No. 856,492. PATENTED JUNE 11, 1907.

J. M. ROHLFING.

RAILWAY TRUCK.

APPLICATION FILED MAR. 6, 1907.

2 SHEETS—SHEET 1.

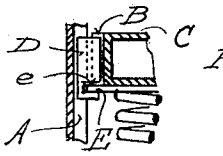

Fig. 1A.

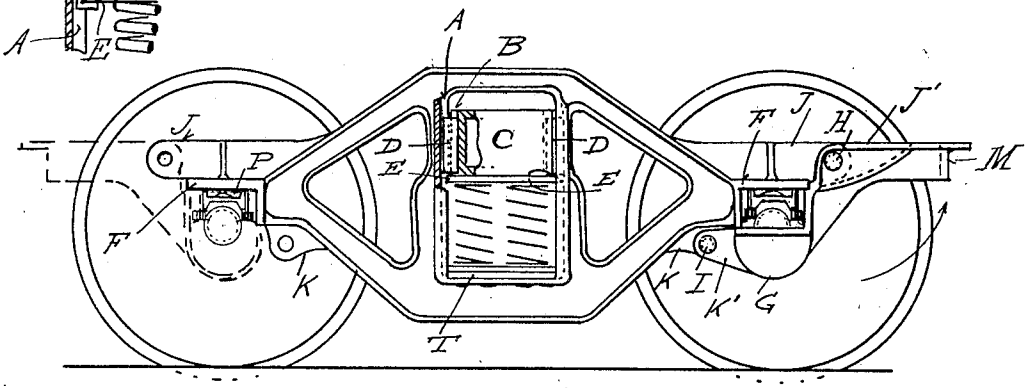

Fig. 1.

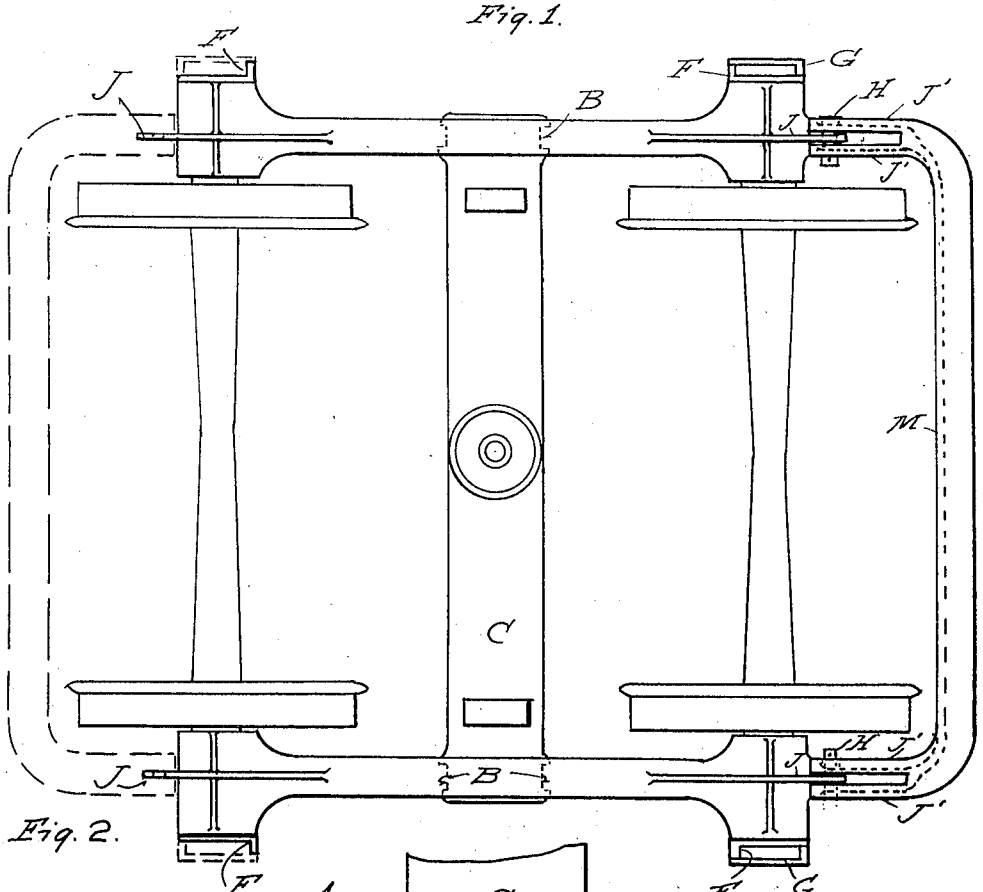

Fig. 2.

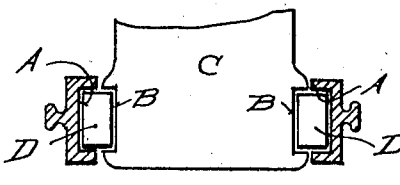

Fig. 2A.

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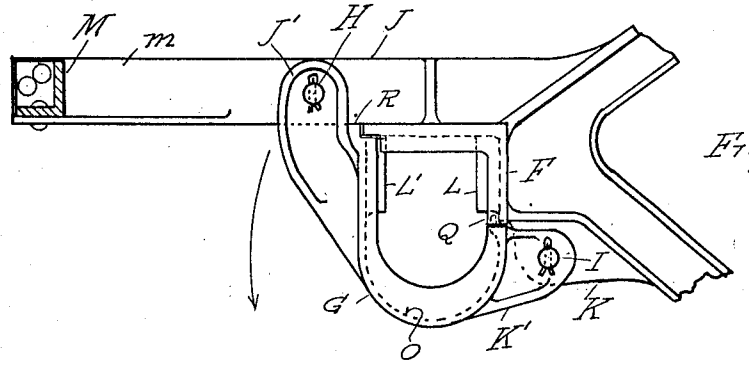

Fig. 3.

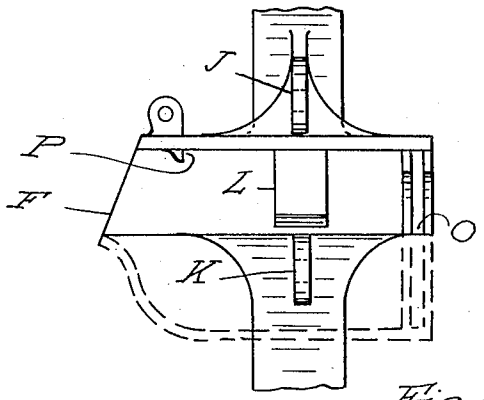

Fig. 4.

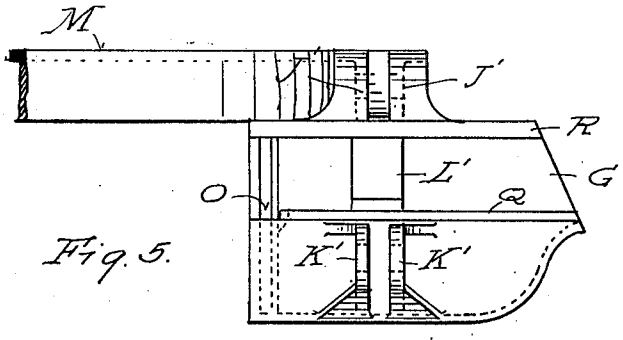

Fig. 5.

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RAILWAY-TRUCK.

No. 856,492. Specification of Letters Patent. Patented June 11, 1907.

Application filed March 6, 1907. Serial No. 360,859.

To all whom it may concern:

Be it known that I, JOHN MICHAEL ROHLFING, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Railway-Trucks, of which the following is a specification.

This invention relates to certain new and useful improvements in railway trucks, the peculiarities of which will be hereinafter fully described and claimed:

The object of my invention is to simplify the construction of trucks so that the main parts, such as the bolster and axles with the wheels, can be quickly and easily taken out and replaced without taking down the whole truck as is necessary in the usual construction.

To this end my improvements have reference to a divided journal box adapted to swing open to let out the wheels and axle; have reference to a combination of side frame and divided journal boxes, and to points of detail hereinafter claimed.

In the accompanying drawings on which like reference letters indicate corresponding parts. Figure 1,—represents a side view of a railway truck exemplifying my improvements: Fig. 1—A,—a detail of the key block and its support. Fig. 2,—a plan view of the truck. Fig. 2—A,—an enlarged detail showing the top of one end of a bolster, the adjacent columns in section, and the key blocks in place. Fig. 3,—a rear view of my journal box; and part of side frame. Fig. 4,—an end view of the upper portion of the journal box cast with the side frame; the lower portion dashed to show its relation; and Fig. 5,—a corresponding view of the matching lower portion of the journal box.

In the ordinary diamond frame truck, when removing an axle and wheels, the bolts through the journal box and arch bars or the side frame, must be taken out before the axle can be run out of the frame:

I show columns that are wider apart than the bolster at the guide lugs, and a removable key to form the connection with each, preferably by means of an opposing groove A in the columns matching the column guides B on the truck bolster C, Fig. 2—A; in the recess formed by these matching grooves, I place a loose rectangular block D that acts as a key. It is substantially as deep as the column guides on the bolster, which are about 5 inches, and is supported by a lip E that preferably forms part of the spring cap, or other detachable piece. The key block may be simply supported on said lip E, or may have a recess *e*, Fig. 1—A, into which the lip E enters, thereby causing the key to slide up and down with the bolster under the weight of the car, and thus prevent its jamming in the column groove, A. The key thus takes up the lateral thrust of the car on the bolster, and transmits it to the columns and side frame, and is smaller than the opposing grooves by the amount of the required end play, which is usually one-quarter of an inch. It is evident that the groove columns may be integral with the side frame, or otherwise. It is not necessary, therefore, to provide a wider opening below the columns, but only necessary to remove the block in the column grooves in order to remove the truck bolster. By taking out the support E the block readily slips down. I am aware this construction of key block and spring cap is old. At the ends of the side frame I provide a journal box of approved constuction, but divided so it will open and allow the axle to pass out on the wheels. This division is preferably at the upper outer corner and at the lower inner corner of the door, forming two portions, F and G respectively,—the one integral with the end of the side frame, and the other matching it and secured by pivot pins H and I, or otherwise, passing through matching lugs J J′ and K K′, as shown.

The pins are provided with cotters for ready removal. The stops L L′ on the inside of the box for the journal brass to butt against, are thus preferably located one on the upper portion F of the box, and the other L′ on the lower portion G. When it is desired to open the box, one pin I is withdrawn and the other pin H serves as a hinge on which to rotate the lower portion in the direction of the arrow, Fig. 1, acting to open the box at the lines of division and thus to free the journal therein with its brass and wedge. It is only necessary to support the end of the truck in order to run out the axle and wheels.

I have shown in Figs. 1 and 2, an end bar M, preferably cast integrally with, or otherwise connecting the lower portions G of the journal boxes on the same axle at each end and serving to connect the side frame. Instead of being integral with the box portions G G, this bar M may be fastened to extensions

m of the side frame as shown in Fig. 3. The box portions G G are then separate and preferably hinge on the pivot pin I, and swing downward as indicated by the arrow in Fig. 3. But this end bar may be dispensed with and other cross connections used, such as the spring plank T, in the usual manner. In my construction, the annular groove O for the dust guard is entirely closed at the top sides and bottom when the box is shut Fig. 3. This is a better construction than the slot in the top of the box as in the ordinary form—as the guard is protected around its whole edge from the entrance of dust, etc. The I-beam section of the side frame is shown and the lugs J K are preferably in line with the central web. The stop P for the wedge used above the usual journal brass is also cast on the upper portion F of the box. Thus the preferred construction provides one brass stop L on the side frame and the matching stop L′ on the hinged portion G of the box. At the parting lines the lips Q and R, Figs. 3 and 5, assist in closing the joints. Stiffening webs are provided for the lugs and box where desirable, substantially as shown. The end bar M and box portion G are shown merely dotted, at the left of Figs. 1 and 2, for the sake of clearness and to indicate how readily the pair of wheels and axle can be run out when the journal boxes are opened and thus set free the journals with their respective brass and wedge.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A railway truck comprising side frames and journal boxes,—the latter being divided and cast partly with said frames and part separately,—and means to secure said divided boxes in matching position to said frames.

2. A railway truck comprising side frames and journal boxes,—the latter being divided and the upper portion of each box being cast with said frame, and pivot fastenings to secure said divided boxes together, and allow of opening by swinging the lower portion about one pivot, substantially as and for the purpose described.

3. A railway truck comprising side frames and journal boxes,—the latter being divided and the upper portion of each box being cast with said frame, and the lower portion of each pair of boxes on the same axle being connected by a cross bar, and fastening means for said boxes when assembled.

4. A railway truck comprising side frames and journal boxes,—the latter being divided diagonally and provided with hinge lugs,—and pivot pins connecting said lugs in matching position, but allowing of opening said boxes, substantially as described.

5. A railway truck comprising side frames and journal boxes,—the latter being divided and part of each box being integral with said frame,—intermatching lugs on each box portion in the plane of the side frame, and pivot bolts through said lugs securing said boxes in their matching position, and providing a hinge effect for opening the same.

6. A railway truck comprising side frames having divided journal boxes,—one portion F of each box comprising the top and part of the side with the brass stop L being cast integral with the frame, and the other portion G comprising the brass stop L′ with side and bottom of the box being cast separately, and intermatching lugs JJ′ and KK′, and pivot pins therefor, substantially as shown and described.

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

JOHN MICHAEL ROHLFING.

Witnesses:
E. P. WHELAN,
WALTER N. DAVIS.