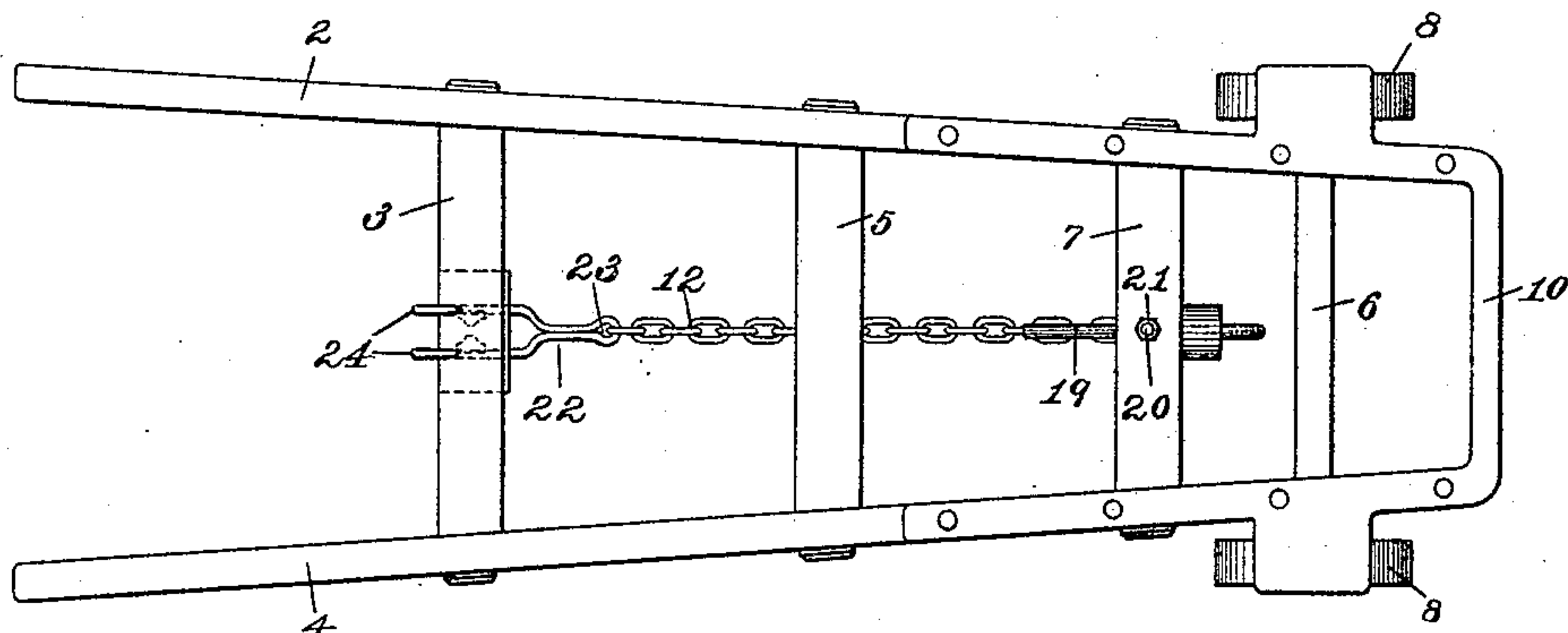


Fig. 2

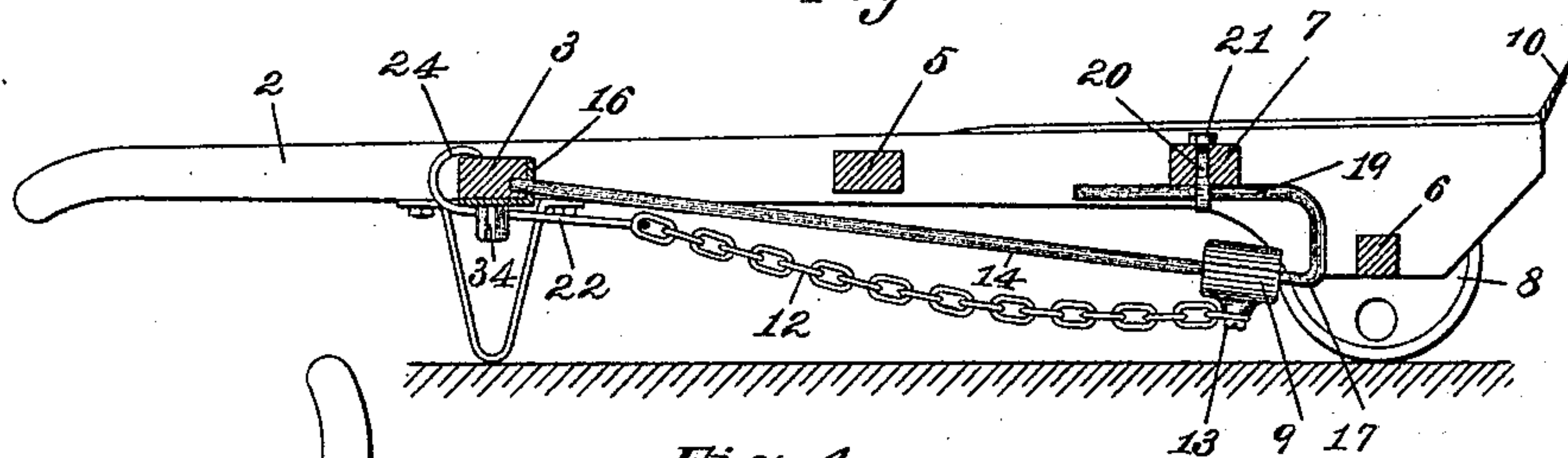


Fig. 4

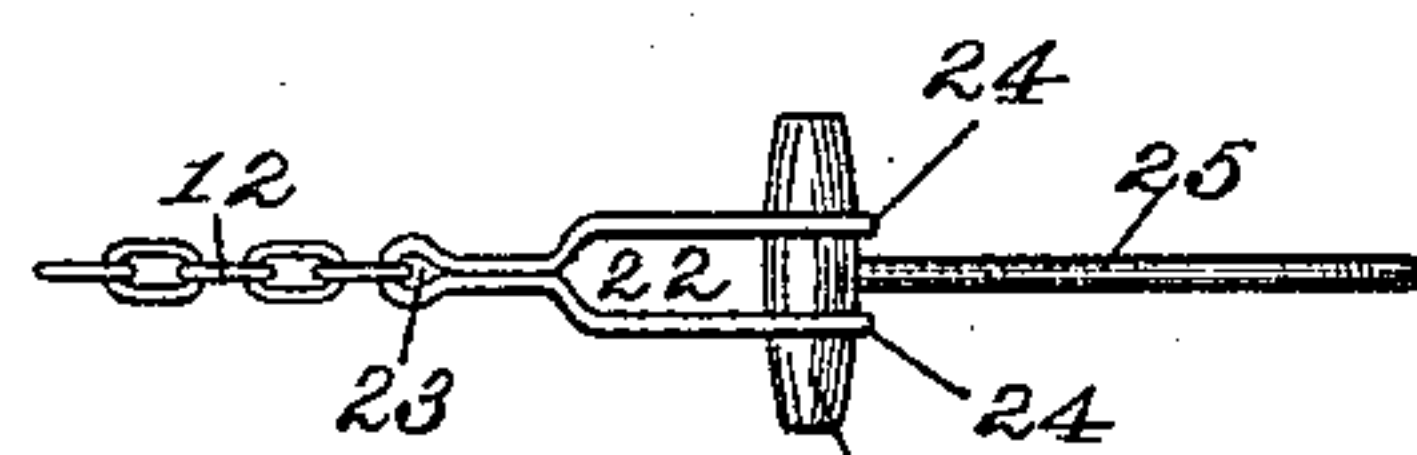


Fig. 3

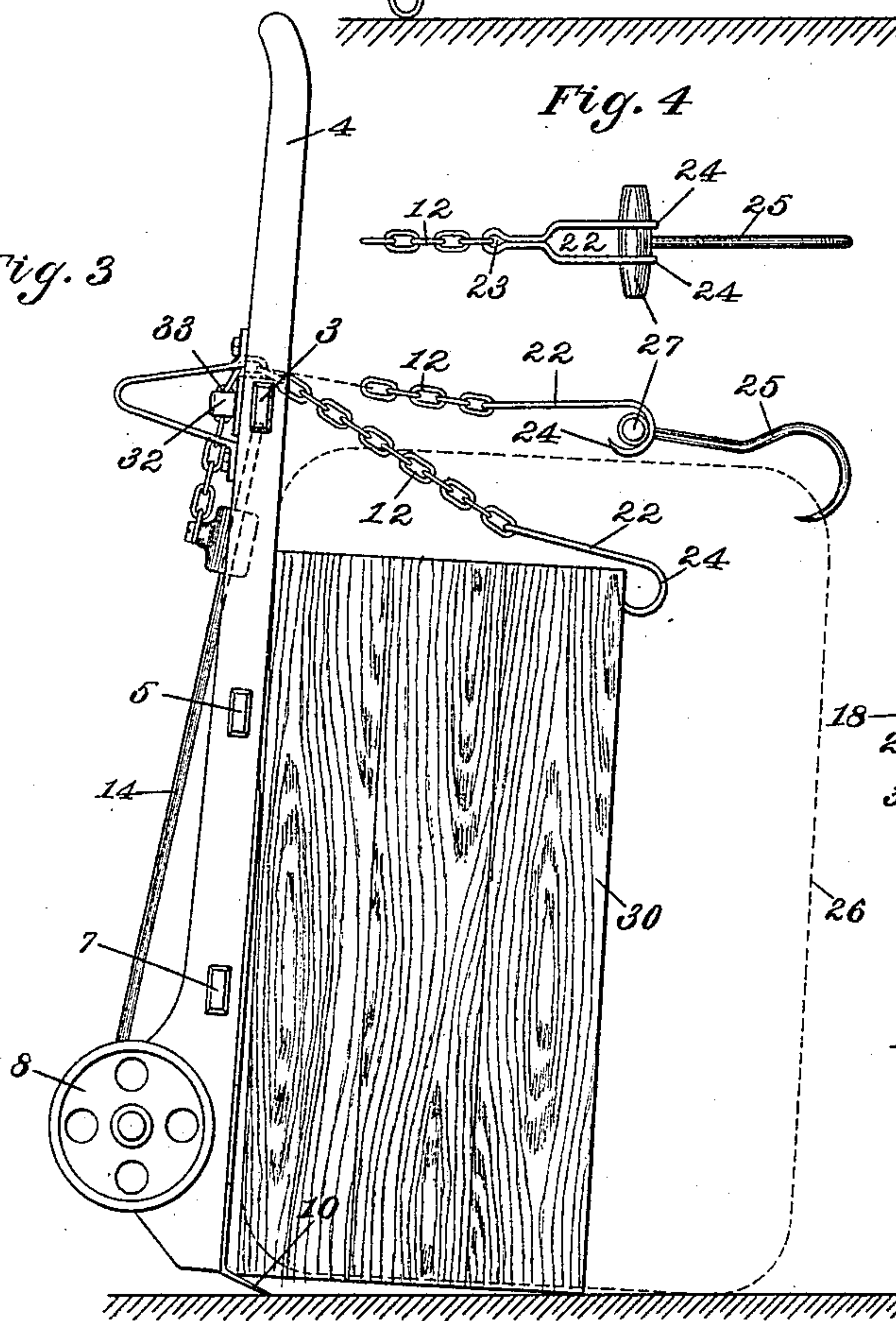


Fig. 5

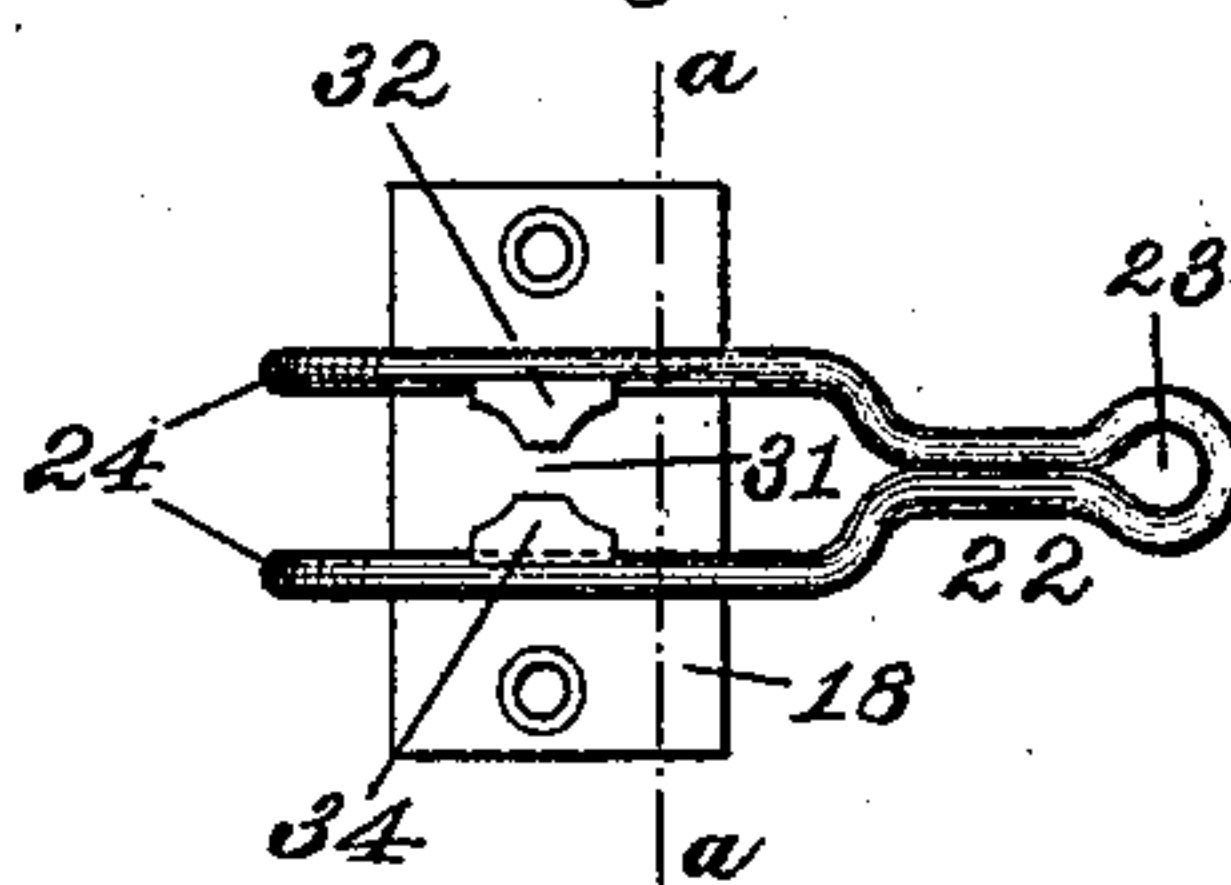


Fig. 6

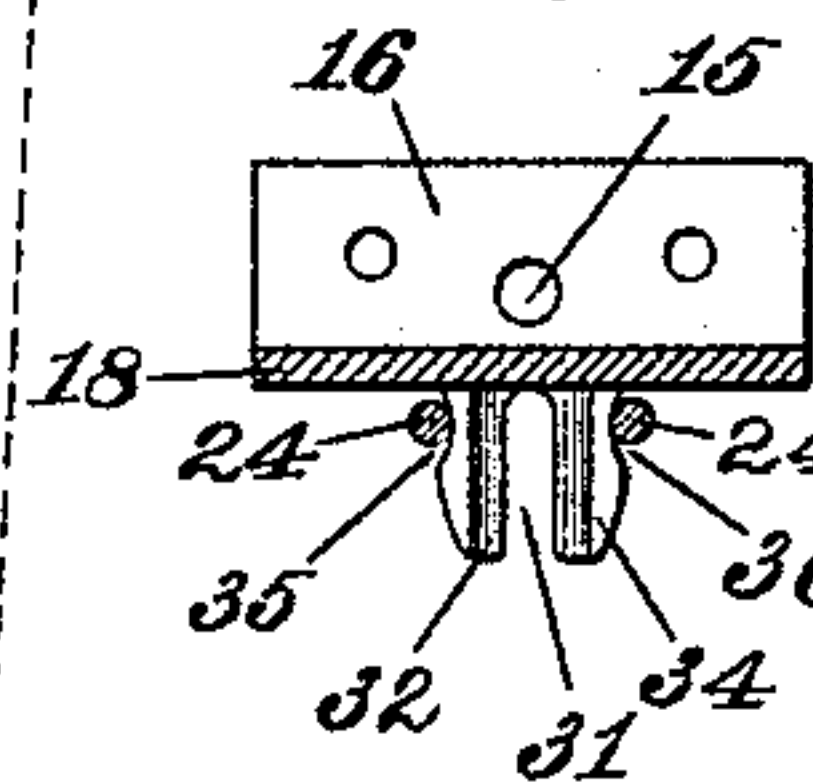
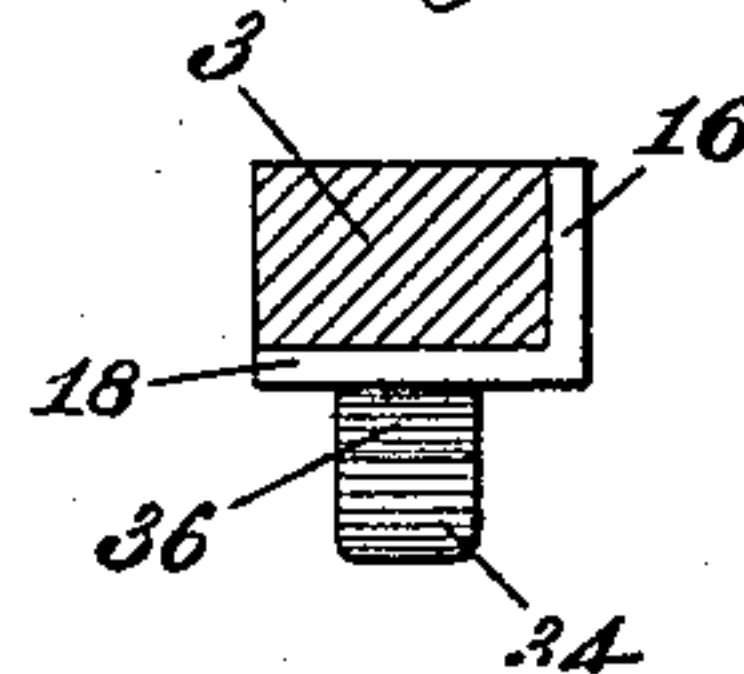


Fig. 7



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HAND-TRUCK.

SPECIFICATION forming part of Letters Patent No. 461,820, dated October 27, 1891.

Application filed March 18, 1891. Serial No. 385,442. (No model.)

To all whom it may concern:

Be it known that I, EDWIN DEWEY EATON, a citizen of the United States, residing at Fairfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Hand-Trucks, of which the following is a specification.

This invention relates to that class of trucks known as "hand-trucks," the object being to provide an improved grapple-truck of that class for use in stores and warehouses and having effective and convenient grappling appliances for the handling of boxes and bales.

In the drawings accompanying and forming a part of this specification, Figure 1 is a plan view of a hand-truck embodying my present improvements. Fig. 2 is a sectional side elevation of the truck. Fig. 3 is a side elevation of the truck, showing the manner of using the same. Fig. 4 is a detail view illustrating the use of one of the details of the improvements. Fig. 5 is a plan view of the under side of the chain-catch, showing the manner of clasp ing the chain-hook thereon when this is not in use. Fig. 6 is a section of the chain-catch plate and of the hook thereon in line *a a*, Fig. 5. Fig. 7 is an end elevation of the chain-catch plate set on the cross-bar of the truck.

Similar characters designate like parts in all the figures.

The hand-truck shown in the drawings is or may be of the ordinary construction, consisting of the sides or handle-bars 2 and 4, connected together by the usual cross-bars 3, 5, and 7, the usual iron cross-piece or "nose" 10 for engaging under the box, bale, or other similar thing to be carried on the truck, and the axle 6, having usual wheels 8 and 8. The side pieces 2 and 4, together with the cross-bars and the front end pieces 10 constitute the truck-frame, this being mounted on the usual axle and wheels.

My improvements comprise a chain provided with a grappling-hook for engaging the box, barrel, or like package, a chain-catch for locking the chain in proper position for holding the said package, a chain-carrying weight for taking up the slack unused chain, and means for locking the grappling-hook in

place when this is not in use. The chain consists of the ordinary link chain 12, connected at one end to the sliding weight 9 by means of the screw or bolt 13, or in any other convenient manner. The means for carrying the weight consists of a weight-rod 14, whose rearward or upper end is set into a socket 15, Fig. 6, in the flange 16 of the chain-catch plate 18. The front or the lower end 17 of the weight-carrying rod 14 is turned upward and backward to form the clamp-rod 19, which lies on the under side of the cross-bar 7, and is secured thereto by the bolt 20 and nut 21 on said bolt. The bolt 20 is or may be an eyebolt, as shown in the drawings. The construction of the weight-carrying rod and its fastening here described has two purposes: When the truck lies horizontal, as in Fig 2, said rod 14, on which the weight slides, stands inclined, as there shown, so that the weight has a sufficient resistance to prevent any great degree of sagging of the chain. The weight-carrying rod being turned upward and backward, as shown, the end 19 thereof furnishes a means for attaching the rod to trucks having different distances between the first and last cross-bars 3 and 7, so that my improved grappling apparatus may be applied without alteration to trucks of varying proportions. The construction described also permits the weight-carrying portion 14 of said rod to extend nearly to the axle 6, so that the weight may have a longer run from the rod than it otherwise could have. It will be remembered that the axle 6 of this class of trucks is made of iron, while the cross-bars 3, 5, and 7 are made of wood. Accordingly it is necessary to construct the apparatus for attachment to the wood cross-bars rather than to the axle in order to make the apparatus readily applicable to the trucks now in use.

The end of the chain 12 opposite to the weight is furnished with a grappling-hook 22 of improved construction, and which consists of the usual eye 23 and the two hooks 24 24, extending therefrom. When the truck, as shown in Fig. 3, is to be used for carrying bales of rags, cotton, or like material, it is desirable to use, instead of the chain-hook the ordinary hand-hook 25 for catching hold of

the bale, which is shown in Fig. 3 by the dotted line 26. Said hand-hook 25 has, it will be remembered, a handle 27, which is attached to fit within the said hooks 24 24, the stem of the hand-hook lying between said chain-hooks and thus keeping the two in the position shown in Fig. 4. This furnishes a means for extending the length of the draft-chain 12, as well as to temporarily provide the same with another kind of hook.

For locking the chain at the proper length for lifting the box, as 30, Fig. 3, or the bale or other article to be carried, the under side of the first cross-bar 3 is furnished with a plate having thereon the chain-catch consisting of the two depending posts 32 and 34, between which is formed the passage 31, shaped for engaging between the chain-links. When the truck is in use the hook is caught onto the box 30, as in Fig. 3, or onto the bale 26, as shown in said figure, and drawn taut, or nearly so, and locked into said chain-catch, as shown at 33 in said Fig. 3.

For locking the chain-hook in place when the grappling apparatus is not in use I attach the chain-catch to the under side of the cross-bar, as set forth, and construct it in the manner illustrated in detail in Figs. 5 and 6, with the depressions 35 and 36 on the outer sides thereof to engage the respective sides of the grappling-hook, as will be understood from said Figs. 5 and 6 and by comparison of them with Figs. 1 and 2. In Fig. 2 the said hook 22 is shown in place, the points 24 thereof engaging the first cross-bar 3, thereby holding the hook from slipping or being accidentally forced down off from the depending posts 32 34. The hook 22 is to some extent

of the nature of a spring, and hence when in the position shown in Figs. 2 and 5 is said to be in spring engagement with the chain-catch posts.

Having thus described my invention, I claim—

1. In a grapple-truck, the combination, with the chain and with a chain-catch, substantially as described, on the truck-frame, of the double grappling-hook affixed to the chain, and constructed, substantially as set forth, to embrace said catch, whereby to hold the hook and chain in place when these are not in use, substantially as set forth.

2. In a grapple-truck, the combination, with the truck-bar 3, of the chain-catch having the posts 32 and 34 and having the link-space between said posts, and the hook having the two sides constructed for spring engagement over said posts, the hook-points being adapted to engage the cross-bar when the hook is spring-locked in place, substantially as set forth.

3. In a grapple-truck, the combination, with the first cross-bar provided with a socket and with the other cross-bar having rod-clamping means, substantially as described, of the weight-carrying rod 14, having the return-bend 17, and the clamp-rod 19, engaging said rod-clamping means, whereby said weight-rod is supported inclined to the truck-frame and is also made applicable to trucks of different lengths, substantially as set forth.

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