W. B. PAVEY & G. M. FRENCH.

CASTER FOR TRUCKS.

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1,194,780.

Patented Aug. 15, 1916.

Fig. 1.

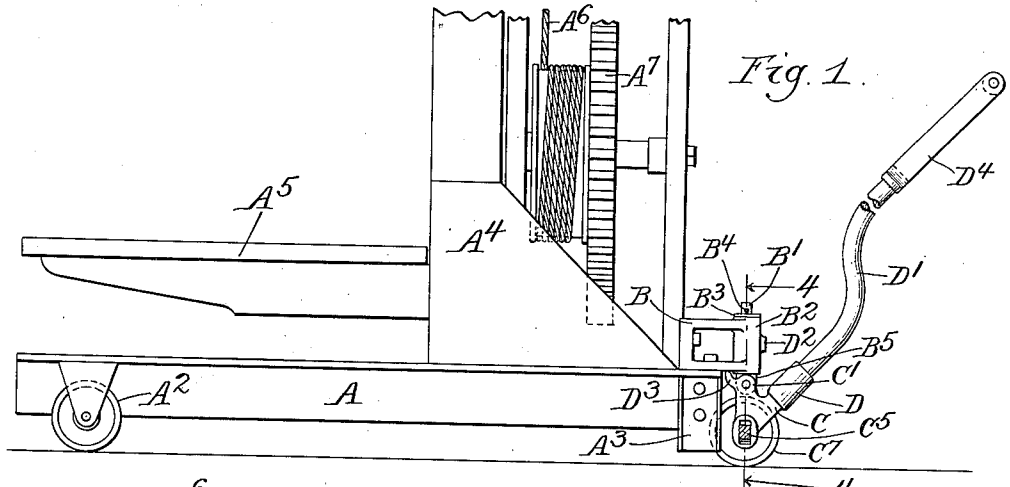


Fig. 2.

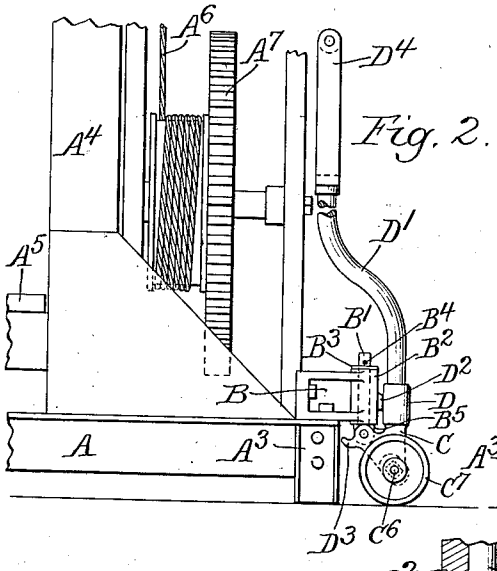


Fig. 3.

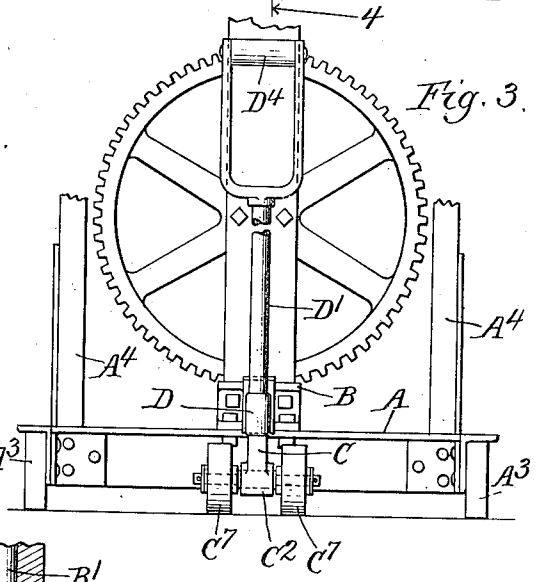
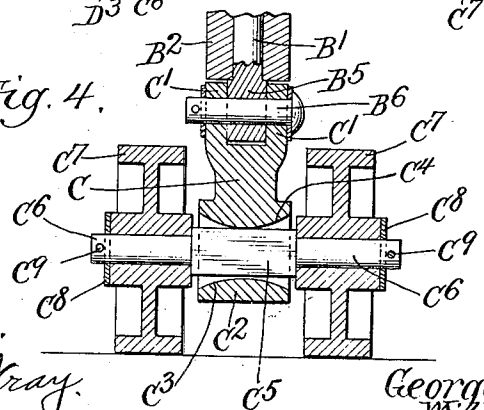


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

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CASTER FOR TRUCKS.

1,194,780. Specification of Letters Patent. Patented Aug. 15, 1916.

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To all whom it may concern:

Be it known that we, WILLIAM B. PAVEY and GEORGE M. FRENCH, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Casters for Trucks, of which the following is a specification.

Our invention relates to improvements in trucks for portable hoists and the like wherein by manipulation by the operator, the hoist may be moved about the floor, but at the will of the operator may be anchored by a rigid frictional support substituted for a part of the anti-friction support so that the truck itself will not be free to move.

Our invention has for one object to provide support of the above mentioned type which will be more easily and freely manipulated and turned by the operator than any of those supports now in existence.

Another object is to provide a device having increased stability and durability.

Another object is to provide a device which will move freely and easily over rough and irregular surfaces without particular difficulty.

Other objects of our invention will appear from time to time in the specification, wherein—

Figure 1 is a fragmentary side elevation showing the support ready to move about with parts in section; Fig. 2 is a detail of the forward part of the truck showing the parts in a fixed resting position; Fig. 3 a front elevation with the parts in the position shown in Fig. 2; Fig. 4 a section on an enlarged scale along the line 4—4 of Fig. 1.

Like parts are illustrated by like characters throughout its several figures.

A is a truck frame supported at the rear end by rollers or wheels A^2. It has at its forward end ground contacting legs A^3. A^4 is a hoisting tower, A^5 a carriage adapted to travel along the tower, A^6 a hoisting rope adapted to raise and lower the carriage, A^7 a windlass whereby the rope is manipulated. These parts form no particular part of my invention, therefore they are described and shown in a more or less diagrammatic manner.

B is a yoke rigidly attached to the front end of the frame and projecting forwardly from it.

B^1 is a vertically disposed pin mounted for rotation in a bearing B^2 at the front end of the yoke. The washer B^3 and cotter pin B^4 prevent downward movement of this pin and hold it in position. It will be noted that the pin is enlarged as at B^5 and provided with a shoulder resting against the lower end of the bearing B^2 whereby an upward pressure on the pin will lift the forward end of the truck. The enlarged portion of the pin B^5 is apertured so as to contain a knuckle or wrist-pin B^6.

C is a bell crank, forked as at C^1 to engage opposed sides of the enlarged pin head B^5. These forked ends are pivotally mounted on the wrist-pin B^6. The lower portion of the bell crank is enlarged as at C^2. It contains an aperture therethrough substantially rectangular in cross section as shown in Fig. 1. The upper and lower sides of this aperture C^3 C^4 are curved as indicated. The rectangular pin C^5 rests within the aperture and is in more or less close contact with the upper and lower sides thereof at the center, but free to rock owing to the curvature of the sides as indicated. This pin terminates in bearings or axle members C^6 C^6 at either end. Upon these members are mounted the wheels C^7 C^7, held in position by washers C^8 and pins C^9 as indicated.

The forward or outer end of the bell crank terminates in a socket D, in which is engaged a handle D^1 whereby it may be manipulated.

D^2 is a lug projecting forwardly from the bearing B^2, adapted to engage the socket D and limit its movement in a counter-clockwise direction.

D^3 is a finger on the opposed end of the bell crank adapted to engage the lower portion of the bracket B and limit the movement of the parts in a clockwise direction, so that the parts may be moved through an angle from the position shown in Fig. 1 to the position shown in Fig. 2, and vice-versa. The handle D^1 terminates in a forked hand engaging member D^4 as indicated for the convenience of the operator.

It will be evident that while we have shown in our drawings an operative device, still many changes might be made both in size, shape and arrangement of parts, without departing materially from the spirit of our invention, and we wish therefore that our drawings be regarded as in a sense diagrammatic.

The use and operation of our invention is as follows: When the truck for hoist or

other purposes is to be moved about the floor, it is essential in view of its great weight, that if the operator is to move it conveniently and easily, it must be completely supported on wheels or anti-friction supports as indicated. This result is obtained by the operator taking the handle and rotating it in, as shown in Fig. 1, a clockwise direction, until it assumes the position shown in Fig. 1, with the stop engaging the under side of the bracket so that the arm of the bell crank lever, which is pivoted on the bracket, is substantially vertical. This lifts the legs on the front end of the body off the floor and permits the load to be entirely supported on the wheels. The sub-truck formed by the axle with the two wheels is, it will be noted, flexible so that it may give or bend permitting the front axle to rotate in response to irregularities in the floor or surface over which the device is propelled. Moreover, the two comparatively narrow separate rollers turn more easily than would a single integral roller so that the device gives or guides much more easily than when a single integral roller is used. When the truck is to be anchored, the operator raises the handle rotating it into the position shown in Fig. 2, thus the arm of the bell crank lever which is vertical in Fig. 1 is sharply inclined in Fig. 2, the distance between the roller and the pivot point of the bell crank lever measured in a vertical direction, is reduced and the legs settle down upon the floor, and by their frictional contact with the floor hold the truck firmly in position. The stop which comes into operation when the parts are in the position shown in Fig. 1 prevents the handle dropping down so that the operator does not have to do anything except pull on it to move the machine. The stop which comes into operation when the parts are in the position shown in Fig. 2 prevents the handle swinging over to interfere with the operation of the hoisting device, so that the angular movement of the handle in a vertical plane is limited between two stops.

It will be understood that the squared or rectangular portion of the central portion of the axle is engaged in a slot in such wise that it cannot rotate in a horizontal plane except when the bell crank lever is rotated, but it can rotate in a vertical plane owing to the curved contour of the walls on either side of the slot so that the wheels give easily and conveniently in response to different levels as they pass over them.

We claim:

1. The combination with a wheeled truck having ground contacting friction supports of a bell crank lever one arm of which is pivoted to the frame of the truck adjacent the supports, a handle for manipulating this lever, the lever being free to rotate both in a horizontal and a vertical plane with respect to the truck, an axle mounted on the lever at its central point and supporting wheels at either end of the axle separate one from the other.

2. The combination with a wheeled truck having ground contacting friction supports of a bell crank lever one arm of which is pivoted to the frame of the truck adjacent the supports, a handle for manipulating this lever, the lever being free to rotate both in a horizontal and a vertical plane with respect to the truck, an axle mounted on the lever at its central point and supporting wheels at either end of the axle separate one from the other, said axle being free to rotate with respect to the bell crank lever in a plane located by the axis of that arm of the bell crank lever which is pivoted to the frame.

3. The combination with a wheeled truck having ground contacting friction supports of a bell crank lever one arm of which is pivoted to the frame of the truck adjacent the supports, a handle for manipulating this lever, the lever being free to rotate both in a horizontal and a vertical plane with respect to the truck, an axle mounted on the lever at its central point and supporting wheels at either end of the axle separate one from the other, said axle having a squared central portion, the bell crank lever being perforate to engage such squared axle portion, the perforation having curved side walls to permit rocking motion of the axle.

4. The combination with a wheeled truck having ground contacting friction supports of a bell crank lever one arm of which is pivoted to the frame of the truck adjacent the supports, a handle for manipulating this lever, the lever being free to rotate both in a horizontal and a vertical plane with respect to the truck, an axle mounted on the lever at its central point and supporting wheels at either end of the axle separate one from the other, stops provided for limiting the pivotal movement of the bell crank lever in a vertical plane to prevent movement of the central portion of the bell crank lever toward the frame beyond that position when the axis of the pivoted arm of the lever is in a vertical position.

Signed at Chicago, in the county of Cook and State of Illinois, this 12th day of May, 1916.

WILLIAM B. PAVEY.
GEORGE M. FRENCH.

In the presence of witnesses:
MINNIE M. LINDENAU,
LAUREL M. DOREMUS.