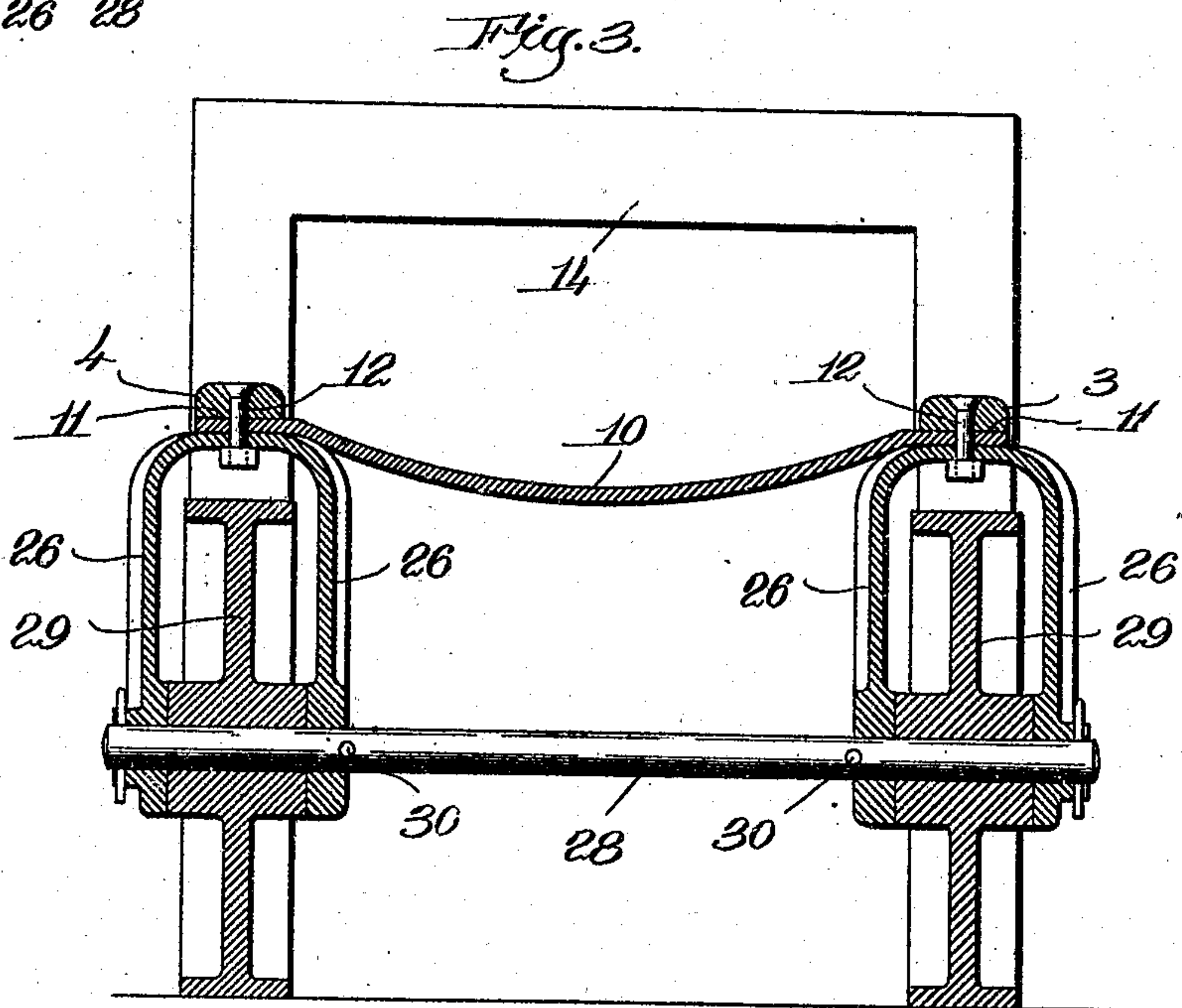
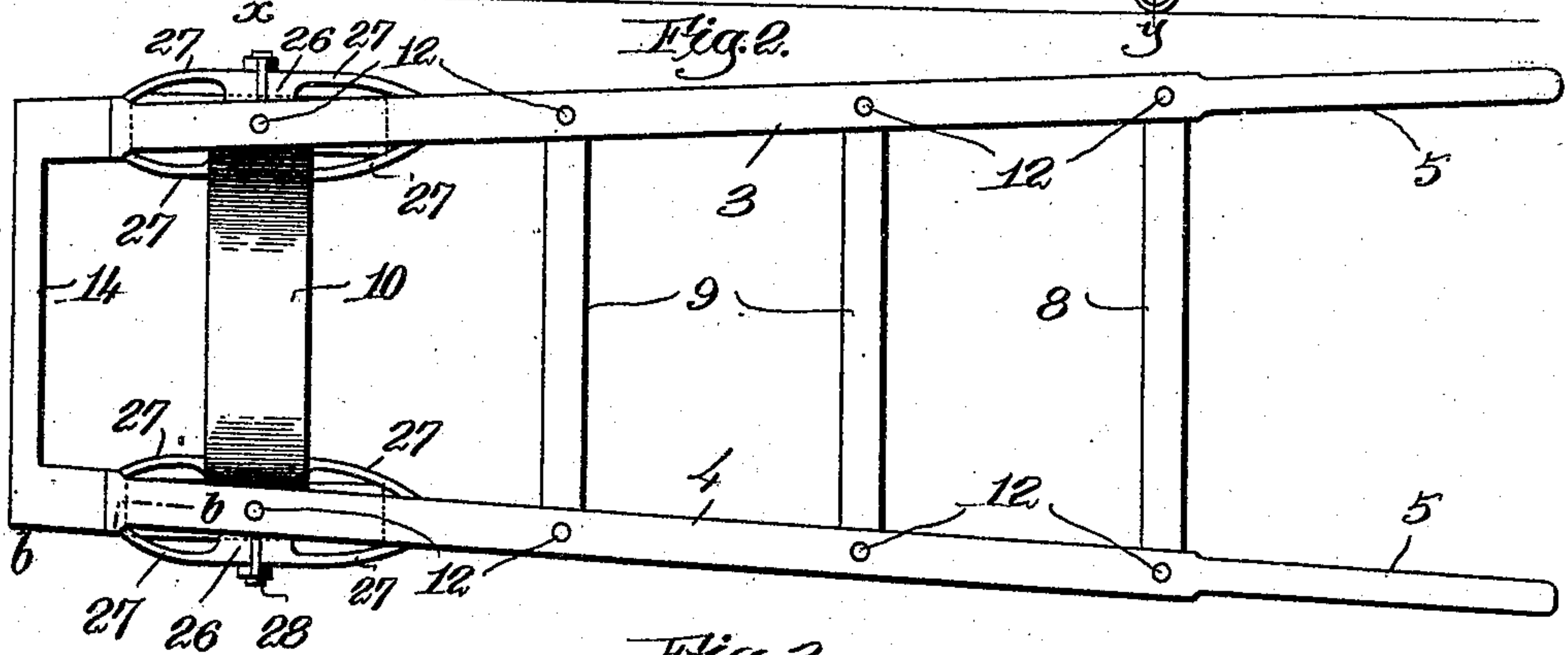
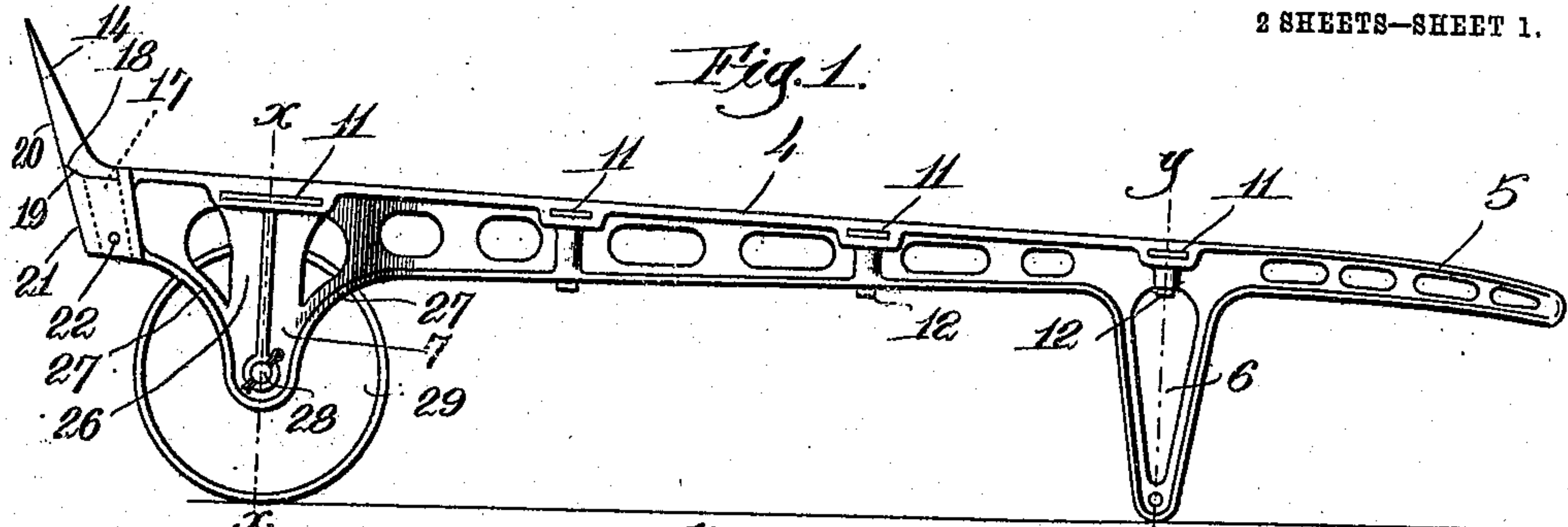


A. W. YOUNG.
HAND TRUCK.
APPLICATION FILED AUG. 11, 1908.

924,523.

Patented June 8, 1909.
2 SHEETS—SHEET 1.



Witnesses.
Thomas J. Drummond
James F. Ward

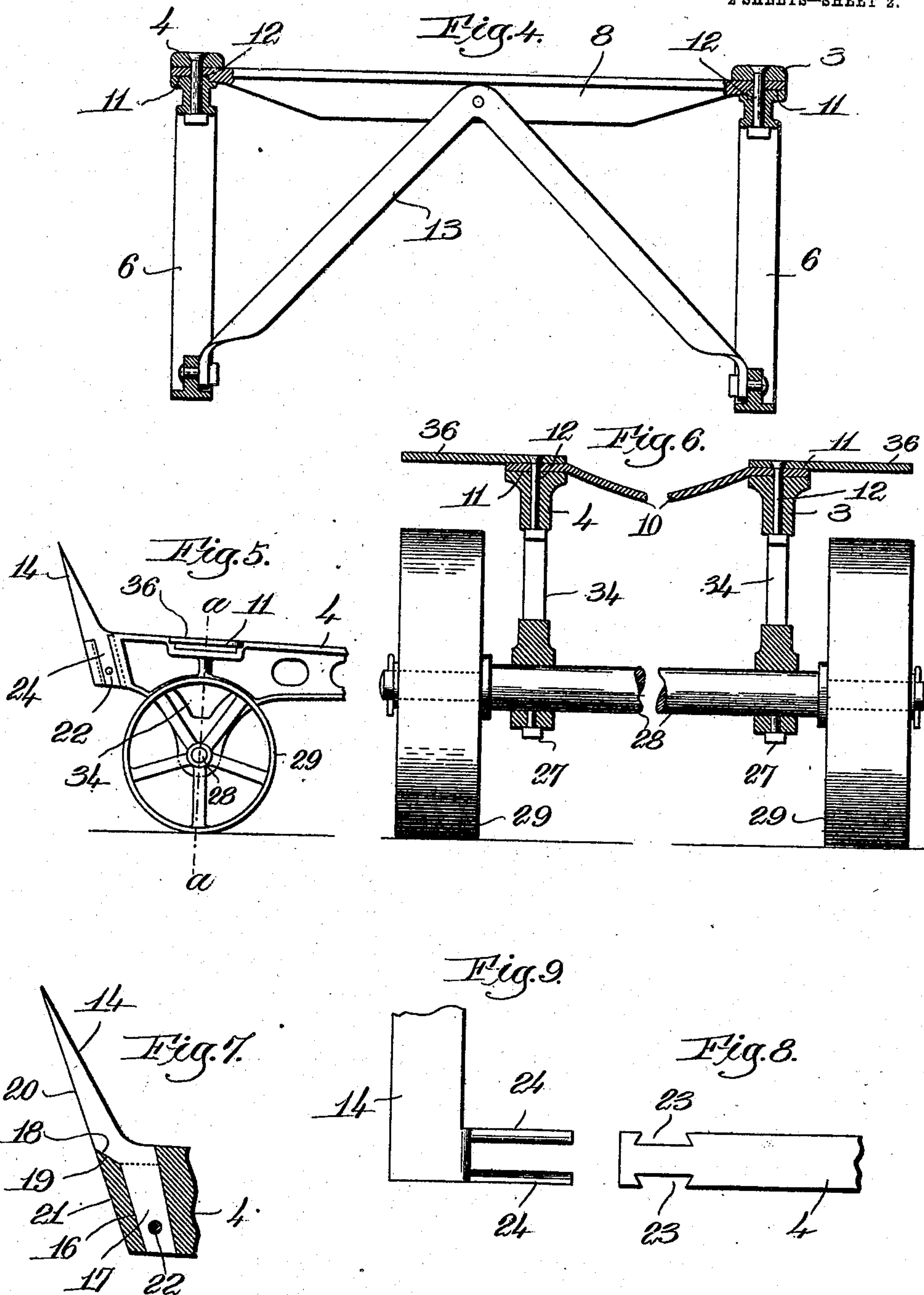
Inventor.
Albert W. Young
By *Glenn H. Young* Attorney

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Albert W. Young,
by Henry S. Young, atty.

UNITED STATES PATENT OFFICE.

ALBERT W. YOUNG, OF DEDHAM, MASSACHUSETTS.

HAND-TRUCK.

No. 924,523.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed August 11, 1908. Serial No. 447,973.

To all whom it may concern:

Be it known that I, ALBERT W. YOUNG, a citizen of the United States, residing at Dedham, county of Norfolk, State of Massachusetts, have invented an Improvement in Hand-Trucks, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

10 This invention relates to hand trucks such as are commonly used for transporting freight in ware-houses, freight houses and similar places.

15 The object of the invention is to provide a novel all-metal truck which will successfully withstand the rough usage to which hand trucks are usually subjected and which can be easily repaired in case it becomes damaged.

20 The hand trucks now in common use are made with wooden frames and are provided with a metal bill which is usually integral with wear straps that extend along and are secured to the upper sides of the side
25 pieces of the frame. The part of the truck which usually becomes damaged first is the bill, and when it does become broken or otherwise injured it is necessary to remove the bill and the wear straps which are integral therewith from the frame and substitute a new bill or wear straps, or to cut the
30 bill from the wear straps and weld a new bill thereon. These repairs are of such a nature that they cannot be easily accomplished without sending the truck to a repair shop.

35 My invention aims to provide a novel truck which will be less liable to be injured than the wooden truck now in common use and which
40 when injured or damaged can be readily repaired at warehouses or freight houses without the necessity of sending the truck to a repair shop for this purpose. In order to secure these objects I make my improved
45 truck with two cast iron side pieces each having integral therewith a handle, a leg and an axle bearing, and I make the bill separate from the side pieces and provide for detachably securing it to the side pieces so
50 that in case the bill becomes broken it can be easily removed from the truck and a new bill substituted by the freight handler and without the use of special tools or machines for this purpose.

55 My invention also comprehends a novel construction for tying the side pieces to-

gether and other novel features which will be more fully hereinafter described and then pointed out in the appended claims.

In the drawings Figure 1 is a side view 60 of a truck embodying my invention. Fig. 2 is a top plan view thereof. Fig. 3 is an enlarged section on the line $x-x$, Fig. 1. Fig. 4 is an enlarged section on the line $y-y$, Fig. 1. Fig. 5 is a side view of one 65 end of a truck showing a different form of the invention. Fig. 6 is a section on an enlarged scale on the line $a-a$, Fig. 5, a part of the section being broken out. Fig. 7 is a section on the line $b-b$, Fig. 2, showing 70 the manner of securing the bill in place. Fig. 8 is a fragmentary view showing a different manner of detachably securing the bill in place. Fig. 9 is a fragmentary view of a bill adapted to fit the construction 75 shown in Fig. 8.

The truck comprises the two side pieces 3 and 4 each of which is made of malleable cast iron, and each of which has integral therewith the handle 5, the leg 6, and the 80 axle bearing 7. The two side pieces are tied together by tie-bars 8, 9 and 10, the tie-bar 8 preferably being made of T-iron, while the tie-bars 9 and 10 may be ordinary flat iron. Each side piece is cast with trans- 85 versely-extending pockets or apertures 11 to receive the ends of the tie-bars 8, 9 and 10, said apertures being situated preferably below the top surface of the side pieces, as clearly shown in Fig. 1. The tie-bars are 90 held in place by means of bolts 12 which pass down through apertures formed in the side pieces and also pass through the apertures formed in the ends of the tie-bars. If desired the legs may be braced by a V-shaped 95 brace-piece 13, the ends of which are secured to the bottoms of the legs, as shown in Fig. 4, and the apex of which is secured to the vertical web of the T-iron tie-bar 8. The bill 14 is made of metal and is detachably 100 secured to the side pieces so that if said bill becomes injured, it can be readily removed and a new bill substituted therefor. The bill may be connected to the side pieces in several ways without departing from the 105 invention.

In Figs. 1, 5 and 7 each side piece is shown as provided with a vertically-extending aperture 16 which is shaped to receive a leg 17 110 formed on the end of the bill, said apertures and legs being properly shaped to give the bill the right inclination. Where this con-

struction is employed I prefer to offset the leg 17 slightly so as to provide each side of the bill with a shoulder 18 that rests against a seat 19 formed on the side piece, this construction having the advantage that the bill has a solid support on the side pieces and the face 20 of the bill comes substantially flush with the end 21 of the side pieces. The bill may be held in place in various ways, one of which is to tie the legs 17 to the side pieces by means of removable keys 22. Another way of securing the bill to the side piece is to form each side piece on each side thereof with the dove-tailed groove 23 and provide the bill at each end with the two dove-tailed legs 24 which fit the grooves 23, as shown in Figs. 8 and 9. A bill made in this way may also be held in place by means of the removable keys 22.

Both of these constructions have the advantage that the bill can be readily removed from the side pieces by an ordinary freight handler and without the necessity of sending the truck to a repair shop for this purpose. As a consequence if the bill becomes damaged it can be removed and a new bill substituted by any person who is using the truck. Another advantage is that this construction permits the bill in use to be removed and another bill of a different type to be substituted therefor. Trucks of this description are commonly made with bills of two or three different shapes each of which is adapted for handling some particular class of freight. With the old construction where the bill is permanently secured to the truck it is necessary to have two or three different kinds of trucks with bills of different shapes for handling all classes of freight, but with my invention it is possible to change a truck over from one type to another by simply removing the bill and substituting therefor a bill of a different shape.

The side pieces may be made with axle bearings of the shape shown in Fig. 1 or of the shape shown in Figs. 5 and 6. In Fig. 1 each side piece is cast to form the two cheek pieces 26 between which the wheel 29 is received, the lower ends of said cheek pieces being connected with the lower edge of the side pieces by the braces 27. These cheek pieces 26 and braces 27 are all integral with the side pieces and form integral parts of the casting. The two wheels may be supported on separate short axles or a single axle 28 may be inserted through apertures formed in the cheek pieces, and the two wheels 29 journaled on the ends of said axle. The axle may have stop pins or projections extending therefrom which are adapted to engage the inner faces of the cheek pieces

26 and thus not only brace the truck but hold the axle in position. This construction has the advantage that since the wheels are received between the cheek pieces, said cheek pieces and the top of the side pieces protect the wheel and act as a wheel guard.

In Figs. 5 and 6 I have shown another type of axle bearing wherein the side pieces each have cast integral therewith the extension 34 provided at its lower end with an opening through which the axle 28 extends. The drawings show both wheels mounted on the same axle, said axle extending through the apertures in both of the extensions 34. In this embodiment the wheels are situated outside of the side pieces and the latter have the wheel-guards 36 cast integral therewith. The axle may be held in place by set-screws 27 or by any other suitable means. A truck having this construction is very easy to repair because when any of the parts become damaged, the damaged part can be readily removed and a new part substituted therefor. The truck being entirely made of iron is much stronger than a wooden truck and is less liable to be injured.

I have not attempted to show all embodiments of my invention herein, but have illustrated two of the preferred embodiments only.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a hand truck, the combination with two cast metal side pieces, each having integral therewith a leg and an axle bearing, of tie-bars extending between and connecting said side pieces, each side piece having a vertical opening at one end which terminates at its upper end in a seat at one side of the opening, a bill separate from the side pieces and having a leg at each end to be received in the opening in one of the side pieces, said bill having a shoulder to rest on the seat of each side piece, and means to detachably secure said legs in the openings.

2. In a hand truck, the combination with two connected side pieces, each having a vertical opening at its end and an inclined seat at the upper end of the opening, of a bill having a leg at each end to be received within said opening, said bill having an inclined shoulder to engage the seat.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ALBERT W. YOUNG.

Witnesses:

LOUIS C. SMITH,
BERTHA F. HEUSER.