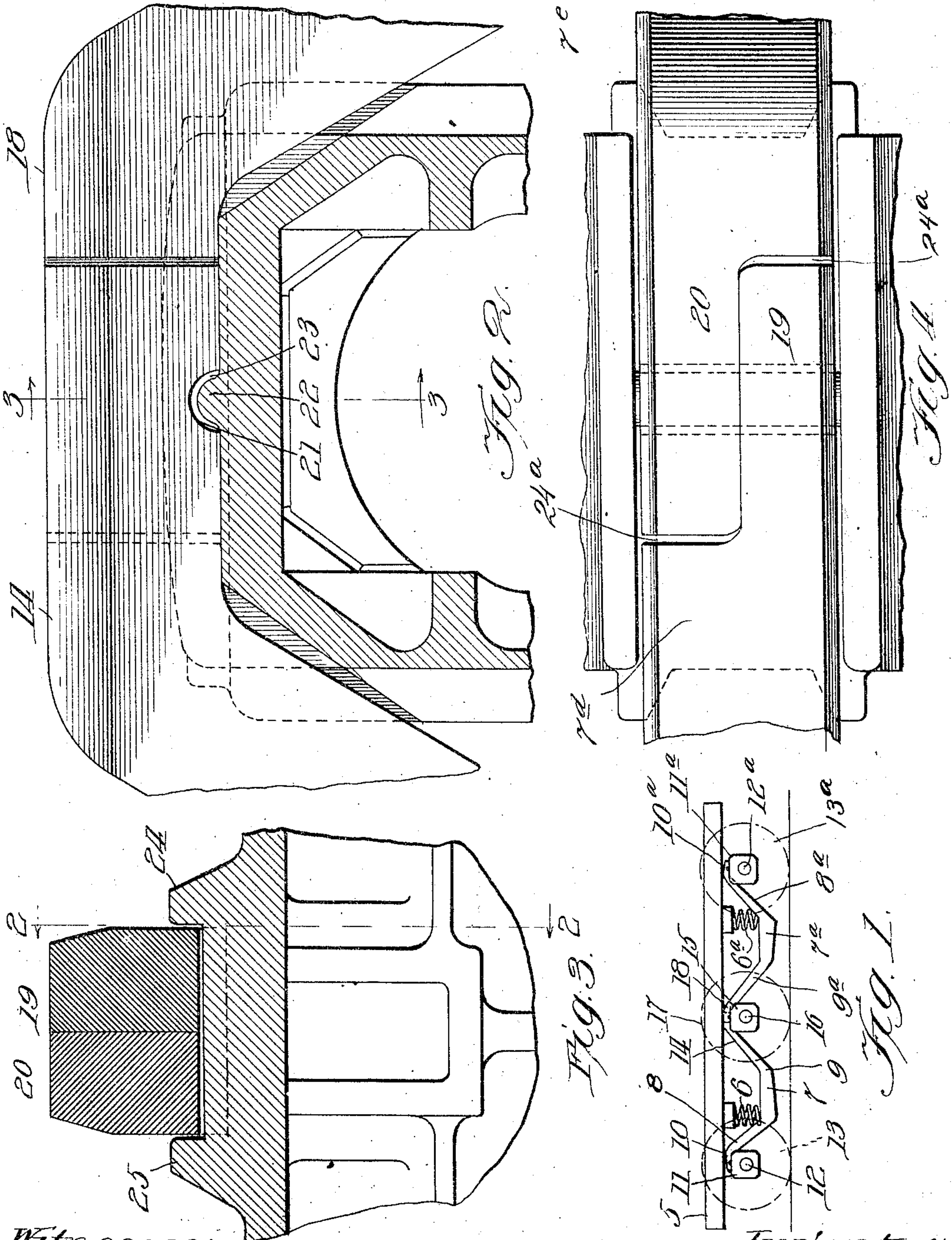


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EQUALIZER FOR SIX WHEEL TRUCKS.
APPLICATION FILED MAR. 26, 1910.

979,033.

Patented Dec. 20, 1910.



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EQUALIZER FOR SIX-WHEEL TRUCKS.

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Specification of Letters Patent.

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Application filed March 26, 1910. Serial No. 551,756.

To all whom it may concern:

Be it known that I, EDWARD POSSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Equalizers for Six-Wheel Trucks, of which the following is a specification.

My invention relates to the equalizer bars or levers that are used in six wheel trucks for railway cars. By means of these equalizers the weight is equally distributed to the wheels.

My invention has particular reference to the connection of the equalizers to the middle journal boxes on each side of the truck.

At the present time the inner ends of the equalizers on each side of the truck rest upon the middle journal box of that side, but the said ends are so placed upon the journal box that they have a tendency to cause a rotation of the journal box about the axis of the journal which they inclose. The ends of the said equalizer bear upon the top of the journal box at opposite sides of the center of said box, with the ends abutting substantially at the center. Any excess of pressure of the end of one of the bars on either side of the box causes a tendency of the said box to rotate, and to become more or less displaced or moved out of a square condition.

My object therefore is to bring about a uniformly distributed pressure of the ends of said equalizers upon the middle journal box. I have endeavored to cause the said pressures to be imparted to said box at substantially the center of its upper surface. In bringing about this effect, I have made the ends of the equalizer overlap and have caused each of them to bear upon the top of the journal box a considerable distance upon each side of the center of the same. In doing this, it has become advisable to give the ends a stepped form, in such a manner that the combined thicknesses of the overlapped portions are equal to the thickness of each of the equalizers.

A further object has been to provide a rib at the center of the top of the journal box, which is engaged by the ends of the equalizers to prevent relative displacement of the parts.

These and other objects and advantages of my improvements will be made apparent in the following specification and claims,

taken in connection with the accompanying drawings, in which—

Figure 1 is a side elevation of a six wheel truck, showing the essential elements which are related to my invention. Fig. 2 is a vertical section of the upper portion of the journal box showing the relation of the ends of the equalizers thereto—this section being taken on the line 2—2 of Fig. 3. Fig. 3 is a sectional view, taken on the line 3—3 of Fig. 2,—this section passing through the axis of the journal and giving a sectional view of the overlapping ends of the equalizers. Fig. 4 is a plan view of the same.

By referring to Fig. 1 of the drawings, it will be seen that this view has more or less of a diagrammatic nature, the essential parts only of a six wheel truck being shown. The car is carried by the frame 5 through certain intermediate parts, which have no relation to my invention and are not here shown. The truck frame 5 rests upon the springs 6, 6^a, which, in turn, are supported by the equalizers 7, 7^a. The ends of the equalizers 7, 7^a are, in turn, carried by the journal boxes 11, 11^a and 15. It will be evident that it is desirable to equally distribute the weight upon the three journal boxes. It will also be evident that the middle journal box must carry the ends of the two equalizers, while the outer journal boxes 11 and 11^a have each one end only of an equalizer to carry.

In order that the pressure upon the middle journal box may be equal to that upon the end journal boxes, each of the equalizers 7, 7^a is so proportioned that one-third of the pressure upon the springs 6, 6^a is transmitted to the middle journal box 15, and two-thirds of said pressure is transmitted to the journal boxes 11, 11^a. In order to bring about this distribution of the pressures, the short arms 8, 8^a of the equalizers 7, 7^a are made of a length one-half that of the long arms 9, 9^a. The ends 10, 10^a, of the arms 8, 8^a, rest upon the journal boxes 11, 11^a, and are ordinarily so formed that their pressures are centrally and squarely imparted to said journal boxes. These journal boxes 11, 11^a are mounted upon the journals 12, 12^a and the pressure is thereby transmitted to said journals, and finally to the wheels 13, 13^a. My invention does not relate to the manner in which the end 10 is placed upon the journal box 11, or to the manner in which the end 10^a of the other

equalizer bar is placed upon the journal box 11^a.

The inner ends 14 and 18 of the two equalizers 7 and 7^a rest upon the journal box 15.

5 In order that the two ends may rest centrally upon said box, I give them a stepped form, as shown at 19 and 20. These stepped ends are made to overlap and to extend a considerable distance beyond the center of the top 10 of the box. It will be seen that with this construction there can be no tendency to cause a rotation of the box about the journal on which the equalizers rest.

In order to prevent the displacement of 15 the equalizers in a longitudinal direction upon the top of the box, I provide the rib 22 on said box, which is placed transversely of the equalizers and parallel to the axis of the journal on which the box rests. I also 20 provide notches 21 in the ends of the equalizers, at their lower sides, which are adapted to engage the said rib. I preferably provide a clearance 23 between the surfaces of the notch 21 and the rib 22, in order that 25 the lower surfaces of the ends of the equalizers may rest squarely upon the top of the box without interference with the rib 22. I also provide a clearance 24^a between the end of each lapped portion and the stepped 30 portion of the adjacent equalizer, in order to permit a desirable freedom in the movement of the parts.

At either side of the lapped end of the equalizers 14 and 18, and in a parallel direction thereto, I provide the ribs 24 and 25, 35 which rise upwardly from the body of the journal box and prevent lateral displacement of the equalizer ends.

The operation of the equalizers as thus 40 modified in accordance with my invention is as follows: The ends 14 and 18 transmit one-third of the pressure of each of the springs 6 and 6^a to the middle journal box. By my improved form of construction the pressure 45 is distributed uniformly across the top of the box. This is due to the fact that I have elongated the said ends. The rib 22 rises into the notch or groove 21 in each of the equalizer ends and prevents displacement 50 thereof. The rotary movement of the journal box out of the square condition is also prevented by the said rib. A tendency to rotate would be resisted by the equalizers. The lateral displacement, as before men- 55 tioned, is prevented by the ribs 24 and 25 at the sides.

I claim:

1. In a car truck, the combination with a journal box of a plurality of equalizers hav- 60 ing their meeting ends adapted to bear centrally upon said box.

2. In a car truck, the combination with a

journal box of a plurality of equalizers hav- ing their meeting ends bearing upon said box, each of said ends being lapped and 65 adapted to bear at opposite sides of the center of the top of said box.

3. In a car truck, the combination with a journal box of a plurality of equalizers bear- ing at their meeting ends upon said box; said 70 ends being stepped and lapped in such manner as to permit them to bear upon said box without tendency to rotate said box.

4. In a car truck, the combination with a journal box of a plurality of equalizers bear- ing at their meeting ends upon said box, 75 said ends being stepped and lapped to permit said equalizers to be disposed in alinement.

5. In a car truck, the combination with a 80 journal box of a plurality of equalizers bearing at their meeting ends upon said box, said ends being stepped and lapped to permit said equalizers to be disposed in aline- 85 ment and to permit their ends to bear centrally upon said box.

6. In a device of the character described, a journal box having a centrally disposed rib on its upper surface, a plurality of equaliz- 90 ers bearing at their meeting ends upon said box, said equalizers having grooves in said ends overlying said rib.

7. In a device of the character described, a journal box having a centrally disposed 95 rib on its upper surface, a plurality of equalizers bearing at their meeting ends upon said box, and means on said equalizers for engaging said ribs.

8. In a device of the character described, a journal box, a plurality of equalizers bear- ing at their meeting ends upon said box, said 100 ends bearing upon said box in a manner to prevent rotation thereof, means for preventing longitudinal displacement of said equalizers on said box, and means for preventing 105 lateral displacement of said equalizers on said box.

9. In a device of the character described, a journal box, a plurality of equalizers bear- ing at their meeting ends upon said box, said 110 ends being stepped and lapped to permit said equalizers to be disposed in alinement, transverse ribs on said box on opposite sides of said equalizers adapted to prevent lateral displacement thereof, and a rib between said 115 transverse ribs at right angles thereto adapted to prevent longitudinal displacement of said equalizers.

In testimony whereof, I have subscribed my name.

EDWARD POSSON.

Witnesses:

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