

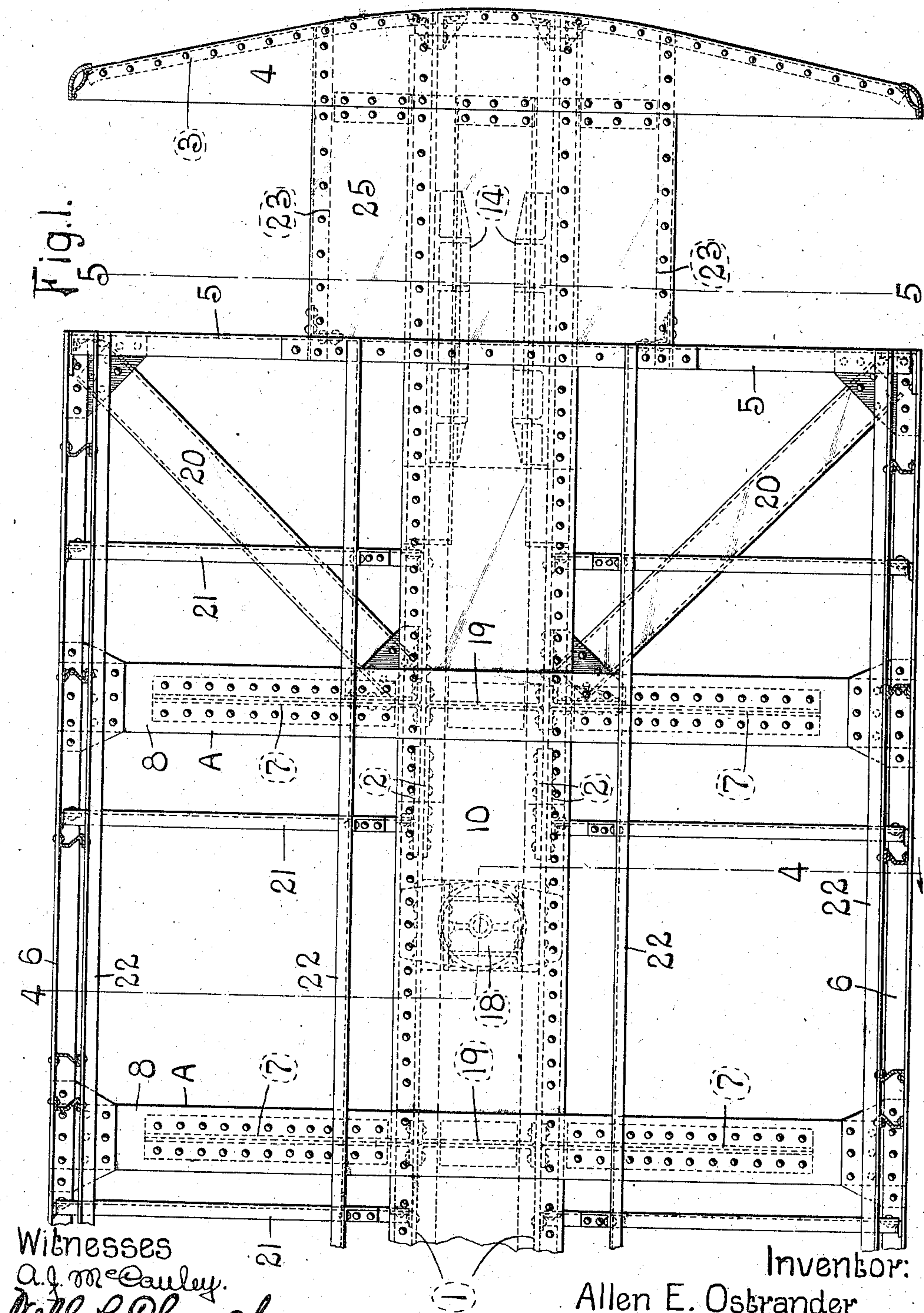
No. 866,956.

PATENTED SEPT. 24, 1907.

A. E. OSTRANDER.
CAR UNDERFRAME.

APPLICATION FILED DEC. 12, 1906.

3 SHEETS—SHEET 1.



Witnesses
A. J. McCauley.
Nelson Church.

Inventor:
Allen E. Ostrander
by Bakerwell Cornwall Abby's

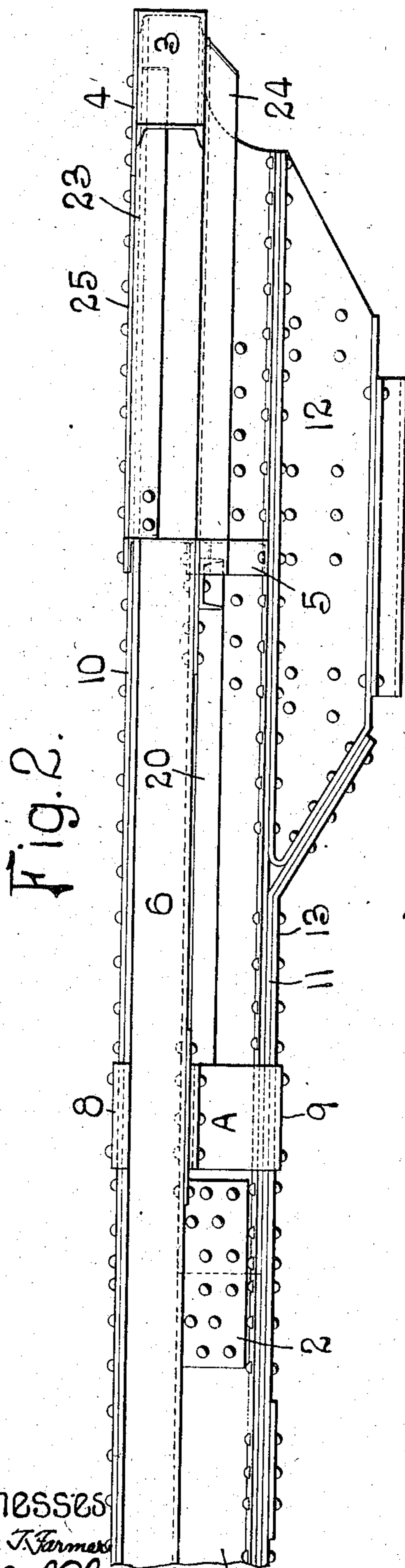
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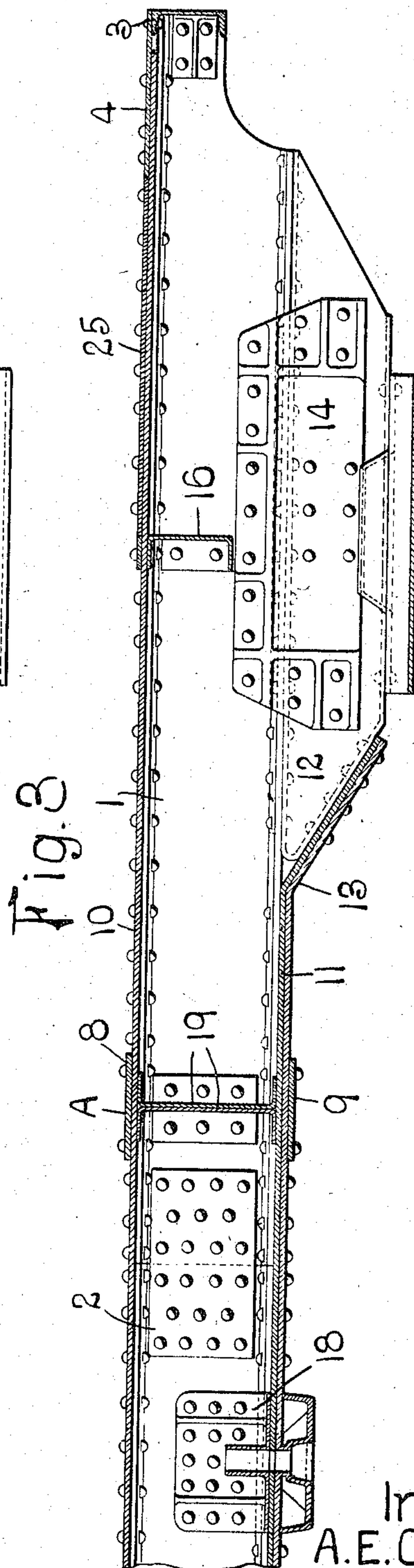
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3 SHEETS—SHEET 2



Witnesses
Edgar T. Farmers
Wells L. Church



Inventor:
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3 SHEETS—SHEET 3.

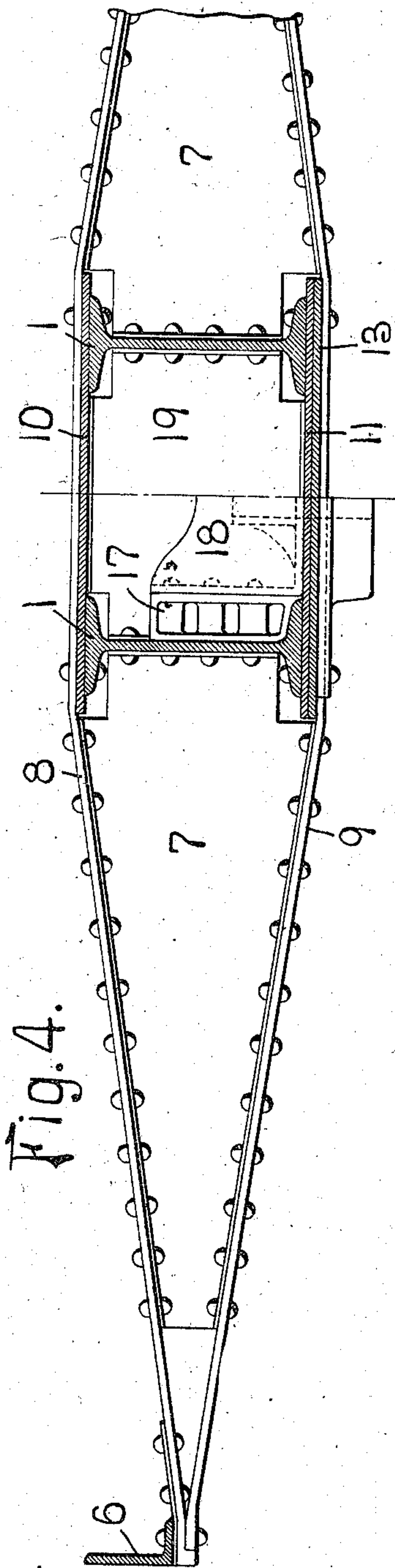


Fig. 4.

Witnesses
Edgar T. Farmer.
Wells L. Church.

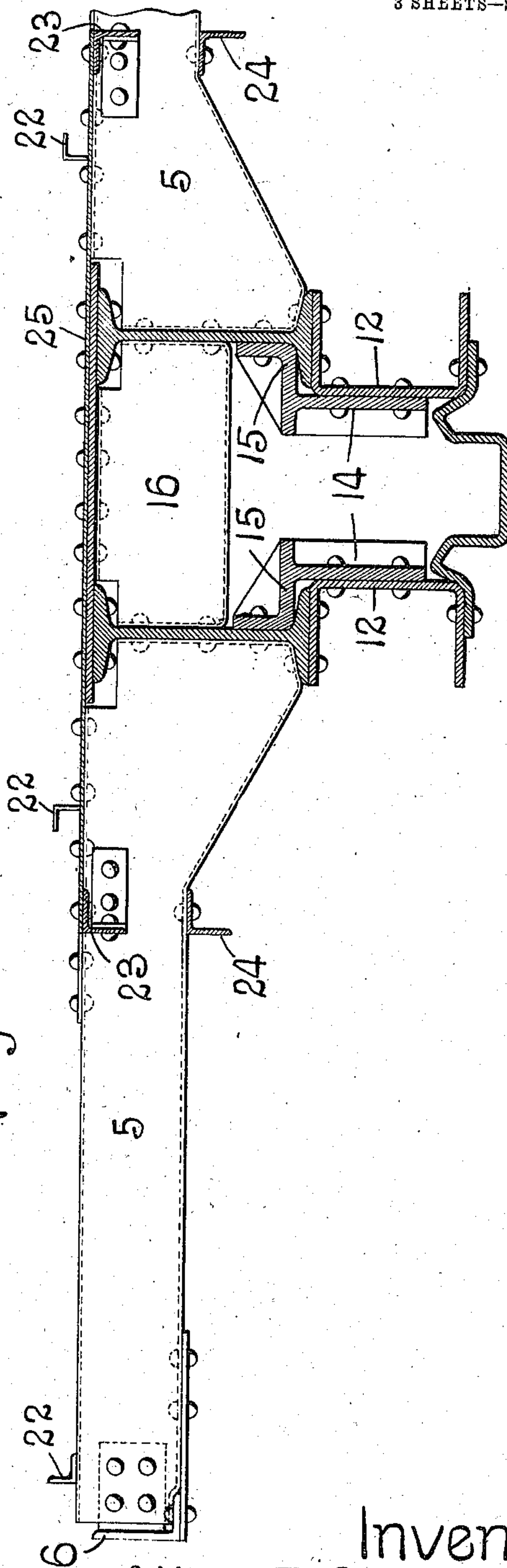


Fig. 5.

Inventor:
Allen E. Ostrander
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Att'y's.

UNITED STATES PATENT OFFICE.

ALLEN E. OSTRANDER, OF PATERSON, NEW JERSEY, ASSIGNOR TO AMERICAN CAR & FOUNDRY COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

CAR-UNDERFRAME.

No. 866,956.

Specification of Letters Patent.

Patented Sept. 24, 1907.

Application filed December 12, 1906. Serial No. 347,475.

To all whom it may concern:

Be it known that I, ALLEN E. OSTRANDER, a citizen of the United States, residing at Paterson, New Jersey, have invented a certain new and useful Improvement in Car-Underframes, 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, in which—

Figure 1 is a plan view of an underframe constructed in accordance with my invention; Fig. 2 is a side elevation thereof; Fig. 3 is a longitudinal sectional view taken through the center of the frame; Fig. 4 is a cross sectional view taken on the line 4—4 of Fig. 1; and Fig. 5 is a cross sectional view taken on the line 5—5 of Fig. 1.

This invention relates to railroad cars and particularly to the underframing of cars.

The object of my invention is to provide an underframe which is of simple construction but very strong.

Referring to the drawings which represent the preferred form of my invention, 1 designates the center sills which are preferably I-beams and these sills may either be continuous or spliced adjacent the bolster by means of splice plates 2, the latter construction being preferable.

The platform end sills 3 consist of channels having top cover plates 4 connected to the upper flanges thereof. The end sills consist of flanged members 5 connected at their outer ends to the side sills 6 and at their inner ends to the center sills 1, said members being of uniform depth throughout the major portion of their length but increasing in depth adjacent the center sills, as shown in Fig. 4.

The bolster consists of two members A spaced quite a distance from each other, as shown in Fig. 1, each of said members consisting of pairs of flanged diaphragms 7 placed back to back and connected to the center sills and side sills and a tension plate 8 and compression plate 9 connected to the flanges of said diaphragms and to the side sills, as shown in Fig. 5.

Top and bottom cover plates 10 and 11, respectively, are connected to the flanges of the center sills, and the tension plates of the bolster members extend over said top cover plate. Draft sills 12, which are preferably pressed metal members of channel-shape in cross section, are connected to the bottom flanges of the center sills intermediate the platform end sill and the outer bolster member, and to insure a very rigid construction I use an additional bottom cover plate 13 which extends from the inside bolster member to the draft sills, as shown in Fig. 3. This additional cover plate is connected to the lower flanges of the center sills and

is bent downwardly with the bottom cover plate 11 and connected to the end flanges of the draft sills 12, the compression plate of the bolster members extending underneath this cover plate 13. The draft rigging casting 14 is provided at its upper end with a flange 15 which rests on the inside lower flanges of the center sills and said casting is riveted to the webs of the center sill and to the webs of the draft sills, as shown in Fig. 4, a flanged diaphragm 16 being interposed between the center sills above said casting. Fillers 17 and a king-bolt casting 18 are interposed between the center sills intermediate the bolster members, and flanged diaphragms 19 are arranged between the center sills at the points where the bolster members are connected thereto.

Diagonally extending braces 20 are connected at their outer ends by gusset plates to the side sills and end sills, and at their inner ends to the center sills and one of the bolster members. Transversely extending floor supports 21 are connected to the side sills and center sills, and longitudinally extending stringers 22 are connected to said floor supports and to the end sill members 5. Extending from the end sill to the platform end sill are two parallel angles 23 and also two angles 24 arranged underneath the angles 23, the platform plate 25 being connected to the angles 23.

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

1. An underframe comprising center sills, draft sills connected to the lower sides of the center sills, and a bottom cover plate connected to the center sills and bent downwardly underneath the draft sills; substantially as described.

2. An underframe comprising center sills, draft sills connected to the underneath sides of the center sills, and provided at their ends with flanges, a bottom cover plate connected to the center sills and bent downwardly to engage the end flanges of the draft sills to which they are connected; substantially as described.

3. An underframe consisting of flanged center sills, pressed metal draft sills connected to the center sills and having inclined end flanges, a bottom cover plate secured to the center sills and to the inclined flanges of the draft sills, and a reinforcing plate extending from the bolster to the draft sills and being connected to the end flanges of said draft sills and to the bottom cover plate for the center sills; substantially as described.

4. An underframe comprising flanged center sills having draft sills connected to the lower flanges thereof, and a casting resting on the flanges of the center sills and riveted to the webs of said sills and to the draft sills; substantially as described.

5. An underframe comprising flanged center sills having channel-shaped draft sills connected to the lower flanges thereof, the legs of said channel projecting outwardly, and a casting connected to the webs of the center sills and draft sills; substantially as described.

6. An underframe comprising flanged center sills, channel-shaped draft sills connected to the bottom flanges of

the center sills with their flanges projecting outwardly, a casting having a flange which rests on the lower flanges of the center sills, said casting being connected to the webs of the center sills and draft sills, and a flanged diaphragm
5 arranged between the center sills above said casting; substantially as described.

7. An underframe comprising center sills, side sills, two bolster members spaced apart from each other, each of said members consisting of pairs of flanged diaphragms
10 connected to the center sills and side sills, a continuous tension plate extending over the center sills and connected to said diaphragms, and a continuous compression plate extending underneath the center sills and connected to said diaphragms, the outer ends of said compression and ten-
15 sion plates being connected to the side sills, and a center

bearing casting secured to the center sills midway said bolster members; substantially as described.

8. An underframe comprising center sills, side sills and two parallel bolster members spaced apart and connected to the center sills and side sills, said center sills being
20 spliced intermediate the bolster members; substantially as described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 30th day of November 1906.

ALLEN E. OSTRANDER.

Witnesses:

EDW. D. HILLMAN,
ROBT. G. JEFFREY.