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TIP WAGON

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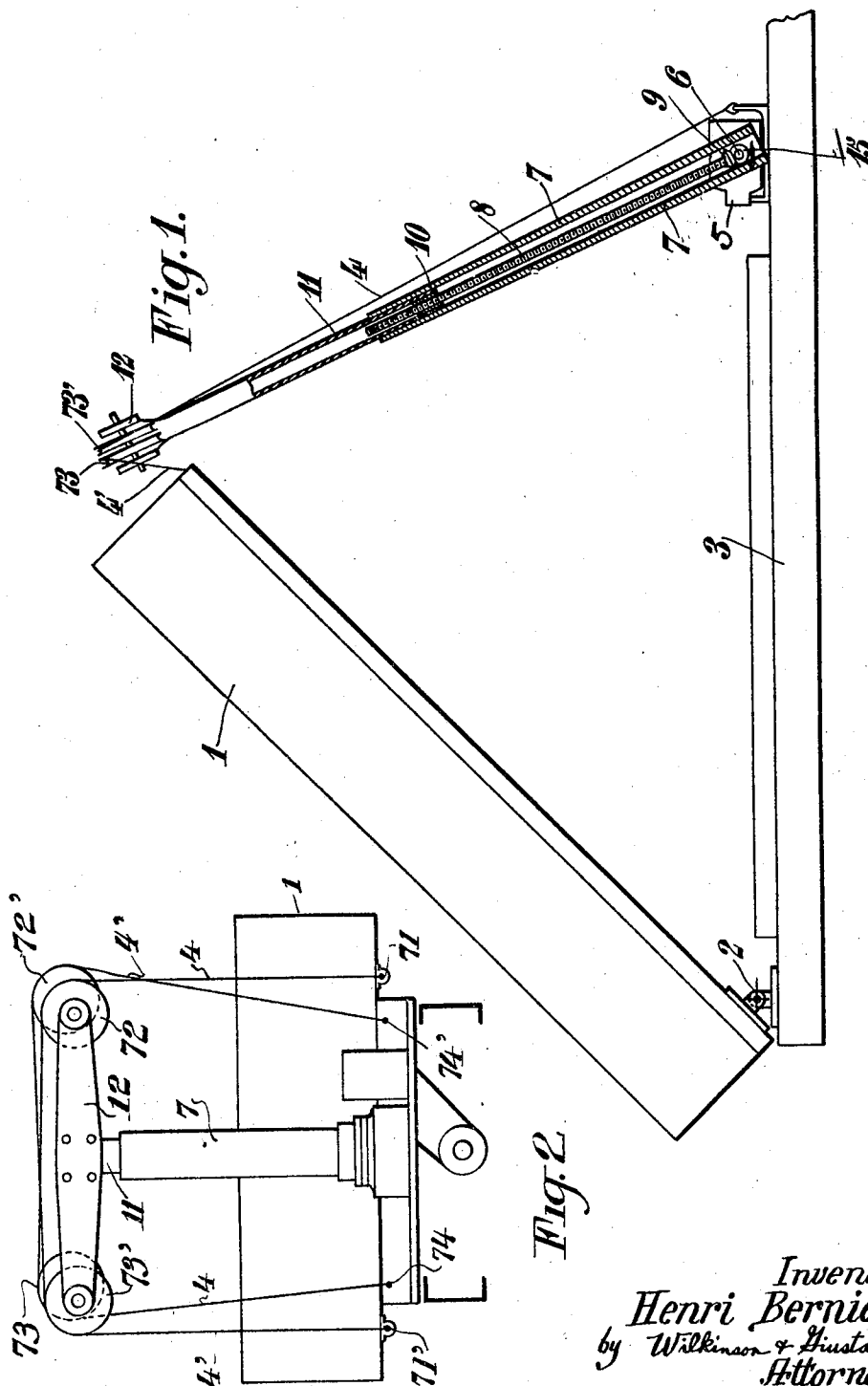


Fig. 2

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TIP WAGON.

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The advantages presented by the use of tipping containers mounted on the chassis of motor-lorries, as regards loading and unloading all kinds of material, are well-known.

This invention consists in certain arrangements of the lifting cables which prevent any warping of the tipping receptacle, in case of irregular loading of this latter, and ensure progressive speed in the raising operation.

A form of realization of the invention is shown diagrammatically and merely by way of example in the accompanying drawings, wherein:

Figure 1 is a side elevation of a tipping receptacle provided with an arrangement of lifting ropes constructed according to the present invention; and

Figure 2 is an end view of a tipping receptacle provided with a system of ropes according to the present invention, the guiding pulleys of each pair being spaced apart relative to each other for the sake of clearness.

In the example shown, the receptacle 1 is pivoted at 2 upon the chassis 3 and a standard 7 is mounted at the front of this chassis, in which standard a tube 11 can telescope under the action of a worm 8 driven by pinions 9 and 15 which are rotated either by the engine of the vehicle, or by means of a crank.

At the extremity of the telescoping tube 11 a cross-piece 12 which carries at its extremities guiding pulleys 72, 72' and 73, 73', is rigidly mounted.

The standard 7 could be mounted obliquely upon the chassis 3 of the vehicle, or as shown in the drawing, could be arranged so as to pivot during the tipping movement of the receptacle about a shaft 6 rotating in a casing 5.

The lifting movement of the receptacle 1 is effected according to the present invention, by means of two cables 4 and 4' which are attached at 71 and 71' to the front of the receptacle and pass respectively over pulleys 72 and 73, 72' and 73', mounted at the two extremities of the cross piece 12 and are then attached at 74 and 74' to the chassis of the lorry.

The pulleys 72 and 72' are independent and are preferably loose on the same axis, and the same is the case as regards the pulleys 73 and 73'.

Supposing, for example, that the recep-

tacle 1 carries at 71 a load of 3000 kilos and at 71' a load of 2000 kilos, the difference of the load will normally tend to distort the receptacle when it rises or to deform the arms of the cross piece 12. But, thanks to the arrangement, on both sides of the raising mechanism 7, of the points of attachment 71 and 74, and 71' and 74' of the cables 4 and 4' respectively and the mounting of the pulleys 72, 72' and 73, 73' at the extremities of the two arms of the cross piece 12, the stress to which the pulley 72 is subjected is transmitted to 73 and the stress supported by the pulley 73' is transmitted to the pulley 72', and the result is that the different stresses exerted upon the two arms of the cross piece 12 balance each other and consequently stop any oscillation or deformation, either of the cross piece or of the receptacle.

Having thus described my invention what I claim and desire to secure by Letters Patent of the United States, is:

1. A tip wagon comprising a chassis, a truck body pivoted on the chassis, a hoisting mechanism for the truck body including a movable cross arm, a pair of pulleys mounted in each end of said cross arm, a cable having one end connected to the truck body at one side and extending upwardly and over one of the pair of pulleys at one side of the cross arm, thence extending along the cross arm to one of the pulleys at the opposite side of the cross arm, and thence downwardly to the opposite side of the chassis to which same is affixed, a second cable attached at one end to the truck body at the side opposite to which the first cable is attached, said cable extending upwardly and over the other pulley of the pair at the second named side of the cross arm, thence along the cross arm to the other pulley of the pair at the first named end of the cross arm and downwardly to the chassis to which the other end of this second cable is affixed.

2. A tip wagon comprising a chassis, a pivoted dump body on said chassis, a hoisting mechanism for the dump body including a transverse vertically movable cross arm, shafts at opposite ends of said cross arm, pairs of pulleys mounted upon said shafts, and a pair of cables attached to the chassis and dump body and extending over said pulleys, one of said cables being attached to the right side of the dump body at one end and at its other end to the left side of the chassis, the intermediate portion of said cable be-

ing brought up from its attachment to the body over one of the pulleys at the right side of the cross arm, thence along the cross arm and over one of the pair of pulleys at the
5 opposite end of the cross arm, and thence downwardly to the point of connection at the left side of the chassis, the other cable being affixed at one end to the left side of the body and at its opposite end to the right side
10 of the chassis, the intermediate portion of this second cable being brought upwardly from its point of attachment with the body over the other pulley of the pair at the left end of said cross arm, thence along the cross arm to the other pulley at the right end of
15 the cross arm, and thence downwardly to the point of connection at the right side of the chassis.

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