R. E. CHOATE.

HOUSE MOVING TRUCK.

APPLICATION FILED JULY 6, 1914.

1,160,690.

Patented Nov. 16, 1915.

Fig. 1.

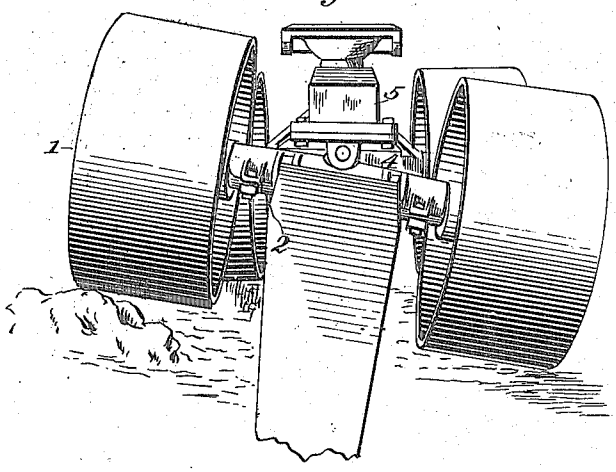


Fig. 6.

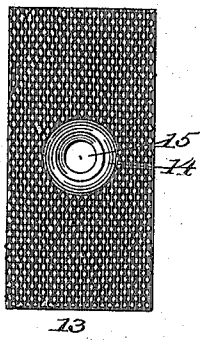


Fig. 2.

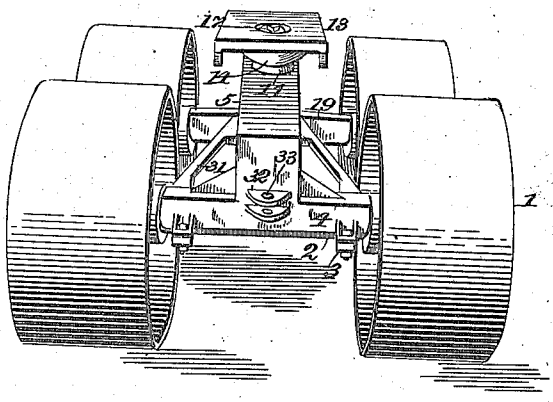


Fig. 5.

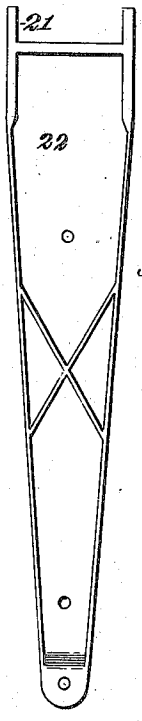


Fig. 3.

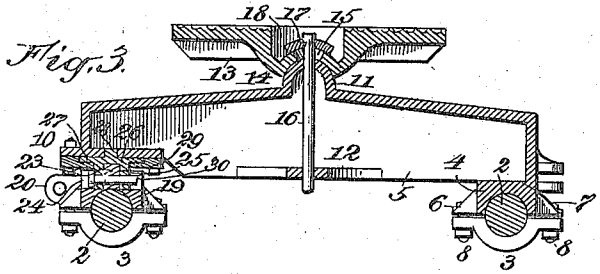
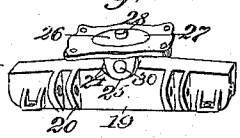


Fig. 4.



Witnesses.

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HOUSE-MOVING TRUCK.

1,160,690. Specification of Letters Patent. Patented Nov. 16, 1915.

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To all whom it may concern:

Be it known that I, ROY E. CHOATE, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in House-Moving Trucks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to trucks used in house-moving operations; and the object of the invention is to produce a truck without wood in its construction, and by reason of its special construction being not only very strong, but also very flexible, and adapted to make short turns and run over uneven ground without varying the relative position of its load.

The nature of the invention is fully disclosed in the description and claims following, reference being had to the accompanying drawing, in which—

Fig. 1 is a front view in perspective of a truck embodying my improvements. Fig. 2 is a rear view of the same. Fig. 3 is a central, longitudinal section through the bolster, reach and connected parts. Fig. 4 is a view in perspective of the saddle for the front axle and the fifth wheel mounted thereon. Fig. 5 is a bottom view of the tongue. Fig. 6 is a top view of the bolster.

In the drawing 1 denotes the wheels, which are of familiar construction, and are mounted on heavy steel axles 2. The rest of the device is of special design, and is described as follows.

To the rear axle is attached rigidly, by clips 3, a saddle 4, which is herein made an integral part of a single steel casting including the reach 5. The saddle is hollowed on the under side, and is provided with front and rear lugs 6 and 7 to take bolts 8 passing through clips 3 above mentioned. The ends of the saddle may form the inner abutments for the hubs of the wheels, as shown. Rising from the saddle at the middle, and extending forward at right angles thereto, is the reach 5. This is made hollow for the sake of lightness, and is provided at the under side of the front end with an expanded plate 10 to serve as a bearing for the fifth-wheel, to be described presently. At the middle on top is a hemispherical dome 11 with a central hole therein in line with a corresponding hole in a web 12 connecting the side flanges of the reach at the bottom and middle. This dome serves as a support for the bolster 13, which in practice may be a casting of iron. It is provided at the center with a downwardly projecting bulge 14, concaved on the under side to fit the curvature of the dome. The opposite side is convex, and in the center is a hole 15 considerably larger than the diameter of the king-bolt 16 which holds the bolster in place, the holes in the dome and web being made to receive said king-bolt. The head of the king-bolt 17 is made large enough to overlap the hole in the bolster, and on its under side is concaved to fit the top of the dome-seat therein. The head of the bolt is contained in a recess 18 formed in the bolster, and a little below its top, so as not to interfere with a timber (not shown) which rests on the bolster when the truck is in use. To prevent the possibility of slippage on the part of such timber the top of the bolster is checked or corrugated, as indicated. It will be evident that this hemispherical joint will allow for universal movement of the bolster, within a certain range, and that a timber resting upon it will not be affected twistwise by any twist or unevenness in the truck. This is clearly illustrated in Fig. 1, to a certain extent, but it is evident that the bolster would maintain the same level position if the rear axle were tilted instead of the front one. This figure is more particularly intended to illustrate the peculiar action of the fifth wheel parts, which will now be described.

The front axle saddle 19 is attached to the axle in the same manner as the rear one, and it is also provided with lugs 20 in front to connect with the interlocking lugs 21 of the tongue 22, which, it will be understood, is the tongue by which it is hauled from place to place, and the guiding tongue for the truck while in use under a building. In practice this is also a casting. In the middle of the front saddle is an upstanding lug 23, with a cavity 24 each side to admit the twin lugs 25 of a knuckle 26. The upper part of the knuckle is expanded to form a flange 27, and in the center is a pivot-boss 28 fitting a corresponding hole in the front bottom flange of the bolster. The flange of the knuckle fits a hole in a retaining plate 29 bolted to said bolster. A pin 30 connects the knuckle and the saddle, as shown. It

will be understood that when held in position by the retaining plate there is a little play between the top of the knuckle flange and the under side of the bolster flange, so that the knuckle is free to turn under the bolster, while at the same time the broad flange of the knuckle serves to brace and steady the parts against the lateral strain due to the movement of the truck over the road. As will be evident, the construction provides a universal joint for the front axle, which may accordingly turn sidewise, or tip vertically, without affecting the position of the reach or bolster.

To strengthen the reach and rear saddle against side-strain they are connected by diagonal braces 31. These need not extend forward far enough to interfere with the forward wheels in making short turns. The possibility of making a very short turn is indeed one of the advantages that arises from the construction described, inasmuch as the steel reach may be made considerably narrower than it would be possible to make a wooden one of equal strength, and this admits of a short "cramp" or turn, as will be evident.

Projecting from the rear face of the reach and saddle are lugs 32, which are provided with holes 33, and by means of which the truck may be connected at the rear with another truck, or with the building, by a link not shown.

From the foregoing it will be seen that wood is entirely eliminated in the construction of the truck, and with it the tendency to rot from exposure, or to split or break under the severe strains to which the truck is subjected. The truck herein described, while but little if any heavier than a truck with a wooden reach and other parts, is practically indestructible, besides possessing the special advantages which have been heretofore set forth.

Having thus described my invention, I claim:

1. In a house-moving truck, the combination with the rear axle, of a saddle fitted thereto, clips fastening the axle to the saddle, a reach rigidly connected with the saddle, a hemispherical dome rising from the middle thereof, a bolster having a concavo-convex seat resting on said dome, and a king-bolt with a head fitting the convexity of said bolster-seat passing through the bolster and reach, the hole in the bolster-seat being large enough to permit a limited rocking movement of the bolster in any direction.

2. In a house-moving truck, a reach composed of a hollow steel casting, and having a hemispherical dome rising from the middle thereof, a transverse web directly below it, with king-bolt holes in said dome and web, a bolster-plate mounted and adapted to rock on said dome, and a king-bolt adapted to hold the bolster plate on said dome and allow it to so rock.

3. In a house-moving truck, the combination of a front axle, a saddle therefor, clips securing the axle to the saddle, a knuckle pivoted to said axle so as to turn in a vertical plane, a reach and a rear axle rigidly connected thereto, and a pivotal connection of the knuckle and reach whereby the knuckle may turn in a horizontal plane under the front end of the reach.

4. In a house-moving truck the combination of a front axle, a saddle fitted and clipped thereto, a knuckle pivotally connected with the saddle to turn in a vertical plane, and having an annular flange with a central pivot-boss at the top, a retaining flange-plate, and a reach having a front-end plate coinciding with said flange-plate, with a hole therein for said boss, and means for fastening the flange-plate and front-end plate together.

5. In a house-moving truck, the combination of a reach and rear-axle saddle, with connecting diagonal braces all cast integral, and rearwardly projecting lugs adapted to connect with a coupling link, formed on the rear face of said reach and saddle.

In testimony whereof I affix my signature in presence of two witnesses.

ROY E. CHOATE.

Witnesses:
HARLAND C. ROBBINS,
CLARISSA BACHMAN.