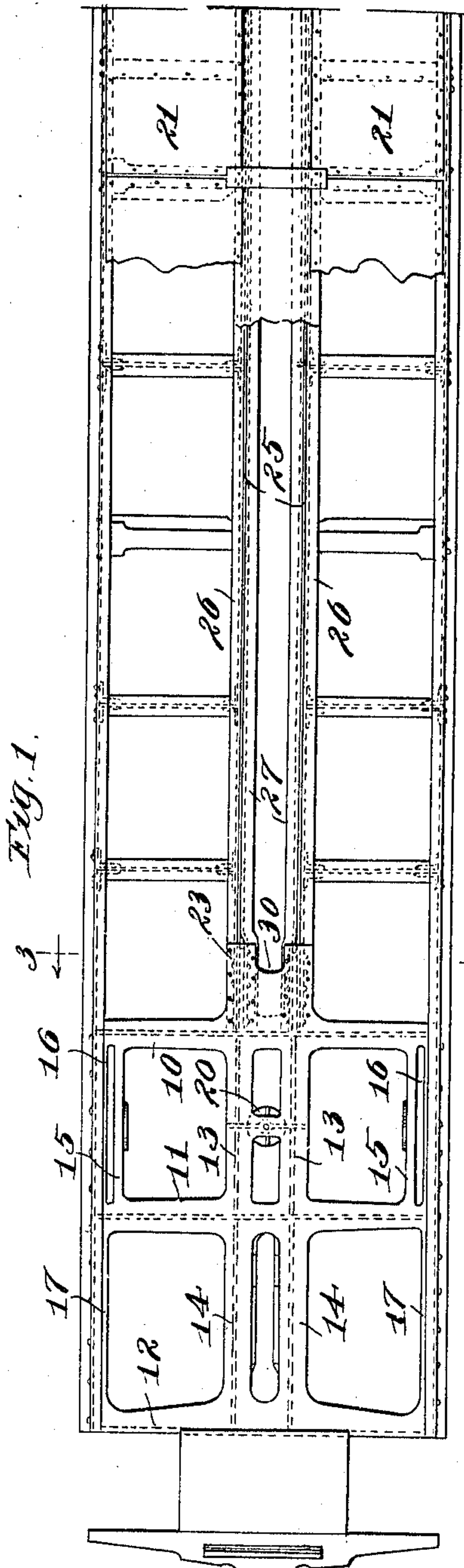


M. M. SCHNEIDER.
CAR BODY UNDERFRAME.
APPLICATION FILED MAR. 23, 1909.

945,142.

Patented Jan. 4, 1910.
2 SHEETS—SHEET 1.



Witnesses:

J. A. Paulschmidt
Walter M. Fuller

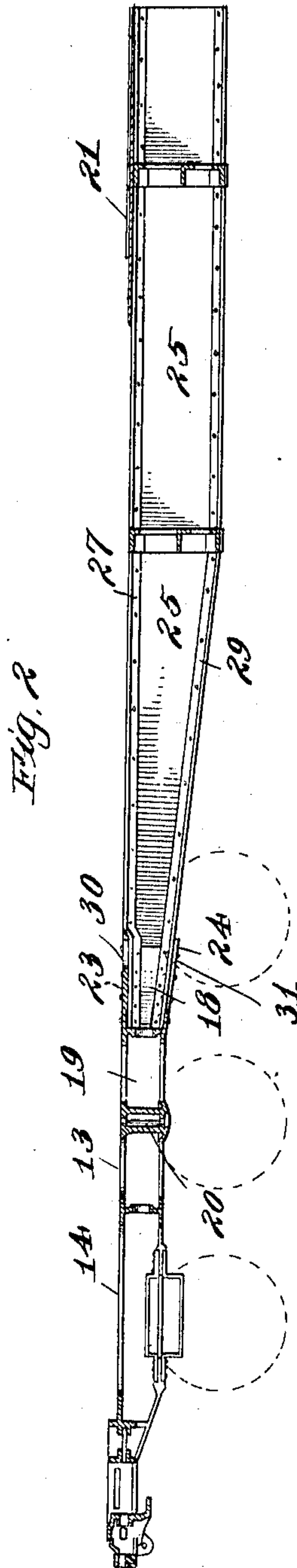


Fig. 2

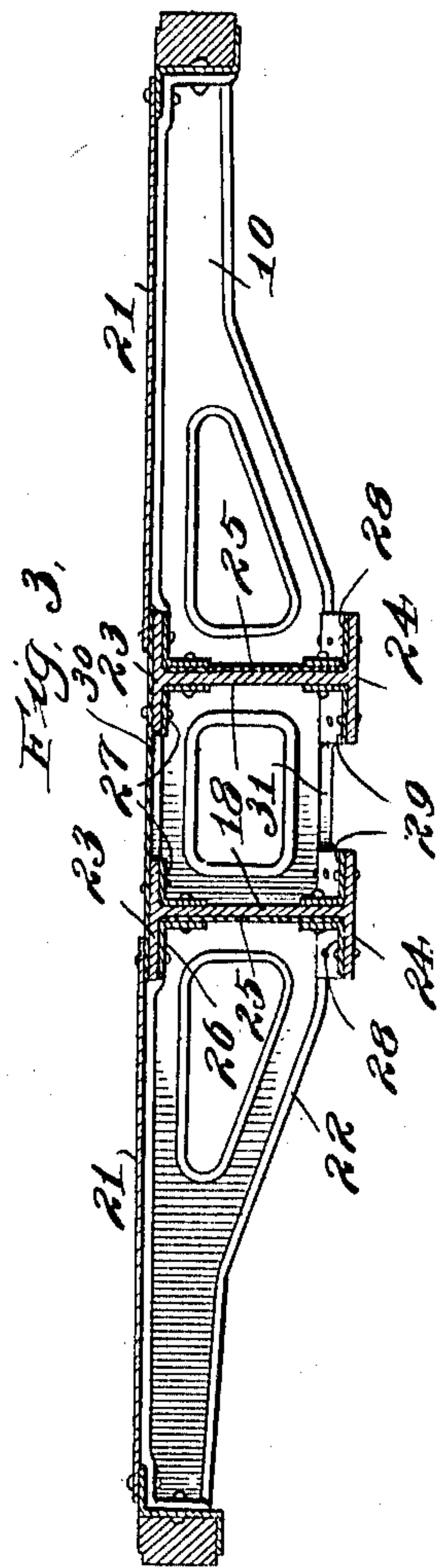


Fig. 3

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Fig. 4.

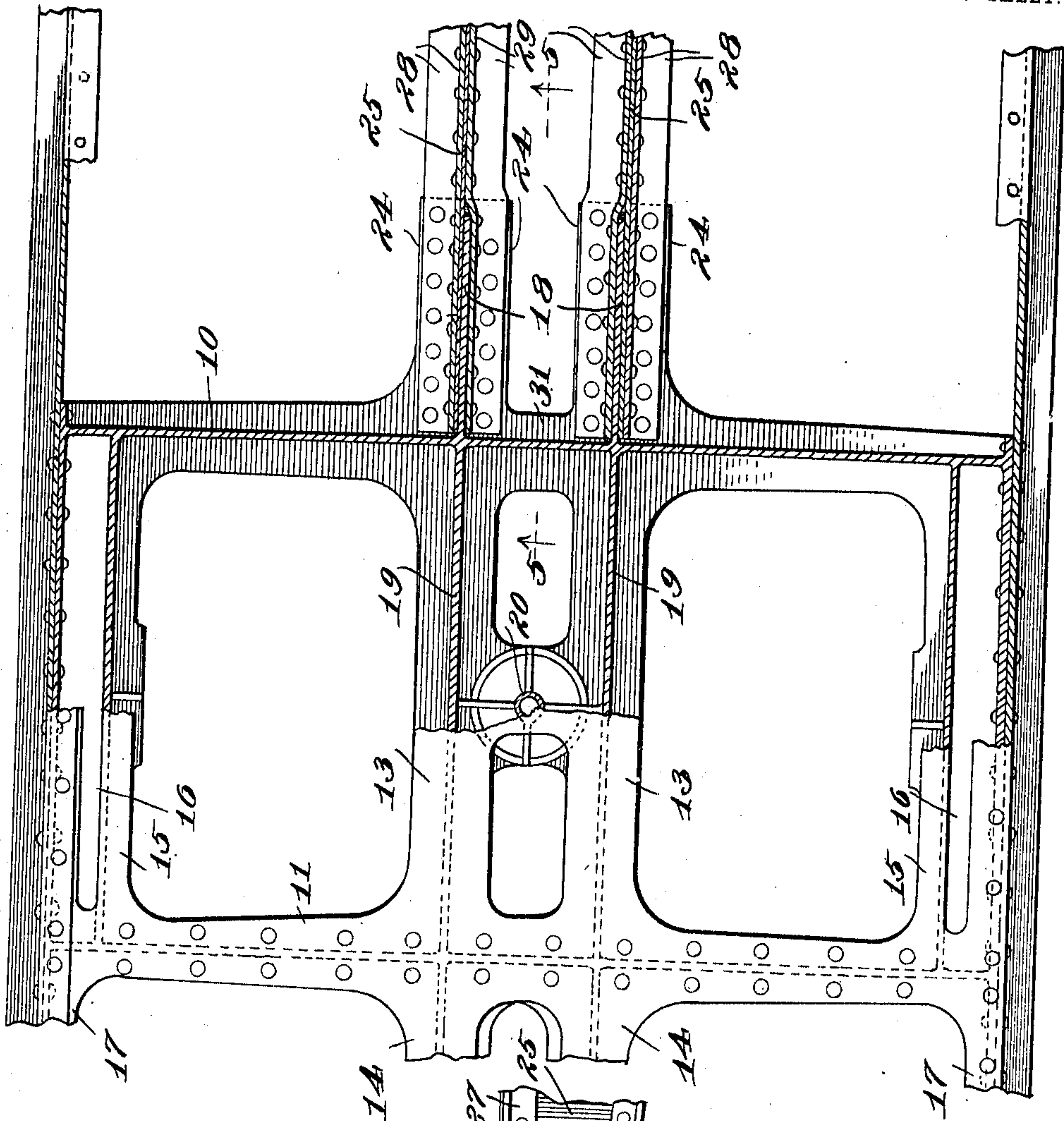
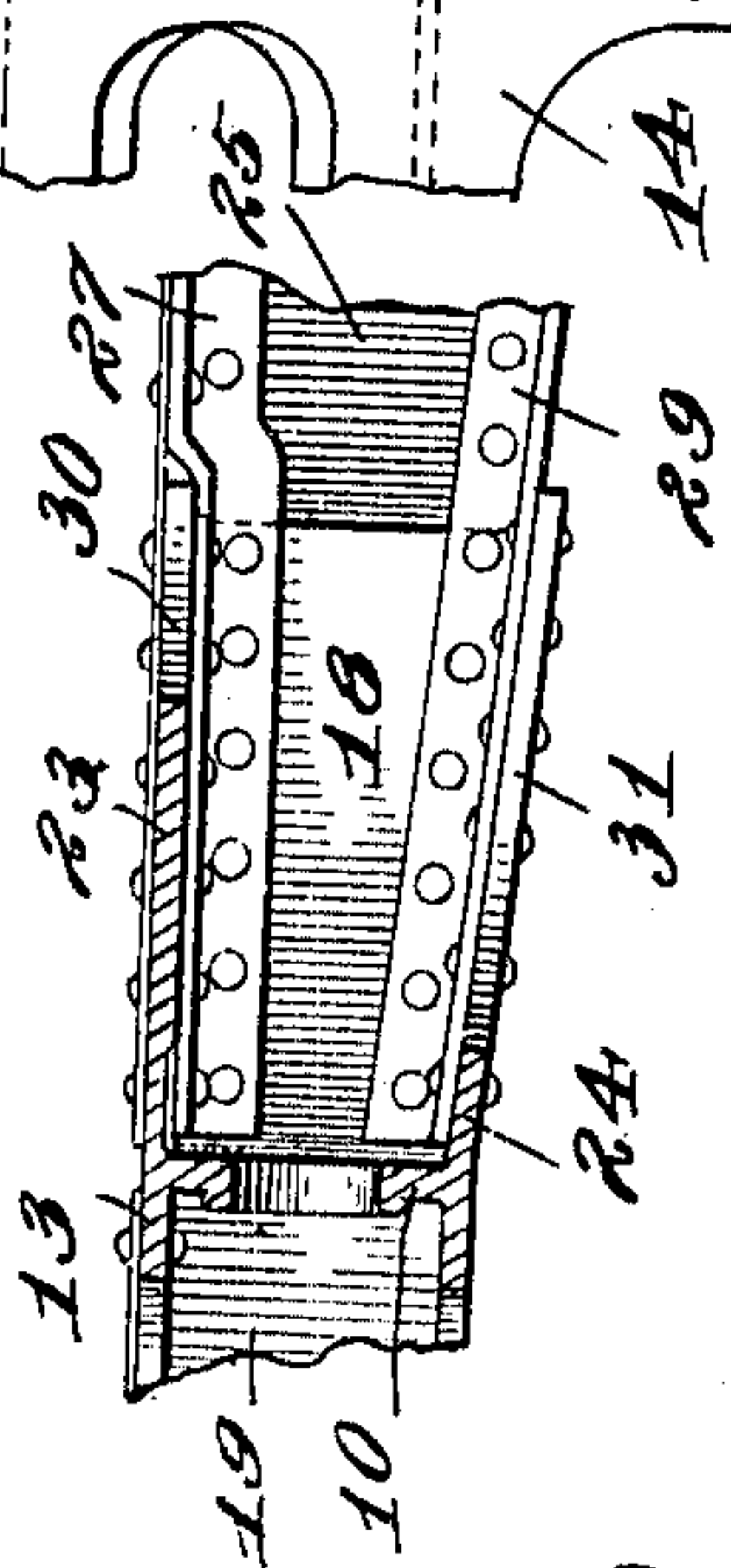


Fig. 5.



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UNITED STATES PATENT OFFICE.

MAX M. SCHNEIDER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE PULLMAN COMPANY,
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CAR-BODY UNDERFRAME.

945,142.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed March 23, 1909. Serial No. 485,191.

To all whom it may concern:

Be it known that I, MAX M. SCHNEIDER, 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 Car-Body Underframes, of which the following is a specification.

My invention pertains to improvements in the underframes of railway cars, and more particularly or especially concerns such underframes with double body bolsters desirably integral. In such cars it has been customary and deemed advisable, if not absolutely necessary, to extend the center-sills from one end of the car to the other, the bolsters being suitably apertured for their accommodation. I have found that in a double body bolster underframe there is practically no bending moment just inside the inner bolsters, and have, therefore, chosen these points as suitable and adaptable for riveting or otherwise splicing the center sills to the double body bolster castings, it being understood that the sills extend only from body bolster to body bolster. Accordingly the bolster casting is supplied with extensions for the ready fastening of the sill ends thereto. Each pair of body bolsters and the corresponding end sill are desirably cast in one piece, being connected together by beam portions integral therewith and forming extensions or prolongations of the center sills to the end sill. It is also desirable to provide means unitary with the bolsters for joining together the outer ends of the same and the end sill.

In the accompanying drawings, forming a part of this specification and to which reference should be made for a full and complete understanding of the invention, I have illustrated a desirable and preferred embodiment of this invention, like reference characters referring to the same parts throughout the various views.

In these drawings—Figure 1 is a plan view of a portion of an underframe of a railway car embodying my invention, the top cover plates being broken away to more clearly show the structural features; Fig. 2 is a central longitudinal vertical section of the device; Fig. 3 is an enlarged cross-section on line 3—3 of Fig. 1; Fig. 4 is an enlarged plan of a fragment of the underframe, certain portions being broken away

to more clearly illustrate the construction; and Fig. 5 is a longitudinal section on line 5—5 of Fig. 4, as viewed in the direction indicated by the arrows.

Each end of the car underframe has an integral or unitary double body bolster casting, including the inner and outer bolsters 10 and 11, an end sill 12, and central connecting spaced beam portions 13, 13 and 14, 14 adapted to form extensions or prolongations of the center sills described hereinafter. The outer ends of the body bolsters 10 and 11 are connected together by the beams 15 and 16 forming portions of the large unitary casting mentioned above, the ends of the outer bolster 11 being likewise joined to the ends of the end sill 12 by similar parts or members 17. As will be readily understood by those skilled in the art, the various parts and portions of such casting may be of any desired or preferred section, the conformation or shape of the bolsters proper being indicated in Fig. 3. These bolsters, as is clearly illustrated, are apertured and of bellied form, being substantially I-shape in cross-section, while the beam portions 15 are of channel shape, and the parts 16 of angle shape in cross-section, as is indicated in Fig. 4.

Extended inwardly from the inner face of the bolster 10 is a pair of vertical webs 18 integral with the double body bolster casting and in alinement with the vertical webs 19 of the central spaced beam portions 13, which at their central part are cross-connected to support the king pin or center bearing member 20. The top and bottom flanges 21 and 22 of the inner bolster 10 merge into the corresponding flanges 23 and 24 projecting in opposite directions from the extension webs or splice portions 18, shown perhaps most clearly in Figs. 3 and 4. The bellied vertical plates 25 constituting the center sills of the car underframe extend from the inner face of one inner body bolster to the corresponding face of the other, these plates lying against the outer surfaces of the extension webs 18, as is illustrated in Fig. 4. Each center sill plate has riveted along its top and bottom edges the four strengthening and stiffening angle bars 26, 27, 28, and 29, the outstanding flanges of which, at the splice or fastening ends of the center sills, are riveted to the top and bottom outstanding flanges 23 and

24 of the fastening extensions 18, the horizontal rivets 30 extending through the vertical flanges or legs of these stiffening angle bars also passing through the plates 25 and the webs 18 to securely fasten the center sills to the double body bolster casting, as will be readily understood. It will, therefore, be apparent that an unusually strong and effective splicing or fastening is obtained between the ends of the center sills and the two bolster castings at the opposite ends of the car underframe, and since at this point in a frame of this character there is substantially no bending moment, this is the most desirable place to employ such a splice or union between the parts of the car underframe.

In the embodiment of the invention illustrated on the drawings the top flanges 23 of the vertical webs 18 are connected together for a portion of their length, the bottom flanges 24 being likewise connected at their inner ends by a part 31, which may be considered if desired as one of the bottom flanges of the inner bolster.

Owing to the fact that the sill or beam portions 13 and 14 are spaced apart the same distance as the center sills and are in alignment with the latter, a strong and rigid underframe is obtained even though a splicing of the center sills is employed. These connecting parts 13 and 14 transmit all strains and shocks and act between the body bolsters and end sill in practically the same manner that the center sills themselves would were they extended from end sill to end sill.

It is to be remembered and understood that minor mechanical changes may be made in the structure shown and described herein without departure from the heart and essence of this invention and without sacrificing any of its benefits and advantages.

I claim:

1. In a railway car underframe, the combination of an integral double body-bolster, and a pair of center sills terminating at the inner one of and fastened to said body-bolsters, substantially as described.

2. In a railway car underframe, the combination of a double body-bolster, an end sill, said double bolster and end sill being integral, and a pair of center sills terminating at the inner one of and fastened to said body-bolsters, substantially as described.

3. In a railway car underframe, the combination of an integral double body-bolster having projecting inwardly longitudinally of the car from the inner one of said bolsters a pair of vertical webs supplied at their top and bottom edges with oppositely-extended flanges, a pair of plate center sills terminating at the inner one of said bolsters and lying against and fastened to said webs, and strengthening rolled bars secured on opposite sides of said center sills along their top and bottom edges, said bars being fastened to said webs and flanges, substantially as described.

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Witnesses:

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