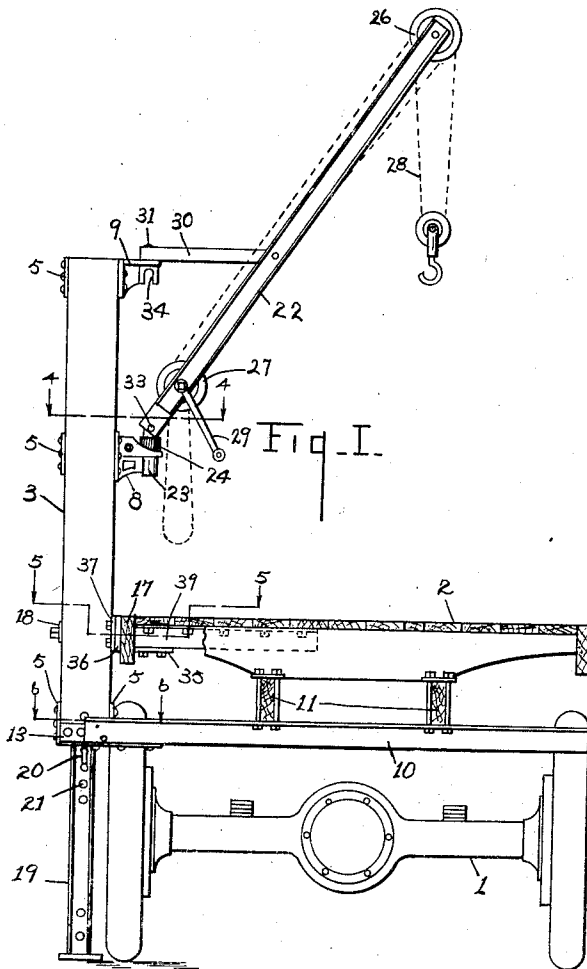
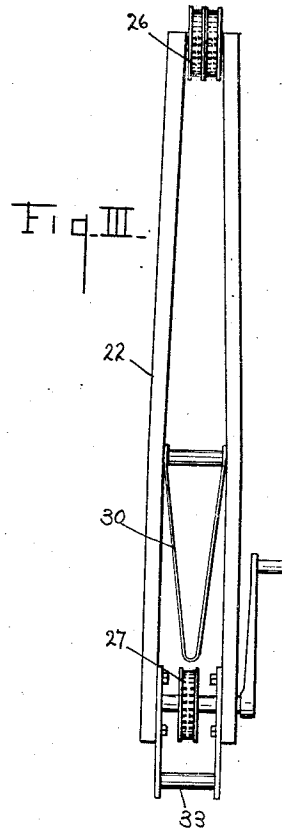
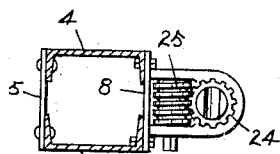
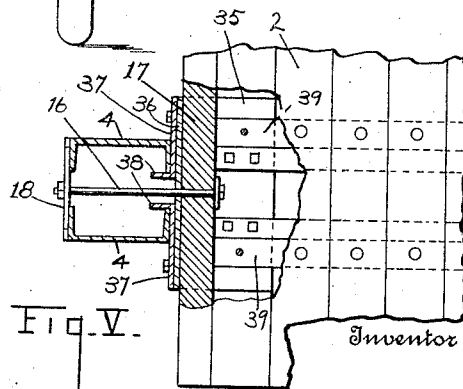


P. C. HAAS.
TRUCK HOIST.
APPLICATION FILED DEC. 20, 1918.

1,340,893.

Patented May 25, 1920.
2 SHEETS—SHEET 1.



Witnesses

Lenna Gilman
Fred Ullrich

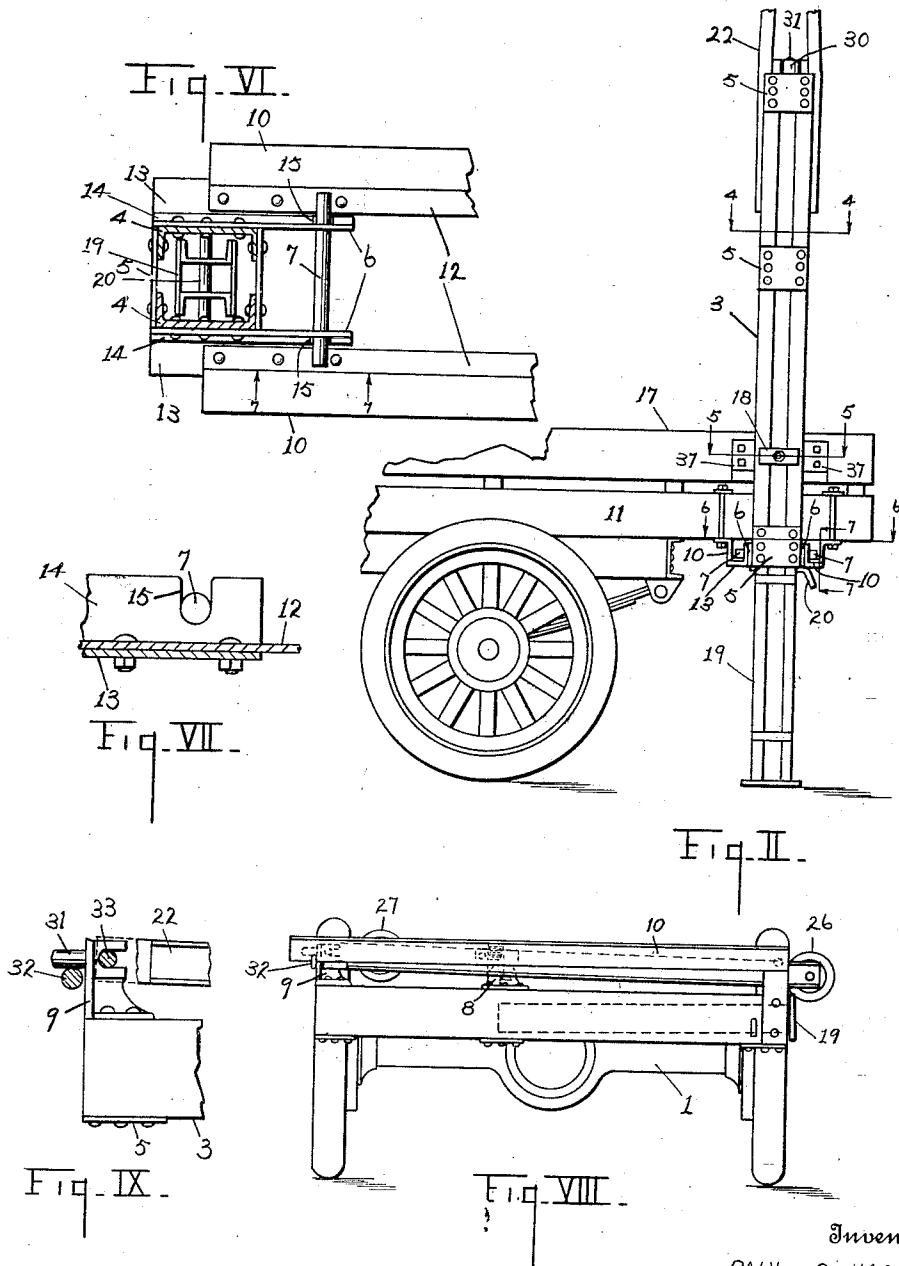
By *Chapman & Co.*

Attorneys

P. C. HAAS.
 TRUCK HOIST.
 APPLICATION FILED DEC. 20, 1918.

1,340,893.

Patented May 25, 1920.
 2 SHEETS—SHEET 2.



Witnesses
Lenn Gilman
Frederick Ulrich

Inventor
 PAUL C. HAAS
By Chappell & Earl
 Attorneys

UNITED STATES PATENT OFFICE.

PAUL C. HAAS, OF MENDON, MICHIGAN.

TRUCK-HOIST.

1,340,893.

Specification of Letters Patent.

Patented May 25, 1920.

Application filed December 20, 1918. Serial No. 267,558.

To all whom it may concern:

Be it known that I, PAUL C. HAAS, a citizen of the United States, residing at Mendon, county of St. Joseph, State of Michigan, have invented certain new and useful improvements in Truck-Hoists, of which the following is a specification.

This invention relates to improvements in truck hoists.

The main objects of this invention are:

First, to provide an improved loading and unloading hoist for trucks which may be readily mounted upon a truck of common construction and when not in use collapsed leaving the truck body entirely unobstructed.

Second, to provide an improved truck hoist which does not put any undue stress or strain upon the truck body.

Third, to provide an improved collapsible truck hoist which is conveniently erected or collapsed and very conveniently manipulated.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure I is a rear view of a structure embodying the features of my invention with the hoist erected, a portion only of the truck running gear and body being illustrated and such portions being shown conventionally.

Fig. II is a detail side elevation looking from the left of Fig. I.

Fig. III is a plan view of the jib, the tackle pulleys or blocks being shown conventionally.

Fig. IV is a detail section on line 4—4 of Figs. I and II.

Fig. V is a detail horizontal section on line 5—5 of Figs. I and II.

Fig. VI is a detail horizontal section on line 6—6 of Figs. I and II.

Fig. VII is a detail vertical section on line 7—7 of Figs. II and VI.

Fig. VIII is a detail rear elevation with the hoist in collapsed position, the platform or body of the truck being omitted.

Fig. IX is a detail view showing the arrangement of certain parts when the post is collapsed.

In the drawing similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, 1 represents the running gear generally and 2 the body or bed of a truck. These parts are shown conventionally as the structural details thereof form no part of this invention.

The post of my improved hoist, designated generally by the numeral 3, is, in the structure illustrated, formed of a pair of channel bars 4 disposed facing and connected by the plates or cross pieces 5,—see Figs. II and IV.

At its lower end the post is provided with inwardly projecting arms 6 carrying the crosspiece 7 which projects at each end,—see Fig. VI. The post also carries the inwardly projecting jib supporting bracket 8 and the jib strut bracket 9.

Disposed below the body and transversely thereof I arrange a pair of bars 10, these bars being secured to the sills 11 in the structure illustrated. The bars in the structure illustrated are Z bars or Z-shaped in cross section, the lower arms of the bars being disposed inwardly providing ways 12 on which the cross bar 7 of the post may slide. The way bars project at one side of the body and on their projecting ends are mounted angle plates 13 disposed with their vertical angles 14 on the inner sides of the ways and notched at 15 to receive the cross bar 7 when the post is in erected position,—see Figs. VI and VII.

When erected the post is connected to the body by the bolt 16 arranged through the bed piece 17 and engaging a cross piece 18 on the outer side of the post, the bolt being arranged between the members 4 of the post,—see Fig. V.

To further support the post I provide a ground strut 19 which is adapted to be adjusted to rest upon the ground and is adjustably connected to the post by means of the pin 20, the strut having a series of holes 21 adapted to receive the pin. This pin extends crosswise below the post as shown in Figs. I and II. Thus arranged, the load on the hoist is mainly sustained directly from

the ground or strut, thus relieving the truck of the greater portion of the stresses.

The jib 22 is provided with a pivot 23 adapted to engage the bracket 8. This pivot is provided with a pinion 24, while the bracket has a coacting worm 25. The jib carries the tackle consisting of the tackle pulleys 26 and 27 and the chain 28, indicated by dotted lines in Fig. I. The crank 29 may be employed on the tackle or to drive the worm 25. The jib strut 30 is U-shaped, the bight of the strut being adapted to engage over the pin 31 on the bracket 9.

The ground strut 19 is adapted to telescope into the post as shown by dotted lines in Fig. VIII, and the post may be stored under the body, the crossbar 7 sliding on the ways. The top of the post is secured to the bars by a pin 32 which is inserted through the bars below the pin 31,—see dotted lines in Figs. VIII and IX. The jib may be arranged upon the stored post as shown in Fig. VIII, the jib pin 33 engaging in a notch 34 provided in the bracket 9, so that the parts are supported entirely out of the way, and in a secure and simple manner.

To coact with the bolt 16 in supporting the post in its erected position and to reinforce the body I provide a plate 35 having an upturned flange 36 at its outer edge bolted to the outer frame piece 17 of the body. On this upturned flange are plates 37 having forwardly projecting lugs 38 adapted to pass between the side members 4 of the post, as shown in Fig. V, supporting the same laterally. The plate 35 is bolted to bars 39 secured on the under side of the bed, thereby providing a very rigid support for the post and reinforcing the body at this point.

I have illustrated but one application and embodiment of my invention and various parts are shown conventionally and without particular regard to proportion. It is believed however that those skilled in the art to which my invention relates will be enabled to embody and apply the same as occasion may require.

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

1. The combination with a running gear and body, of hanger bars disposed in a spaced relation below said body with their ends projecting at one side thereof, said bars being of Z-cross section and disposed with their lower arms inwardly providing ways, angle plates mounted on the projecting ends of said bars with their vertical arms projecting upwardly at the inner sides of the ways and notched, a post comprising facing rigidly connected channel irons having inwardly projecting arms at its lower end provided with a cross bar projecting into en-

gagement with said hanger ways to slide thereon whereby the post may be stored below the body, said cross bar being adapted to be engaged with the notches of said plates when the post is erected, said post being also provided with a jib bracket and with a jib strut bracket having an upwardly projecting pin, a pin on said hanger bars adapted to be engaged with said jib strut bracket for supporting said post when stored, a jib provided with a pivot adapted to be engaged with said jib supporting bracket, a U-shaped jib strut pivoted to the jib and adapted to be engaged with said pin on said jib strut bracket, said jib with its strut collapsed thereon being adapted to be arranged above said post when the post is stored with its pivot engaging said jib strut bracket, a post supporting bolt projecting from said body and detachably connected to said post, a post strut adapted to telescope into the post, and means for adjustably connecting said strut and post.

2. The combination with a running gear and body, of hanger bars disposed in a spaced relation below said body with their ends projecting at one side thereof, said bars being of Z-cross section and disposed with their lower arms inwardly providing ways, angle plates mounted on the projecting ends of said bars with their vertical arms projecting upwardly at the inner sides of the ways and notched, a post comprising facing rigidly connected channel irons having inwardly projecting arms at its lower end provided with a cross bar projecting into engagement with said hanger ways to slide thereon whereby the post may be stored below the body, said cross bar being adapted to be engaged with the notches of said plates when the post is erected, said post being also provided with a jib bracket and with a jib strut bracket having an upwardly projecting pin, a pin on said hanger bars adapted to be engaged with said jib strut bracket for supporting said post when stored, a jib provided with a pivot adapted to be engaged with said jib supporting bracket, a U-shaped jib strut pivoted to the jib and adapted to be engaged with said pin on said jib strut bracket, said jib with its strut collapsed thereon being adapted to be arranged above said post when the post is stored with its pivot engaging said jib strut bracket, and a post supporting bolt projecting from said body and detachably connected to said post.

3. The combination with a running gear and body, of hanger bars disposed in a spaced relation below said body with their ends projecting at one side thereof, said bars being of Z cross section and disposed with their lower arms inwardly providing ways, angle plates mounted on the projecting ends of said bars with their vertical arms projecting upwardly at the inner sides

of the ways and notched, a post comprising facing rigidly connected channel irons having inwardly projecting arms at its lower end provided with a cross bar projecting into engagement with said hanger ways to slide thereon whereby the post may be stored below the body, said cross bar being adapted to be engaged with the notches of said plates when the post is erected, said post being also provided with a jib bracket and with a jib strut bracket having an upwardly projecting pin, a jib provided with a pivot adapted to be engaged with said jib supporting bracket, a U-shaped jib strut pivoted to the jib and adapted to be engaged with said pin on said jib strut bracket, a post supporting bolt projecting from said body and detachably connected to said post, a post strut adapted to telescope into the post, and means for adjustably connecting said strut and post.

4. The combination with a running gear and body, of hanger bars disposed in a spaced relation below said body with their ends projecting at one side thereof, said bars being of Z-cross section and disposed with their lower arms inwardly providing ways, angle plates mounted on the projecting ends of said bars with their vertical arms projecting upwardly at the inner sides of the ways and notched, a post comprising facing rigidly connected channel irons having inwardly projecting arms at its lower end provided with a cross bar projecting into engagement with said hanger ways to slide thereon whereby the post may be stored below the body, said cross bar being adapted to be engaged with the notches of said plates when the post is erected, said post being also provided with a jib bracket and with a jib strut bracket having an upwardly projecting pin, a jib provided with a pivot adapted to be engaged with said jib supporting bracket, a U-shaped jib strut pivoted to the jib and adapted to be engaged with said pin on said jib strut bracket, and a post supporting bolt projecting from said body and detachably connected to said post.

5. The combination with a running gear and body, of hanger bars disposed in a spaced relation below said body with their ends projecting at one side thereof, said bars being of Z cross section and disposed with their lower arms inwardly providing ways, angle plates mounted on the projecting ends of said bars with their vertical arms projecting upwardly at the inner sides of the ways and notched, a post comprising facing rigidly connected channel irons having inwardly projecting arms at its lower end provided with a cross bar projecting into engagement with said hanger ways to slide thereon whereby the post may be stored below the body, said cross bar being adapted to be engaged with the notches of

said plates when the post is erected, a jib, means for supporting said post in erected position, a post strut adapted to telescope into the post, and means for adjustably connecting said strut and post.

6. The combination with a running gear and body, of hanger bars disposed in a spaced relation below said body with their ends projecting at one side thereof, said bars being of Z cross section and disposed with their lower arms inwardly providing ways, angle plates mounted on the projecting ends of said bars with their vertical arms projecting upwardly at the inner sides of the ways and notched, a post comprising facing rigidly connected channel irons having inwardly projecting arms at its lower end provided with a cross bar projecting into engagement with said hanger ways to slide thereon whereby the post may be stored below the body, said cross bar being adapted to be engaged with the notches of said plates when the post is erected, a jib, and means for supporting said post in erected position.

7. The combination with a running gear and body, of hanger bars constituting ways disposed below said body, notched plates mounted on said ways, a post having inwardly projecting arms at its lower end provided with a cross bar projecting into engagement with said hanger ways to slide thereon whereby the post may be stored below the body, said cross bar being adapted to be engaged with the notches of said plates when the post is erected, said post being also provided with a jib bracket and with a jib strut bracket having an upwardly projecting pin, a pin on said hanger bars adapted to be engaged with said jib strut bracket for supporting said post when stored, a jib provided with a pivot adapted to be engaged with said jib supporting bracket, a jib strut pivoted to the jib and adapted to be engaged with said pin on said jib strut bracket, said jib with its strut collapsed thereon being adapted to be arranged above said post when the post is stored with its pivot engaging said jib strut bracket, means for detachably connecting said post to said body, a post strut adapted to telescope with the post, and means for adjustably connecting said strut and post.

8. The combination with a running gear and body, of hanger bars constituting ways disposed below said body, notched plates mounted on said ways, a post having inwardly projecting arms at its lower end provided with a cross bar projecting into engagement with said hanger ways to slide thereon whereby the post may be stored below the body, said cross bar being adapted to be engaged with the notches of said plates when the post is erected, a jib, means for detachably connecting said post to said

body, a post strut adapted to telescope with the post, and means for adjustably connecting said strut and post.

9. The combination with a running gear 5 and body, of hanger bars constituting ways disposed below said body, notched plates mounted on said ways, a post having inwardly projecting arms at its lower end provided with a cross bar projecting into 10 engagement with said hanger ways to slide thereon whereby the post may be stored below the body, said cross bar being adapted to be engaged with the notches of said plates when the post is erected, said post 15 being also provided with a jib bracket and with a jib strut bracket having an upwardly projecting pin, a pin on said hanger bars adapted to be engaged with said jib strut bracket for supporting said post when 20 stored, a jib provided with a pivot adapted to be engaged with said jib supporting bracket, a jib strut pivoted to the jib and adapted to be engaged with said pin on said jib strut bracket, said jib with its strut 25 collapsed thereon being adapted to be arranged above said post when the post is stored with its pivot engaging said jib strut bracket, and means for detachably connecting said post to said body.

30 10. The combination with a running gear and body, of hanger bars constituting ways

disposed below said body, notched plates mounted on said ways, a post having inwardly projecting arms at its lower end provided with a cross bar projecting into 35 engagement with said hanger ways to slide thereon whereby the post may be stored below the body, said cross bar being adapted to be engaged with the notches of said plates when the post is erected, a jib, and 40 means for detachably connecting said post to said body.

11. The combination with a running gear and body, of a post detachably connected to said body, and a way disposed below said 45 body, said post having means slidably engaging said way whereby the post may be stored below said body and supported by said way.

12. The combination with a running gear 50 and body, of a post, means for supporting said post in an erect position or storing the same below said body, a post strut telescoping therewith, and means for adjustably 55 connecting said strut and post.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

PAUL C. HAAS. [L. s.]

Witnesses:

LUELLA G. GREENFIELD,
GRACE B. THOMPSON.