C. A. LINDSTRÖM.

UNDERFRAME FOR RAILWAY CARS.

APPLICATION FILED JAN. 10, 1914.

1,202,746.

Patented Oct. 24, 1916.

3 SHEETS—SHEET 1.

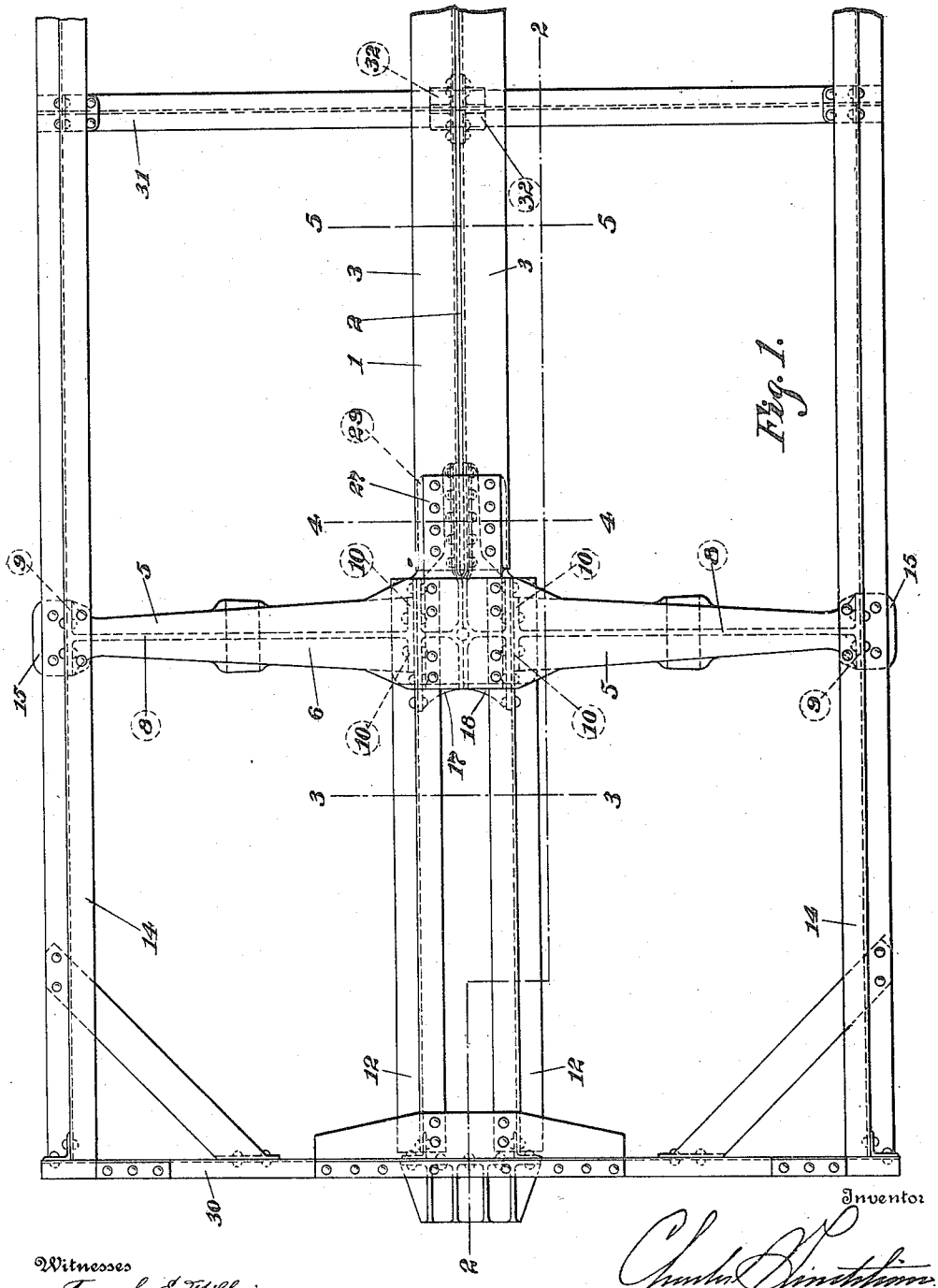


Fig. 1.

Witnesses

Frank E. Wyllie.

Margaret Summerfield

Inventor

Charles Lindström

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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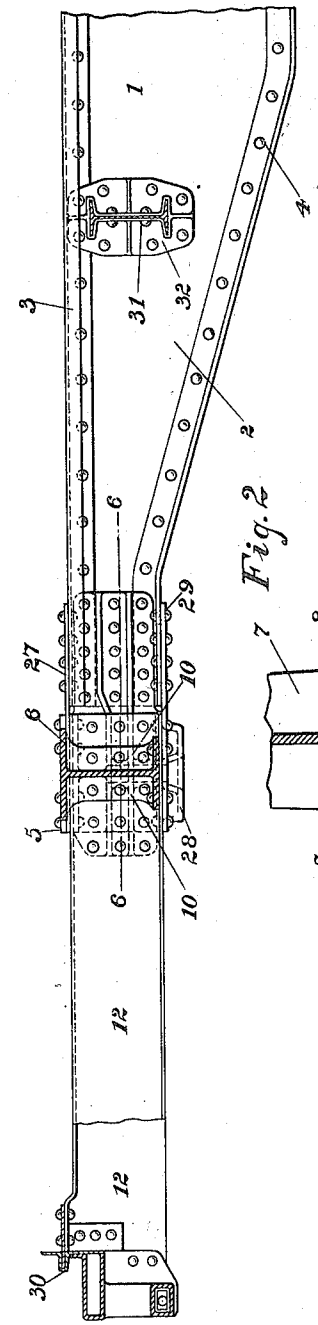


Fig. 2

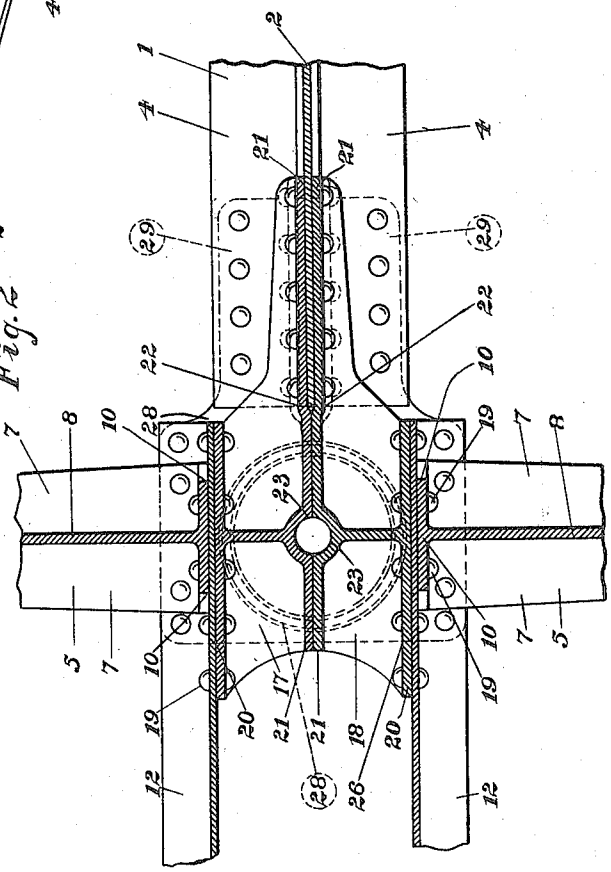


Fig. 6.

Witnesses

Frank C. Miller.

Margaret Summerhill

Inventor

Charles A. Lindström

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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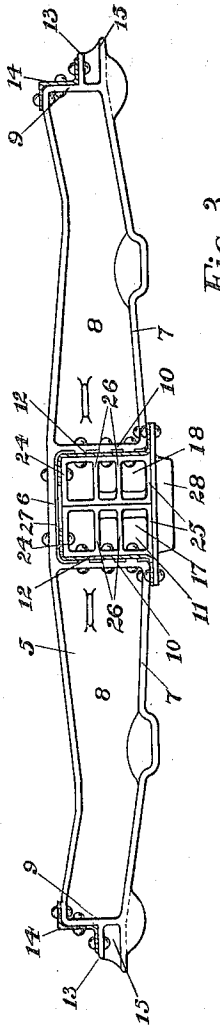


Fig. 3.

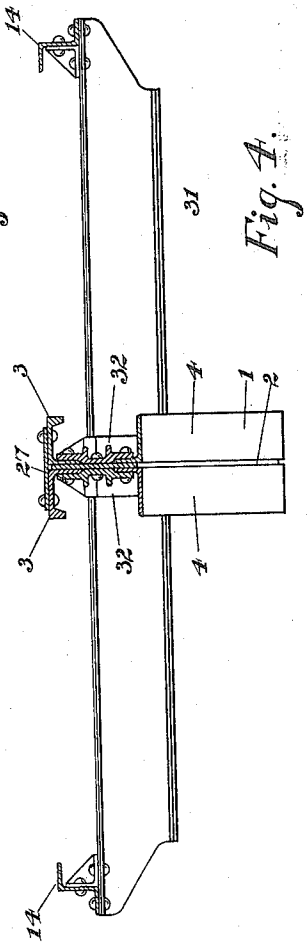


Fig. 4.

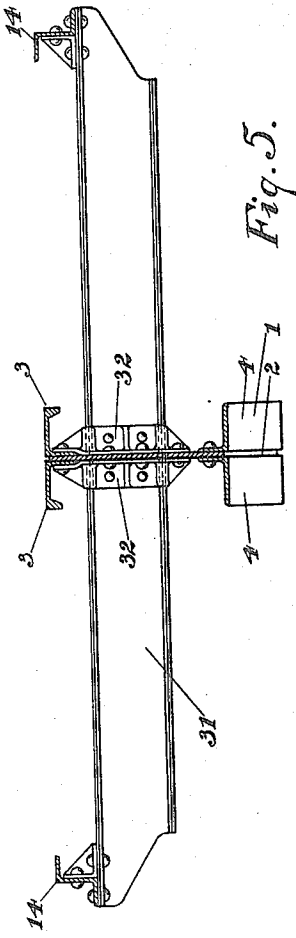


Fig. 5.

Witnesses

Frank C. Miller

Margaret Summerhill

Inventor

Charles Lindström

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES A. LINDSTRÖM, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR TO PRESSED STEEL CAR COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

UNDERFRAME FOR RAILWAY-CARS.

1,202,746. Specification of Letters Patent. Patented Oct. 24, 1916.

Application filed January 10, 1914. Serial No. 811,371.

To all whom it may concern:

Be it known that I, CHARLES A. LINDSTRÖM, a citizen of the United States, residing at No. 138 Stratford avenue, Pittsburgh, E. E., in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Underframes for Railway-Cars, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

An object of the invention is to provide a simple, light and strong steel underframe for railway cars, which is especially adapted for use in box car construction, but may be used in any and all classes of cars where suitable.

Another object of the invention is to combine the bolster, center sill and draft sills in such a manner as to reduce to a minimum the number of parts used in such combination, and also reduce the number of means used for securing such parts together.

Another object of the invention is to provide a bolster member having a recess formed therein for the reception of the center brace member, the ends of the draft sills and also member adapted to connect the center sill with said center brace member and draft sills.

Another object of the present invention is to provide a center brace member comprising a plurality of parts, each of said parts being adapted to be secured to the draft sill, bolster and center sill, and when so secured to these members is adapted to strengthen the underframe both longitudinally and transversely.

A further object of the invention is to combine the bolster, center brace and draft sills, in such a manner as to facilitate the removal of the draft sill and center brace from the bolster recess, in the event of removal for repairs through damage or other cause.

With these and other objects in view, the present invention consists in the combination and arrangement of parts, as will hereinafter be more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size and minor details may be made, within the scope of the claims, without departing from the spirit or sacrificing any of the advantages of the invention.

Referring now to the drawings, in which like reference characters refer to like parts, and in which—

Figure 1 is a plan view of a portion of an underframe embodying the invention; Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1; Figs. 3, 4 and 5 are cross sectional views on the lines 3—3, 4—4 and 5—5 respectively of Fig. 1, and Fig. 6 is an enlarged detail sectional view on the line 6—6 of Fig. 2.

Referring now in detail to the drawings, 1 indicates the center sill which may be of rolled I section, or as shown in the several figures of the drawings, may be built up of commercial sections and plates.

2 indicates the web plate of the center sill to which are secured the top or compression members 3, 3 and the bottom or tension members 4, 4; the compression members 3, 3 being preferable of bulb-angle section.

5 indicates the bolster which comprises a single element preferably of I section for a greater part of its length. The top member 6 which extends the full length of the bolster and the bottom members 7, 7, which stop short of the longitudinal center line of the underframe, are connected by the webs 8, 8, the end members 9, 9 and by the flanges 10, 10, such flanges 10, 10, together with the top member 6, forming an opening 11 adapted to permit of the passing of the draft sills 12, 12 therethrough. The end members 9, 9 are provided with brackets 13, 13 to which the side sills 14, 14 are secured and are also provided with extensions 15, 15 which form roping and jacking portions.

Within the opening 11 of the bolster 5, the inner ends of the draft sills 12, 12 are secured to, and spaced apart by, a center brace member comprising parts 17 and 18. These parts 17 and 18 and the draft sills 12, 12 are secured to the bolster 5 by suitable means 19 which pass through the flanges 10, 10 of the bolster, the webs of the draft sills 12, 12 and the side portions of the center brace parts 17 and 18. Each of the parts 17 and 18 are provided with vertical side portions 20 and 21; the side portions 20 of both parts being adapted to contact with the webs of the draft sills 12, 12 while the side portions 21 are adapted to contact with

each other for some distance on either side of the transverse center line of the bolster, and at 22 these side portions 21 are offset a sufficient distance apart to permit of the insertion of the center sill 1 therebetween; the portions 21 and the center sill 1 being secured together by rivets or other suitable means. Each of the sides 21 are provided with a semi-circular groove 23 which when the parts 17 and 18 are assembled as shown in Figs. 1 and 6 of the drawings, form a circular opening for the reception of a king pin (not shown). To strengthen these parts 17 and 18, horizontal top portions 24, bottom portions 25 and ribs 26 are provided.

27 indicates a top tie plate which is secured to the draft sills 12, 12 and to the top members 3, 3 of the center sill 1.

To form an additional tie between the center sill 1, the bolster and draft sills 12, 12, the center bearing member 28 is provided with flat horizontal portions 29 which are secured to the bottom members 4, 4 of the center sill 1 to the draft sills 12, 12 and to the boiler 5.

30 indicates the end sill to which the outer ends of the draft sills 12, 12 are secured by rivets or other suitable means.

31 indicates the cross beams, which are preferably of rolled section and extend continuously from side to side of the underframe, and at their ends form seats for the side sills 14, 14. Where the crossbeams pass through the web of the center sill, bracket members 32, 32 are provided which are secured to said crossbeams and sills.

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

1. In a car underframe, the combination of a single rigid bolster element extending across said underframe, said bolster element having an opening formed therein intermediate its ends, draft sills extending through said bolster, a center sill terminating short of said bolster and a center brace member adapted to fit in said opening and be secured to said bolster, draft sills and center sill.

2. In a car underframe, a bolster comprising a single rigid element, draft sills extending through said bolster, a center brace member between said draft sills, said center brace member comprising a plurality of parts, having portions extending beyond said bolster, a center sill terminating short of said bolster and secured to said portions and means for securing said bolster, draft sills and center brace member together.

3. In a car underframe, a single center sill, draft sills, a bolster, and a center brace member comprising a plurality of parts adapted to be secured to said center sill bolster and draft sills, said center sill terminating short of said bolster.

4. In a car underframe, a bolster comprising a single element, a single center sill terminating short of said bolster, draft sills extending through said bolster and terminating short of said center sill, and a center brace member adapted to connect said center sill with said bolster and draft sills.

5. In a car underframe, a bolster, draft sills extending through said bolster, a single center sill terminating short of said bolster and a center bearing member connecting said bolster, draft sill and single center sill.

6. In a car underframe, a bolster, draft sills extending through said bolster, a single center sill terminating short of said bolster, a center brace member secured to said bolster and draft sill, and top and bottom tie plates secured to said bolster and draft sills, said center brace member and top and bottom tie plates being also secured to said center sill.

7. In a car underframe, a bolster, draft sills, a single center sill terminating short of said bolster, a center brace member comprising a plurality of parts, one of each of said parts being secured on each side of said center sill, connecting the draft sills and the bolster to the center sill.

8. In a car underframe, a bolster, draft sills extending through said bolster, a center sill terminating short of said bolster and sills, and a center brace member connecting said bolster, draft sills and center sill.

9. In a car underframe, a bolster, draft sills extending through said bolster, a single center sill terminating short of said draft sills, and a two part center brace member connecting said bolster, draft sills and single center sill.

10. In a car underframe, a bolster, draft sills extending through said bolster, a single center sill terminating short of said draft sills, a center brace member connecting said bolster, draft sills and center sill, and top and bottom cover plates connecting said draft sills and center sill.

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

CHARLES A. LINDSTRÖM.

Witnesses:
FRANK E. MILLER,
JAMES MCKEVITT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."