C. H. HOWARD.

RAILROAD MOTOR CAR TRUCK.

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928,976.

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Fig. 1.

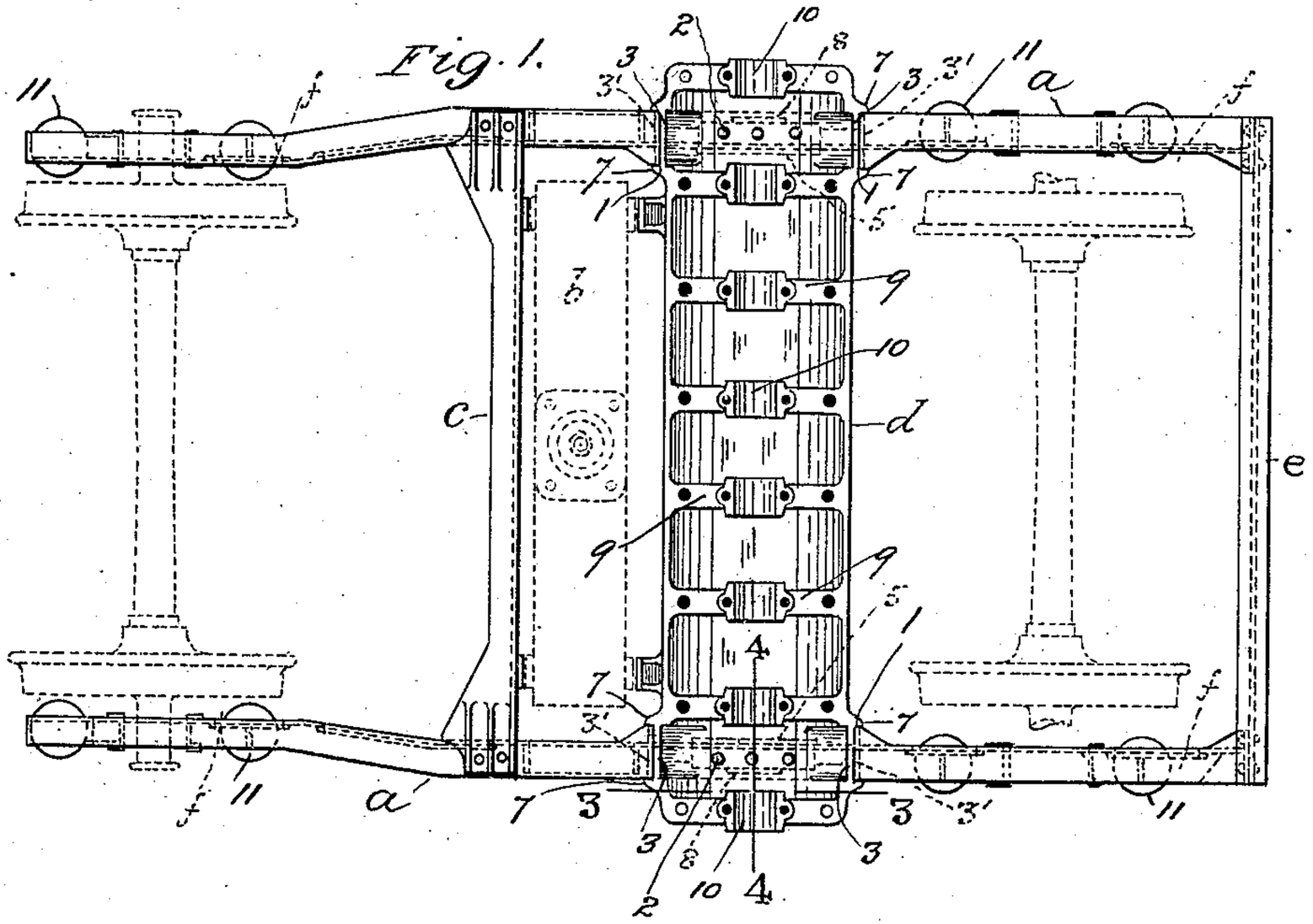


Fig. 2.

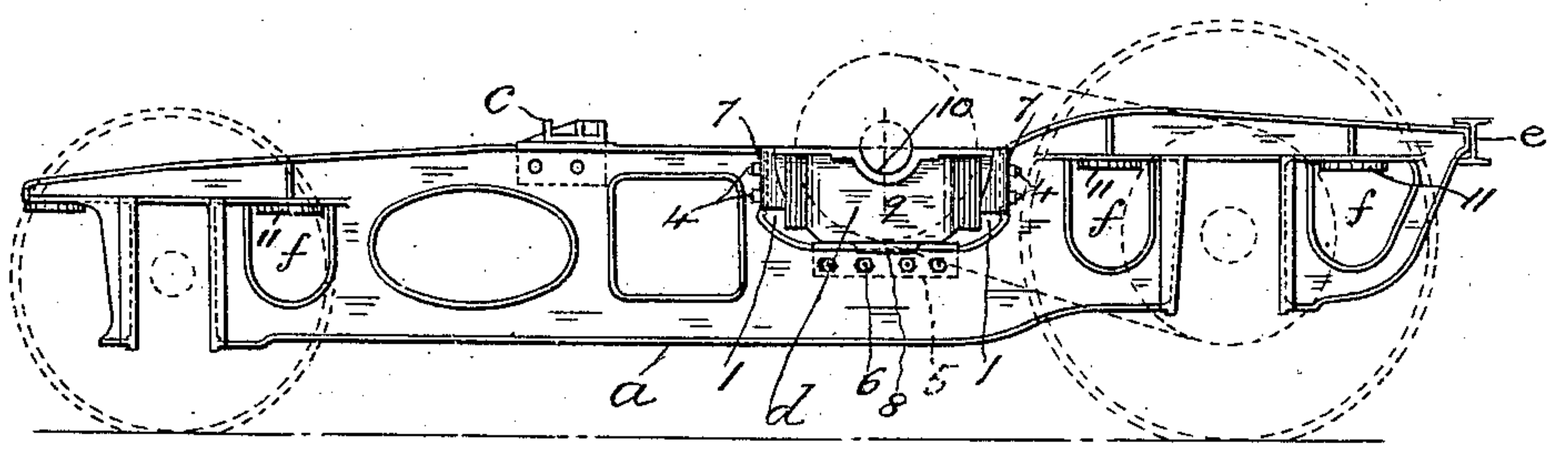


Fig. 3.

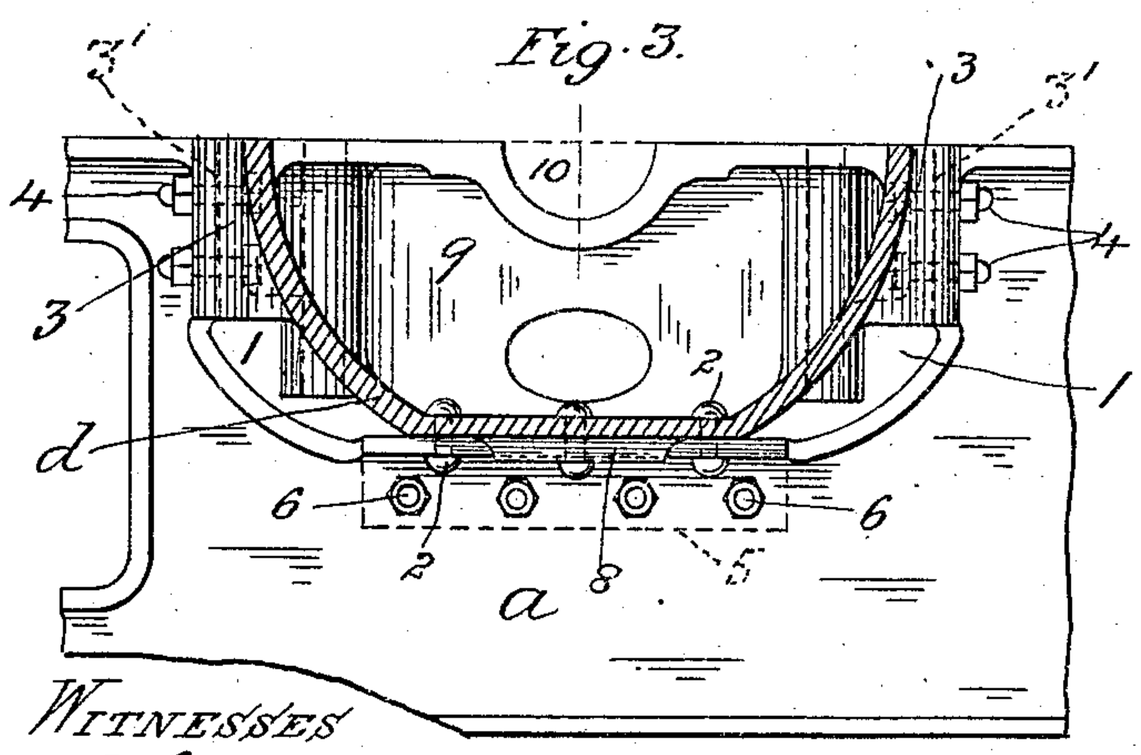
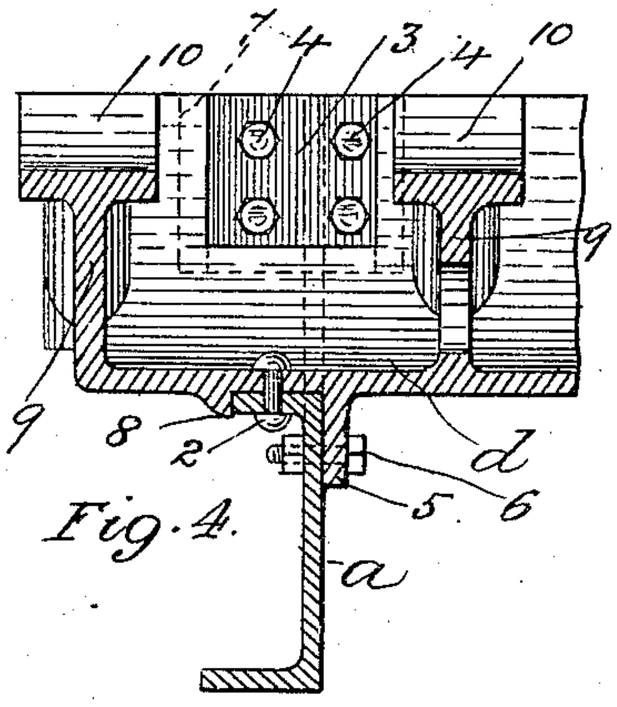


Fig. 4.



WITNESSES

C. F. Wenzel Jr.

J. B. Willis.

INVENTOR

Clarence H. Howard

By Edward W. Furrell

His Atty

UNITED STATES PATENT OFFICE.

CLARENCE H. HOWARD, OF ST. LOUIS, MISSOURI.

RAILROAD MOTOR-CAR TRUCK.

No. 928,976. Specification of Letters Patent. Patented July 27, 1909.

Application filed February 26, 1909. Serial No. 480,130.

To all whom it may concern:

Be it known that I, CLARENCE H. HOWARD, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Railroad Motor-Car Trucks, of which the following is a specification.

My invention relates particularly to the side frames of a railroar motor-car truck, and to the means of attaching the motor-bed thereto, and has for its object to increase the efficiency and stability of the truck by applying the motive power longitudinally through the upper portion or compression members of the said frames and thereby enable stronger frames of greater depth to be used with the same amount of material while maintaining the normal height of the motor-bed from the track.

The invention consists in features of novelty as hereinafter described and claimed, reference being had to the accompanying drawing forming part of this specification, whereon,

Figure 1, is a top plan view of the side frames and their connecting members forming parts of my improved motor-car truck; Fig. 2, a side elevation thereof; Fig. 3, a vertical transverse section to enlarged scale on line 3, 3, in Fig. 1, through the motor-bed forming one of the said members, and showing its attachment to, and means for interlocking with the corresponding side frame (seen in side view broken away), and Fig. 4, a vertical longitudinal section through the end portion of the motor-bed at its attachment to the side frame, on line 4, 4, in Fig. 1.

Like letters and numerals of reference denote like parts in all the figures.

a represents the two opposite side frames of my improved motor-car truck, which are connected together at, and adjacent to the rear side of the truck-bolster *b* (indicated by dotted lines in Fig. 1) by the usual transverse member or transom *c*, and at, and adjacent to the front side of the bolster *b* by the motor-bed *d*, which is preferably a metallic casting integral throughout, and used in lieu of the usual transverse member or transom on this side of the bolster, while the side frames *a* are connected together at their front ends by the transverse member *e* which is preferably I-shaped in cross section.

The motor-bed *d* on which the gasolene engine or other suitable motor (not shown) is mounted and fixed in the usual well-known manner, is in the present case preferably concave or trough-shaped in cross section, of suitable width and depth, and extends lengthwise between and across the side frames *a* to which it is rigidly fixed and preferably interlocked therewith in the following manner:—Transversely through the upper portion or compression member of each side frame *a* and opening through the top thereof, is formed a preferably rectangular-shaped recess 1 which is preferably, somewhat longer than the width of, and of the same depth as the motor-bed *d*, the recesses 1 being opposite and alined to each other and adapted to receive the end portions of the motor-bed *d*, which when placed therein is flush at the top with the top of the side frames *a* and bears at its underside on the bottom of the recesses 1 to which it is rigidly fixed by rivets (or bolts) 2.

From each side of the motor-bed *d* where it engages in the recess 1 of each side frame *a* projects outwardly a bracket or pocket 3 which is adapted to bear at its outer face against the corresponding upright end wall 3′ of the recess 1 to which it is fixed by bolts (or rivets) 4 (seen in Figs. 3 and 4, but omitted from Fig. 1), the motor-bed *d* thereby fitting closely between the opposite end walls 3′ and forming a part or continuation of the compression members of the side frames *a*. Furthermore, from the bottom of the motor-bed *d* preferably, depends a flange 5 which is adapted to bear against the inner face of each side frame *a* adjacent to the bottom of its recess 1, the flange 5 being fixed to the frame *a* thereat by bolts 6 (seen in Figs. 2, 3, and 4 but omitted from Fig. 1).

For interlocking the motor-bed *d* in its fixed position with the side frames *a*, the outer face of each bracket 3 is preferably, formed with outwardly projecting upright lateral lugs or flanges 7 which overlap and bear against the inner and outer sides of the corresponding frame *a* thereat, whereby the motor-bed *d* and side frames *a* are firmly held together in their proper relative positions at all times, and the latter prevented from spreading. Furthermore, from the bottom of the motor-bed *d* opposite to each flange 5 preferably depends a lug 8 which bears against the outer face of the corresponding side frame *a* at the bearing of the latter thereon, and in combination with the flange 5 securely holds the parts in position thereat.

Across the motor-bed *d* at suitable intervals along the same are formed brackets 9 having respectively, a bearing 10 for the driving shaft of the motor, the bearings 10 being arranged in longitudinal alinement with each other transversely to the truck, and having their longitudinal center preferably, in the horizontal plane of the compression members of the side frames *a*.

By the above construction in which the motor-bed forms a part or continuation of the compression members of the side frames, deeper and stronger side frames can be used with the same amount of material, and by applying the motive power from the drive shaft of the motor longitudinally through the compression members of the side frames as near as practicable to the railroad track, combined with the interlocking of the motor-bed and side frames with each other, the efficiency and stability of the truck are increased.

f are suitably shaped openings formed transversely through each side frame *a* for receiving the equalizer-springs (not shown) within the body of the frame *a* below its top member, whereby sufficient clearance is insured between the top of the frame *a* and the car-body, the top wall of each opening *f* having a spring-seat 11 preferably integral therewith.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In a railroad motor-car truck, the combination with the side frames having respectively, a recess formed transversely therethrough at the top, of a motor-bed adapted to engage in the said recess, and means integral therewith adapted to overlap the edges of the said recess for interlocking the motor-bed with the said frames, substantially as described.

2. In a railroad motor-car truck, the combination with the side frames having respectively, a recess formed transversely therethrough at the top, of a motor-bed adapted to engage in the said recess, means integral with the motor-bed adapted to overlap the edges of the said recess for interlocking the motor-bed with the said frames, and means for fixing the said bed to the said frames, substantially as described.

3. In a railroad motor-car truck, the combination with the side frames thereof, of the motor-bed adapted to form a part of the compression members of the said frames, substantially as described.

4. In a railroad motor-car truck, the combination with the side frames thereof, of the motor-bed adapted to form a part of the compression members of the said frames, and means for interlocking the motor-bed with the said frames, substantially as described.

5. In a railroad motor-car truck, the combination with the side frames thereof, of the motor-bed adapted to form a part of the compression members of the said frames, and means for fixing the motor-bed to the said frames, substantially as described.

6. In a railroad motor-car truck, the combination with the side frames thereof, of the motor-bed adapted to form a part of the compression members of the said frames, and means for interlocking the motor-bed with, and for fixing it to, the said frames, substantially as described.

7. In a railroad motor-car truck, the combination with the side frames thereof, of the motor-bed adapted to form a part of the compression members of the said frames and having a bearing for the driving shaft of the motor, the longitudinal center of the said bearing being in the horizontal plane of the said members, and means for interlocking the motor-bed with the said frames, substantially as described.

8. In a railroad motor-car truck, the combination with the side frames thereof, of the motor-bed adapted to form part of the compression members of the said frames, and having a bearing for the driving shaft of the motor, the longitudinal center of the said bearing being in the horizontal plane of the said members, and means for fixing the motor-bed to the said frames, substantially as described.

9. In a railroad motor-car truck, the combination with the side frames thereof, of the motor-bed adapted to form a part of the compression members of the said frames and having a bearing for the driving shaft of the motor, the longitudinal center of the said bearing being in the horizontal plane of the said members, and means for interlocking the motor-bed with, and for fixing it to, the said frames, substantially as described.

10. In a railroad motor-car truck, the combination with the side frames thereof, of the motor-bed adapted to form a part of the compression members of the said frames, the said frames having openings transversely therethrough adapted to form housings for the equalizer-springs of the truck, and a spring-seat integral with the top wall of each of the said openings, substantially as described.

11. In a railroad motor-car truck, the combination with the side frames thereof, of the motor-bed adapted to form a part of the compression members of the said frames, the said frames having openings transversely therethrough adapted to form housings for the equalizer-springs of the truck, and a spring-seat within each of the said openings, substantially as described.

CLARENCE H. HOWARD.

Witnesses:

HAL C. BELLVILLE,

EDWARD W. FURRELL.