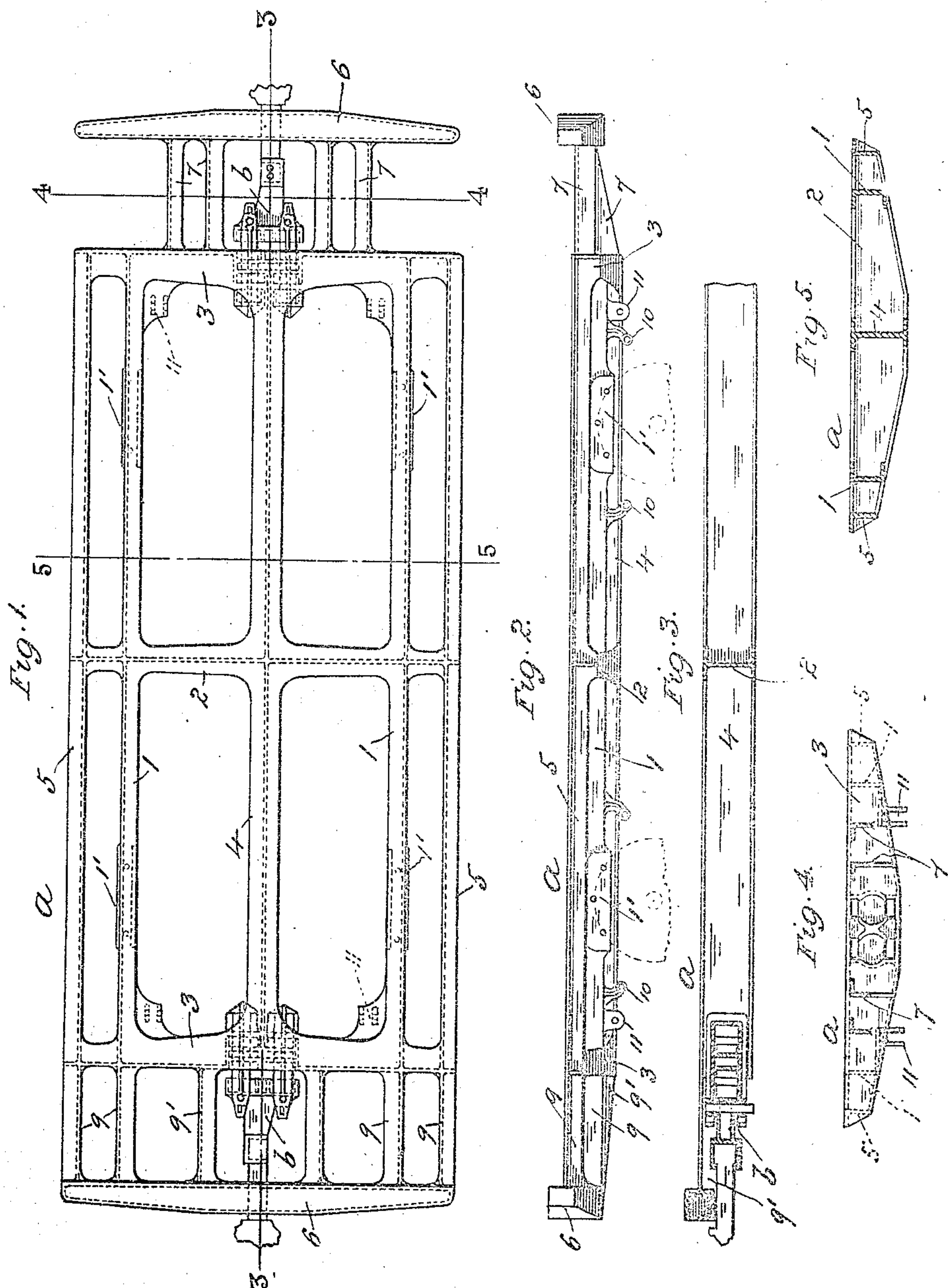


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CAR UNDERFRAME.
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919,356.

Patented Apr. 27, 1909.



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CAR-UNDERFRAME.

No. 919,356.

Specification of Letters Patent.

Patented April 27, 1909.

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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 Car-Underframes, of which the following is a specification.

My invention relates to a metallic car underframe, particularly applicable to a four-wheeled caboose car, and has for its object to provide a strong and rigid underframe having its component members disposed to the best advantage for sustaining the superincumbent load and resisting shock.

It 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 my improved metallic underframe as applied to a four-wheeled caboose car, and having its end portions arranged either with, or without the side step openings, as shown to the right and left respectively, of the figure; Fig. 2, a side elevation thereof; Fig. 3, a vertical longitudinal section through the underframe (broken away) on line 3, 3, in Fig. 1; Fig. 4, a vertical transverse section thereof on line 4, 4, in Fig. 1, omitting the draft-gear, and Fig. 5, a view similar to Fig. 4, on line 5, 5, in Fig. 1.

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

a represents my improved metallic underframe as applied to a four-wheeled caboose car and composed preferably of cast steel integral throughout. The underframe *a* comprises mainly, two opposite longitudinal members or wheel-pieces 1, which in the present case are channel-shaped in cross section and adapted laterally at 1' for the attachment thereto of the axle-box pedestals (not shown).

The wheel-pieces 1 are united together, preferably in the middle, by a transverse I-shaped member 2 (or by a similar member at each side of and equidistant from the middle as the case may be), and at each end by a preferably, transverse channel-shaped member 3 which is adapted at its middle portion for the application thereto of a suitable draft-gear *b*, the transverse members 3 being united to each other thereat by a longitudinal preferably I-shaped middle or "bulling" member 4 which intersects the middle transverse member (or members) 2.

In the present case the end and middle

transverse members 2 and 3 are extended a suitable distance beyond, or overhang, each wheel-piece 1 and are united together at their outer ends by a preferably, longitudinal L-shaped member 5, and at a suitable distance from and parallel to each transverse member 3, is a transverse preferably, box-shaped end sill or buffer-beam 6 which, as seen to the right in Fig. 1, is united to the corresponding transverse member 3 by a series of longitudinal preferably L-shaped members 7 suitably arranged for the attachment thereto of the platform (not shown) and to form the openings 8 for the side steps (not shown), of the car, the other end portion of the underframe *a* being in this case similarly constructed; while in the case of a caboose car used without the step openings 8, the transverse end sills or buffer-beams 6, as seen to the left in Fig. 1, are respectively, united to the corresponding transverse member 3 by a series of outer and inner longitudinal preferably, L-shaped members 9, 9', the outer members 9 being preferably aligned to and forming continuations of the corresponding longitudinal members 1 and 5 as shown. On the underside of the longitudinal members or wheel-pieces 1 and integral therewith are preferably formed, adjacent to the pedestal planing faces 1', the dependent spring-brackets 10, and the brake-hanger brackets 11.

The great advantage of the above construction is, that the long continuous middle longitudinal "bulling" member 4, combined with the adjacent members and end sills in connection therewith, presents a very rigid resistance to the shocks to which the caboose car is subjected in the case of long and heavy trains when it becomes necessary in many places to use one or more locomotives in the rear of the train as pushers in ascending heavy grades. Moreover, by combining the ordinary truck-frame and car underframe as it were in one piece greater simplicity of construction is effected.

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

1. A car underframe of the class described, comprising two opposite longitudinal wheel-pieces adapted for the attachment thereto of the axle-box pedestals, a transverse member uniting the wheel-pieces together at each end thereof, an end sill parallel to the said member, longitudinal members uniting the said member and end sill together, and a transverse member uniting the wheel-pieces

together intermediate to their ends, substantially as described.

2. A car underframe of the class described, comprising two opposite longitudinal wheel-pieces, a transverse member uniting the wheel-pieces together at each end thereof and adapted for the application thereto of a suitable draft-gear, an end sill parallel to the said member, longitudinal members uniting the said member and end sill together, and a transverse member uniting the wheel-pieces together intermediate to their ends, substantially as described.

3. A car underframe of the class described, comprising two opposite longitudinal wheel-pieces, a transverse member uniting the wheel-pieces together at each end thereof, an end sill parallel to the said member, longitudinal members uniting the said member and end sill together, a longitudinal member uniting the said transverse members together intermediate to their junction with the wheel-pieces, and a transverse member intersecting the said longitudinal member and uniting the wheel-pieces together intermediate to their ends, substantially as described.

4. A car underframe of the class described, comprising two opposite longitudinal wheel-pieces, a transverse member uniting and

extending beyond the wheel-pieces at each end thereof, an end sill parallel to the said member, longitudinal members uniting the said member and end sill together, a transverse member uniting and extending beyond the wheel-pieces intermediate to their ends, and a longitudinal member parallel to the wheel-pieces and uniting the said transverse members together on the outside of each wheel-piece, substantially as described.

5. A car underframe of the class described, comprising two opposite longitudinal wheel-pieces, a transverse member uniting and extending beyond the wheel-pieces at each end thereof, an end sill parallel to the said members, longitudinal members uniting the said member and end sill together, a longitudinal member uniting the said transverse members together intermediate to their junction with the wheel-pieces, and a longitudinal member parallel to the wheel-pieces and uniting the said transverse members together on the outside of each wheel-piece, substantially as described.

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Witnesses:

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