C. H. STEPHENSON.

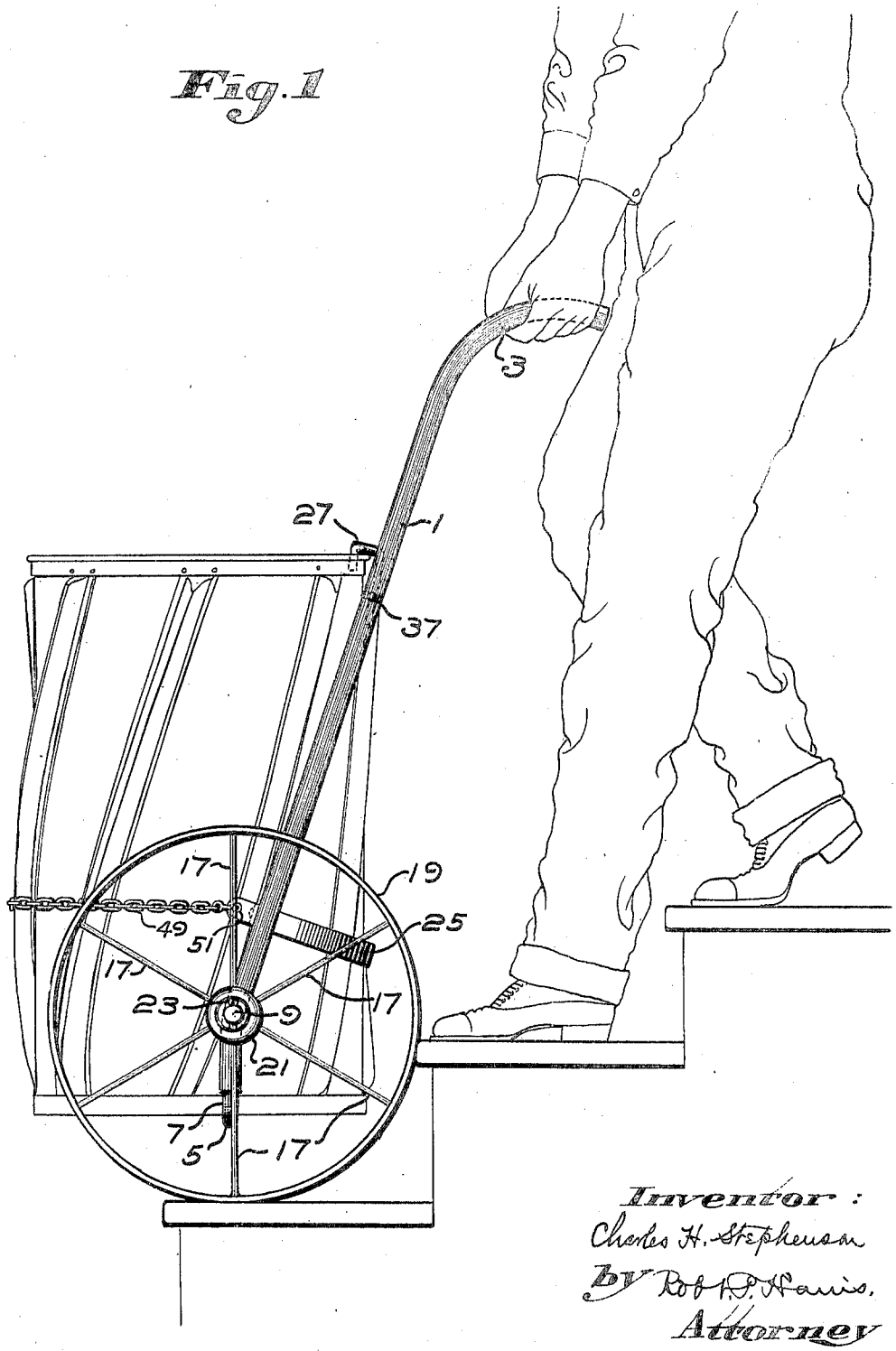
BARREL TRUCK

APPLICATION FILED OCT. 31, 1918.

1,430,698. Patented Oct. 3, 1922.

2 SHEETS—SHEET 1.

Fig. 1



Inventor:
Charles H. Stephenson
by Robt. P. Harris,
Attorney

C. H. STEPHENSON.

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2 SHEETS—SHEET 2.

Fig. 2

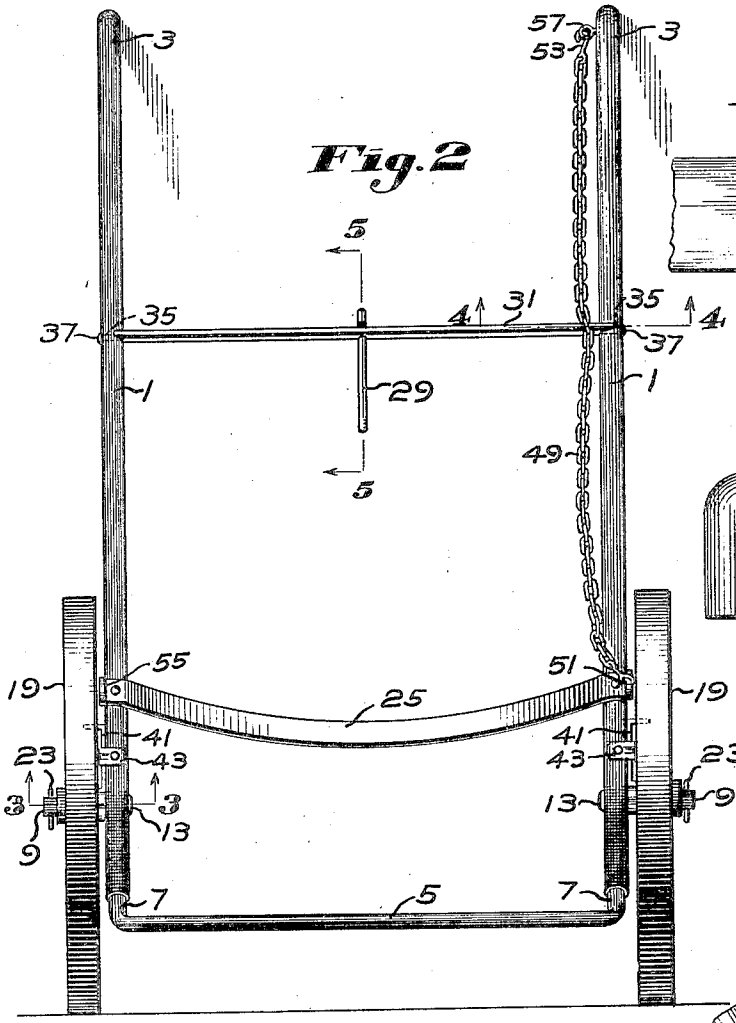


Fig. 4

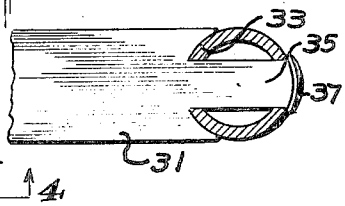


Fig. 5

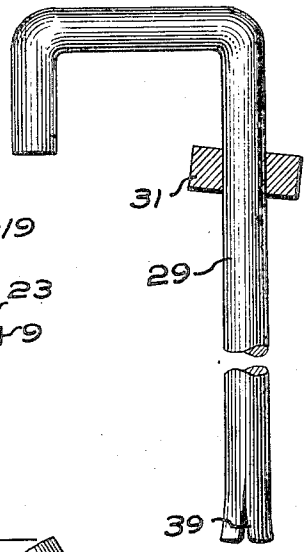


Fig. 3

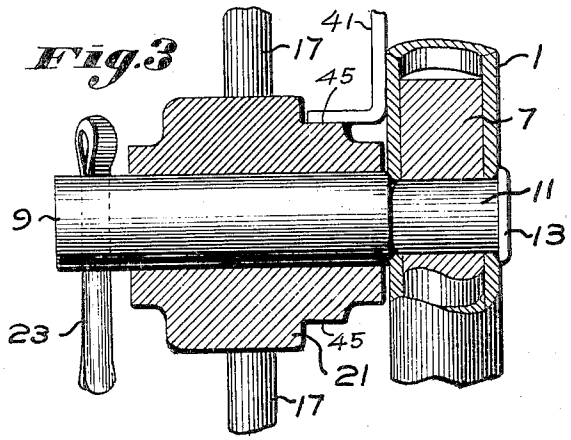
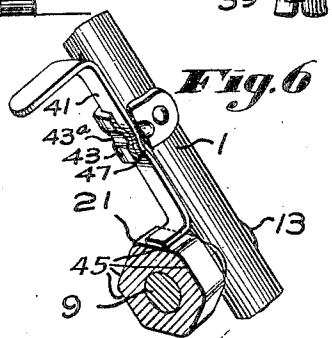


Fig. 6



Inventor:
Charles H. Stephenson
by Robt. D. Hains.
Attorney

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UNITED STATES PATENT OFFICE.

CHARLES H. STEPHENSON, OF LYNN, MASSACHUSETTS.

BARREL TRUCK.

Application filed October 31, 1918. Serial No. 260,421.

To all whom it may concern:

Be it known that I, CHARLES H. STEPHENSON, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented an Improvement in Barrel Trucks, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

The invention to be hereinafter described relates to trucks for conveying barrels from place to place.

Heretofore great inconvenience has been experienced in moving ash and refuse barrels from the house to the street when full, and back to the house again after emptied. Frequently it is necessary to move the barrels up and down steps and in some cases over lawns or soft land. Trucks as usually constructed are unsuited for this use.

One of the objects of the present invention, therefore, is to provide a truck which is specially constructed so that it can readily pick up ash and other barrels, travel easily up and down steps, and pass over lawns or soft ground without injury thereto, while maintaining the barrel in upright position to avoid spilling any of the contents thereof.

Another object of the invention is to provide a truck which will have a light, strong frame consisting of a minimum number of parts strongly secured together and able to withstand the hard usage which trucks for the purposes described necessarily experience.

And still another object of the invention is to provide the truck with simple and effective means to prevent the wheels thereof from rolling away from a wall when the handles of the truck frame are leaned against the wall while the truck is not in use.

With the aforesaid and other objects in view, the character of the invention will be best understood by reference to the following description of one good form thereof shown in the accompanying drawings, wherein:—

Fig. 1 is a side elevation of a truck embodying the invention, showing its relation to stairs when conveying a barrel over the same;

Fig. 2 is a front elevation of the truck shown in Fig. 1 with the barrel removed therefrom;

Fig. 3 on an enlarged scale is a sectional detail taken on line 3—3 of Fig. 2;

Fig. 4 on an enlarged scale is a sectional detail taken on line 4—4 of Fig. 2;

Fig. 5 on an enlarged scale is a section taken on line 5—5 of Fig. 2; and

Fig. 6 is a view of the stop device for the wheels.

Referring to the drawings, the truck shown therein as one good form of the invention, comprises side bars 1 conveniently in the form of steel tubes having their upper ends curved to present handles 3. At the lower ends of the side bars is a stirrup 5 of U-shaped form and preferably made of solid steel with the legs 7 thereof entered into the lower ends of the side tubes, and secured therein by means to be described.

A pair of stub shafts 9 may be connected to and project outward from the side tubes at points a substantial distance above the bottom of the stirrup. In the present instance of the invention, these stub shafts have reduced portions 11 (Fig. 3) entered through registering holes in the side bars and the legs of the stirrup, and the inner ends 13 thereof are upset, the construction being such that the side tubes are confined between shoulders 15 and the upset ends 13 of the reduced portions 11 of the stub shafts, and the latter are securely connected to the side tubes. The solid legs of the stirrup serve as plugs to prevent distortion of the tubes when the ends 13 of the stub shafts are upset and desirably contribute to the rigid connection of the stub shafts with the tubes.

Mounted on the stub shafts are wheels 17 preferably having wide rims 19 to avoid cutting into the ground and hubs 21 which may be confined between the side tubes and cotter pins 23 entered through holes adjacent the outer ends of the stub shafts. The radius of the wheels is somewhat greater than the depth of the stirrup, so that the bottom of the barrel may be supported above but near to the ground.

The barrel may stand in upright position on the stirrup between the stub shafts, as will be noted in Fig. 1. Suitable means may be provided to receive the side of the barrel and limit sliding thereof in one direction on the stirrup. This means, in the present instance, is in the form of a steel strap 25 having ite ends rivited to the side bars at

points a substantial distance above the stub shafts, and having a portion intermediate said ends offset or curved laterally to conform to the contour of the barrel, and thus serve as a seat which will limit the barrel against movement in the direction of the axis of the wheels of the truck and prevent sliding of the barrel in one direction on the saddle.

Suitable means may be provided to prevent the barrel from tipping outward away from said strap. To accomplish this, in the present instance, a hook 27 is provided for engagement with the rim of the upper end of the barrel. This hook has a shank 29 adapted to slide through a hole in a flat transverse bar 31 connected to the side bars a substantial distance above the strap 25. To provide a rigid construction, the ends of the transverse bar 31 may be formed to present throats 33 (Fig. 4) curved to conform to the side tubes, and studs 35 integral with said transverse bar may be entered through registering holes in the side tubes, and have upset ends 37 to hold the tubes securely against said curved throats. The lower end of the shank of the hook may have a notch 39 therein which will spread said end and prevent the hook from sliding out of the hole in the bar 31.

The construction is such that when the barrel stands on the stirrup, its side may rest against the curved strap 25, and its upper end may engage the transverse bar 31 and be secured thereto by the hook 27. The hook is susceptible of sufficient sliding movement to allow ready application thereof to the rim of the barrel, and removal therefrom as desired.

When the barrel stands on the truck in upright position, as shown in Fig. 1, the inclination of the side bars with respect to the stirrup is such that the stirrup will stand in a substantially vertical position, and the side bars will incline from the stub shafts toward the right of Fig. 1, and pass the upper rim of the barrel, and since the handles curve outwardly away from the barrel, the truck may be readily wheeled from place to place while maintaining the barrel in upright position, so as to avoid spilling any of the contents thereof.

It will be noted that when the barrel stands on the stirrup between the stub shafts, the center of gravity of the barrel is nearly directly above the axis of the stub shafts for the wheels. As a consequence, the weight of the barrel and its contents is borne principally by the wheels. This is an important consideration, since it greatly reduces the work of wheeling the truck with the barrel thereon from place to place.

As stated, the construction of the truck is such that it may readily travel up and down steps. To accomplish this, the wheels are constructed of sufficient radius to enable the rim of each simultaneously to rest on the tread of one step and engage the edge of the tread of the next step. Preferably when the wheels rest on the tread of a step, the stub shafts should be at or somewhat above the plane of the next step above the step on which the wheels rest. This will allow the wheels to readily roll over the edge of the upper step with a minimum amount of effort. Not only is the size of the wheels an important consideration, but also it is desirable that the strap 25 should have a curvature or depth such that the strap will be within the rims of the wheels so as to prevent the barrel from coming in contact with the edge of the tread of the upper step, as will be noted in Fig. 1, wherein is shown the relation of the truck and barrel to the steps and the position the operator assumes in rolling the truck over the steps. It will be observed that it is unnecessary to tilt the barrel substantially from its upright position when the truck is moving over the steps.

When the barrel is not in use, it is desirable to lean the handles of the side bars thereof against a wall, in order that the truck may occupy a small amount of space, but the wheels of the truck are so large that they are liable to roll away from the wall and allow the handles to fall to the floor. Suitable means may be provided to prevent the wheels from rolling at such time. This means, in the present instance, comprises lock bars 41 (Fig. 6) guided by straps 43 secured to the side bars, said lock bars being adapted to engage any of a series of flat faces 45 formed on the hubs of the wheels. These straps may be of resilient material and be formed to present humps 47 which may frictionally engage the upper and lower edges of a transverse rib 43^a on the inner face of the strap. The construction is such that the lock bars may be readily shifted to the flat faces on the hubs, and thereby prevent the wheels from rolling away from the wall when the handles of the side bars are leaned against the wall, but when the truck is propelled, the flat faces of the hubs will wipe against the lock bars and thrust the same to inoperative positions.

When it is desired to place a barrel on the truck, it is merely necessary to tilt the barrel sufficiently to allow the stirrup to be introduced beneath the bottom of the barrel until the strap 25 and transverse bar 31 engage the side of the barrel. Then the hook 27 may be slipped onto the upper rim of the barrel and the truck may be rocked to bring the barrel into upright position. The barrel may be removed from the truck with equal ease.

In certain uses, such for example, as collecting fruit in orchards, it may be desirable

to allow the truck and barrel thereon to stand alone from time to time. The supporting stirrup for the barrel is so near to the ground that the truck may be tilted somewhat to permit the edge of the barrel opposite the strap 25 to rest on the ground and thus prevent the truck from tipping over and at the same time facilitate filling of the barrel.

In some cases it may be desirable further to secure the barrel on the truck. To accomplish this, a chain 49 or equivalent member may be provided having one end secured to an eye 51 on one of the side tubes and its opposite end provided with a hook 53 for connection with an eye 55 on the other side tube. The construction is such that the chain may partly embrace the barrel and prevent it from sliding on the stirrup away from the strap 25. When the chain is not in use its hook 53 may be connected to an upper eye 57 on the side tube to which the chain is secured

The wheels should be neither too large nor too small for the purposes set forth. They are constructed with regard to the dimensions of the risers and treads of standard steps usually found in dwelling houses. It is not only essential that the wheels should be sufficiently large to enable the rim of each simultaneously to engage the tread of one step and the edge of the tread next above said step, but also the radius of the wheels should not be greater than the width of the tread of the step in order that the weight of the truck and barrel may come on the step and thereby enable the truck to be rolled over the steps in stages with rests therebetween.

The side tubes are appropriately spaced to receive the barrels between them, and the stub shafts are made as short as possible in order that the overall width of the truck may be sufficiently small to allow the truck readily to pass through doors of dwelling houses with adequate clearance.

The truck described is very light, strong and simple in construction, cheap to manufacture and easily operated.

It will be understood that the invention is not limited to the specific embodiment shown but that various deviations may be made therefrom without departing from the spirit and scope of the appended claims.

What is claimed is:—

1. A two-wheeled truck for moving barrels from place to place and over steps while maintaining the barrel in an upright position, comprising a pair of tubular side bars extending upwardly and having rearwardly bent handles at the upper ends thereof, a stirrup to support the bottom of the barrel having legs inserted in the lower ends of the tubular side bars, a pair of stub shafts extending laterally from the side bars and having reduced portions at the inner ends extending through the legs of the stirrup within the side bars rigidly to secure the stub shafts and the legs of the stirrups to the side bars, wheels upon the stub shafts, a curved strap connecting the side bars and adapted to engage and position a barrel sitting on the stirrup, and an upper transverse bar extending between and secured to the side bars.

2. A two-wheeled truck for moving barrels from place to place and over steps while maintaining the barrel in an upright position comprising a pair of tubular side bars extending upwardly and having rearwardly bent handles at the upper ends thereof, a stirrup to support the bottom of the barrel having legs inserted in the lower ends of the tubular side bars, a pair of stub shafts extending laterally from the side bars and each having means extending through a side bar and the leg of the stirrup therein rigidly to secure the stub shaft and the leg of the stirrup to the side bar, wheels upon the stub shafts, a rearwardly bent strap connecting the side bars and adapted to engage and position a barrel sitting on the stirrup, and an upper transverse brace extending between and rigidly secured to the side bars.

In testimony whereof, I have signed my name to this specification.

CHARLES H. STEPHENSON.