

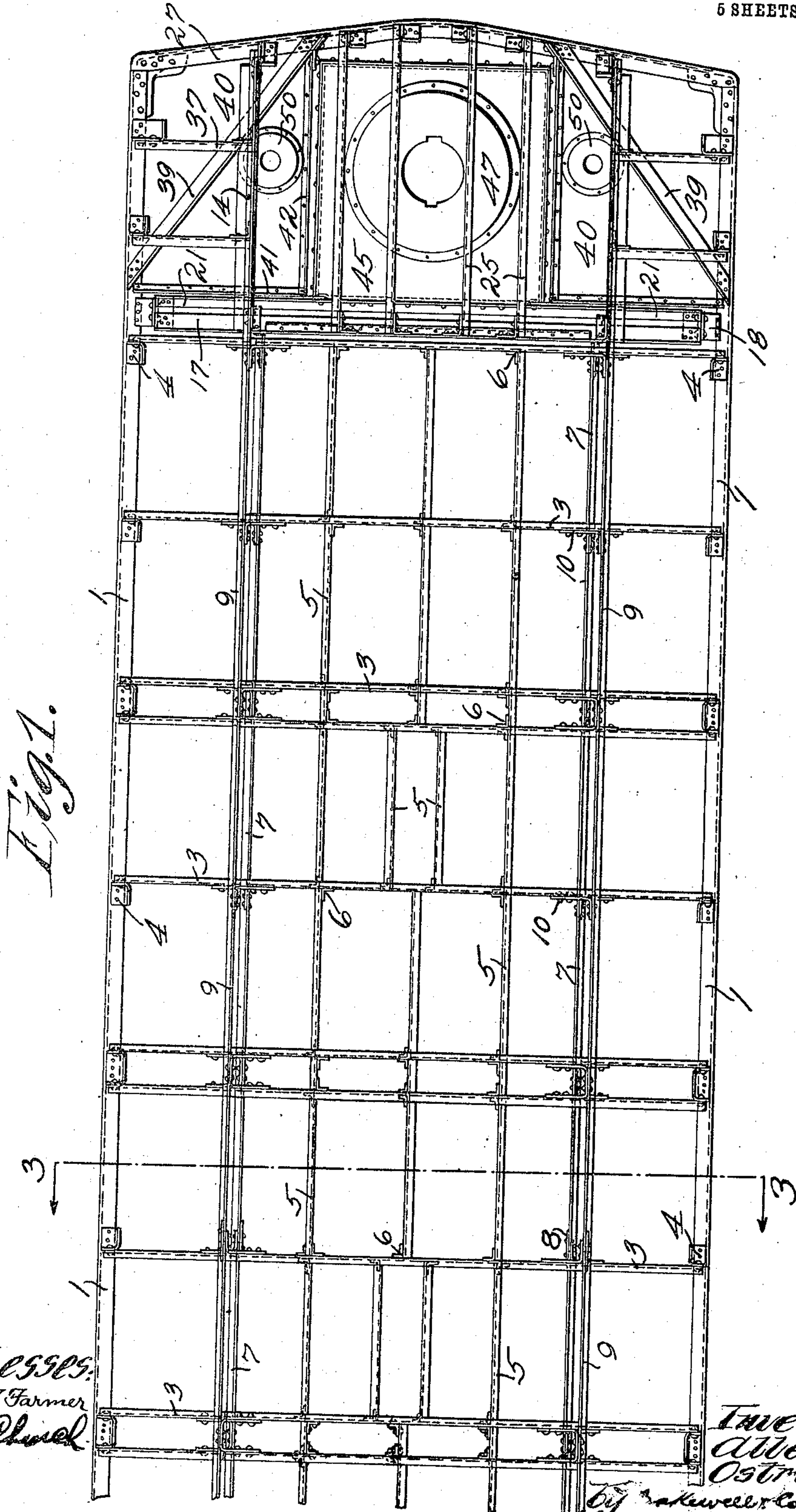
No. 847,500.

PATENTED MAR. 19, 1907.

A. E. OSTRANDER.
ROOF CONSTRUCTION FOR PASSENGER CARS.

APPLICATION FILED JUNE 2, 1906.

5 SHEETS—SHEET 1.



Witnesses:
Edgar T. Farmer
Wm. L. Chubb

Inventor:
Allen E. Ostrander
By *Wm. L. Chubb*

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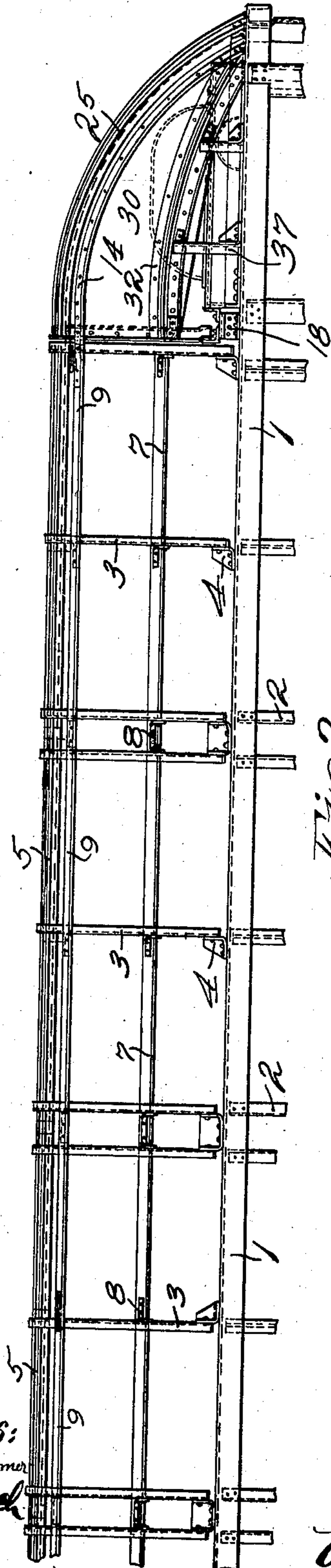
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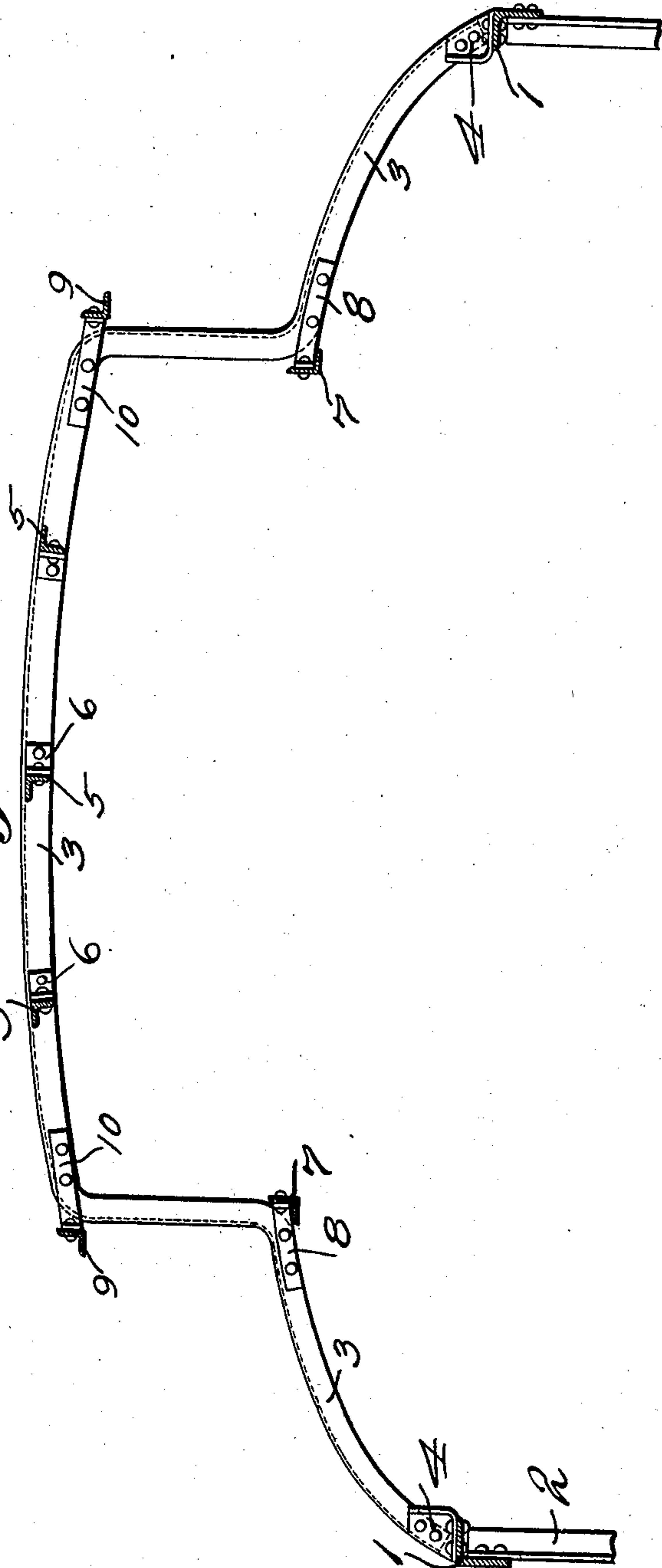
5 SHEETS—SHEET 2.

Fig. 2.



Witnesses:
Edgar T. Farmer
Mills & Church

Fig. 3.



Inventor:
Allen E. Ostrander.
By Rakevill & Cornwall Attys.

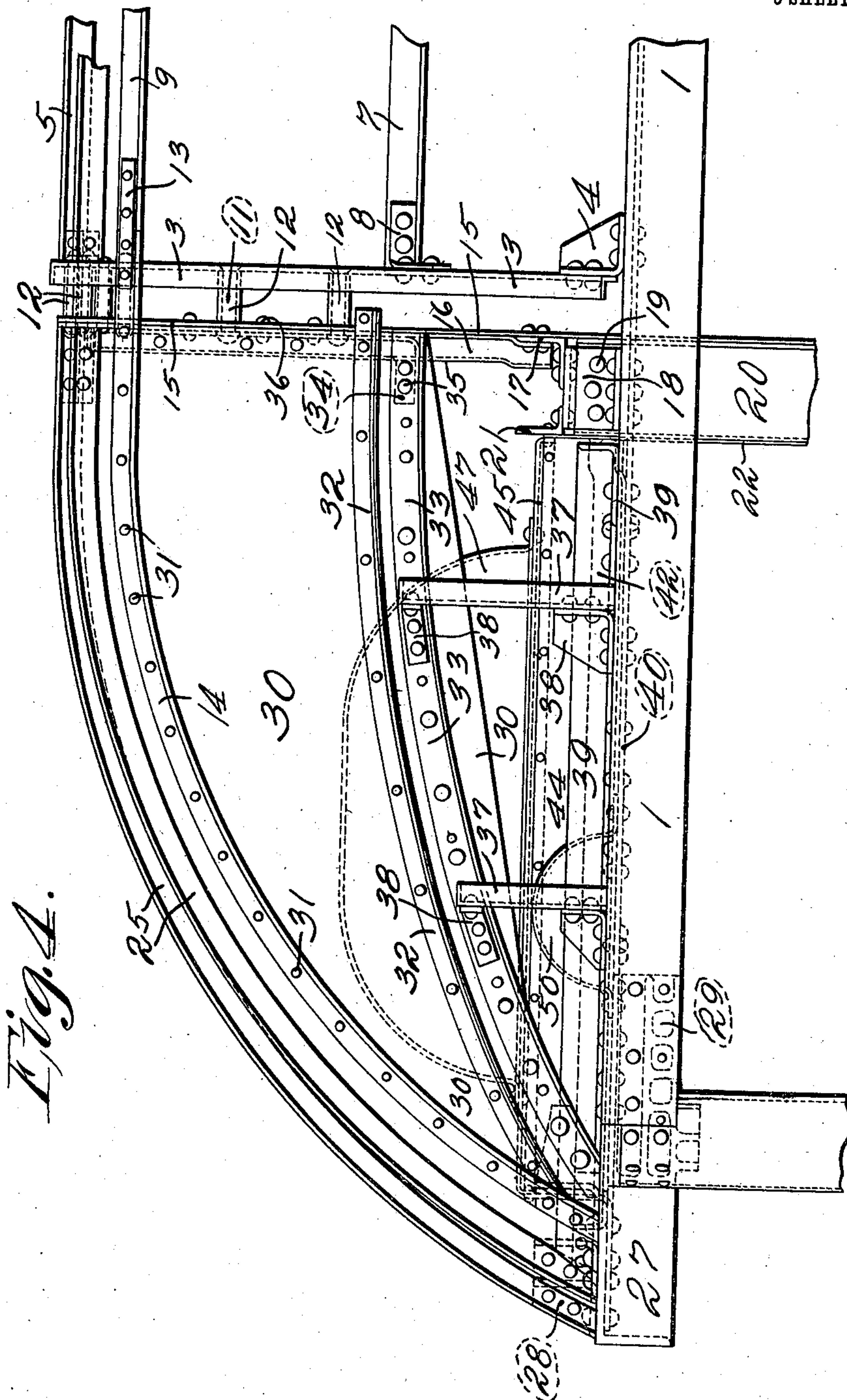
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5 SHEETS—SHEET 3.



Witnesses:
J. H. Cooke.
Wells Church

Inventor:
Allen E. Ostrander.
by Bakewell Cornwall
Attys.

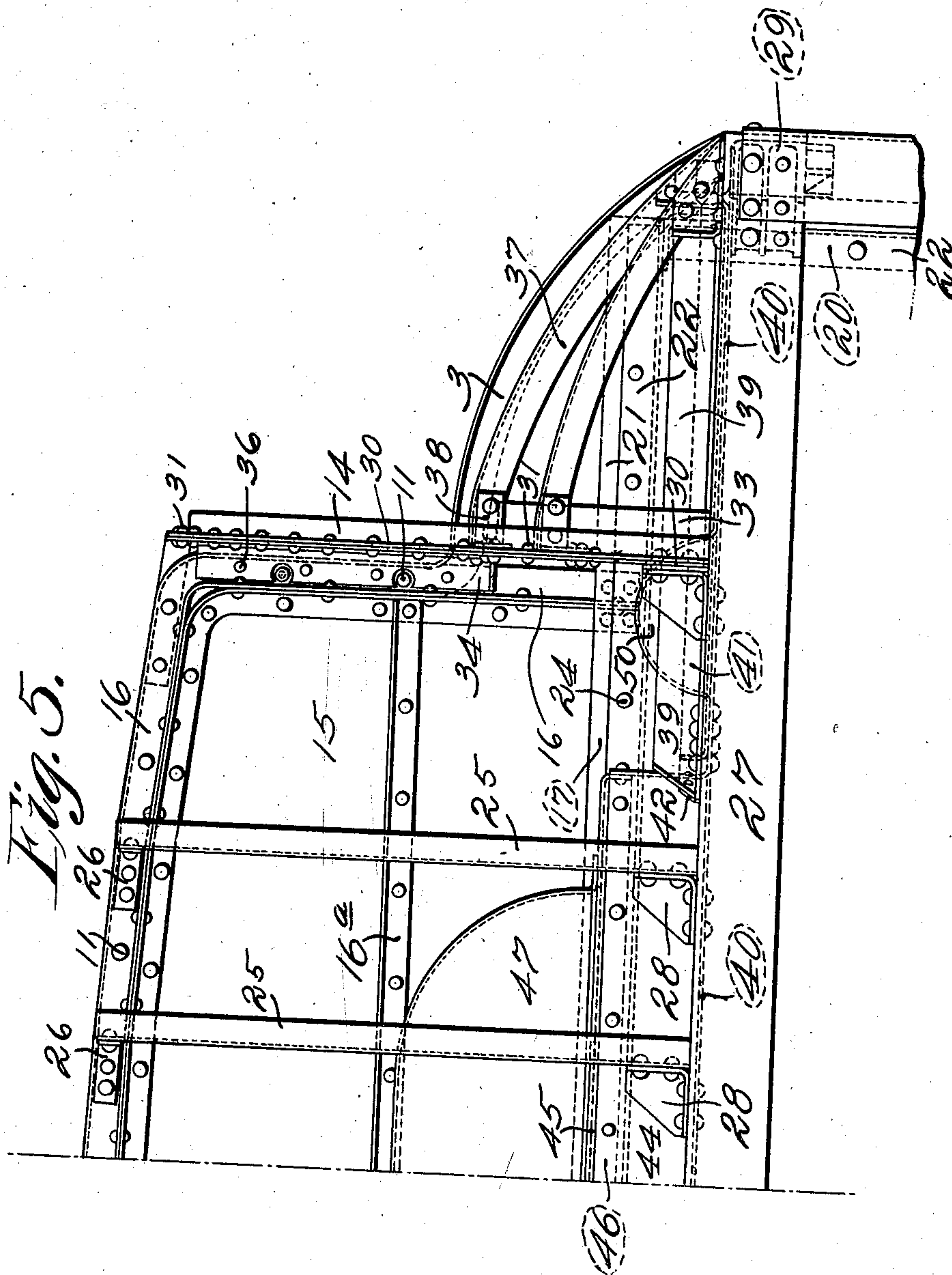
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5 SHEETS—SHEET 4.



Witnesses:
Dred Hume
Wells L. Church

Inventor:
Allen E. Ostrander.
by Bakerwell Cornwall
Attys.

No. 847,500.

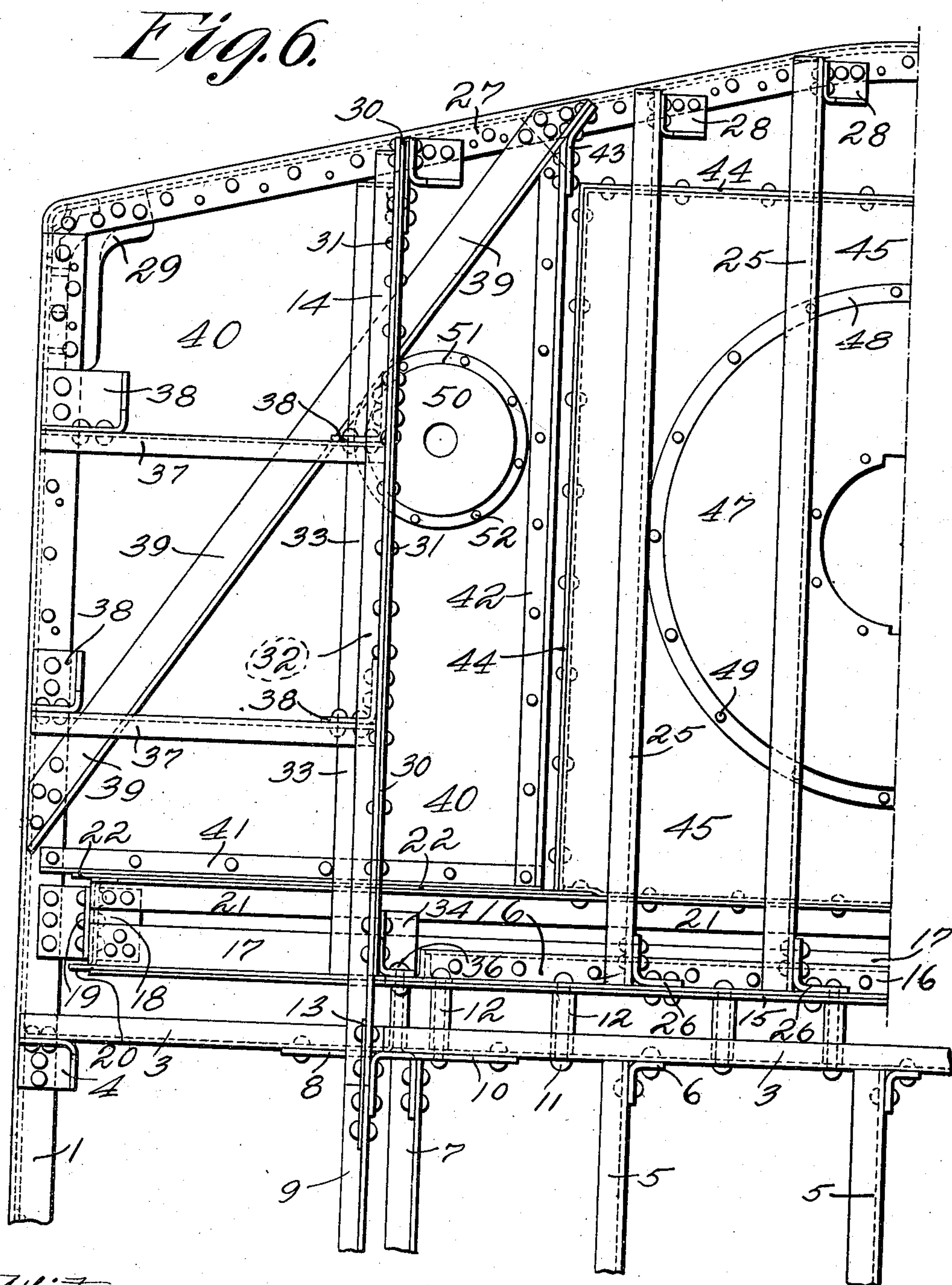
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5 SHEETS—SHEET 5.



Witnesses:

Paul Kecke
Hells L. Church.

Inventor:

Allen E. Ostrander.
by Drakewell Cornwall
Attys.

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.

ROOF CONSTRUCTION FOR PASSENGER-CARS.

No. 847,500.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed June 2, 1906. Serial No. 319,912.

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 Roof Construction for Passenger-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, in which—

Figure 1 is a plan view of the framing of a car-roof constructed in accordance with my invention. Fig. 2 is a side elevation of one-half the roof-framing shown in Fig. 1. Fig. 3 is a cross-sectional view of the roof-framing, taken on line 3 3 of Fig. 1. Fig. 4 is an enlarged side elevation showing the construction of the hood. Fig. 5 is an end elevation of one-half of the hood, and Fig. 6 is an enlarged top plan view of one-half of the hood.

This invention relates to passenger-cars, and particularly to the roof construction of such cars.

The object of my invention is to provide a steel-frame car-roof which will be light and strong and which is provided with an end hood that is constructed as an independent section of the car-roof and can be removed from the roof proper without disturbing same, thereby enabling the hood, which is the part that is most often damaged, to be repaired quickly and at a small cost.

Referring to the drawings, which represent the preferred form of my invention, 1 designates the continuous side plate or upper sill, consisting of an angle which is connected to the upper ends of the vertical side posts 2, to which the side plates of the car are fastened. The continuous roof-car lines 3, also formed from angles, are connected to the horizontal legs of the side plates by means of brackets 4. The roof-purlins 5 are made up of short angles interposed between the carlines and connected thereto by brackets 6. The lower-deck sills 7 consist of continuous angles which are connected to the carlines by brackets 8, as shown in Fig. 3, and the eaves-angles 9 are also formed from continuous angles which are connected to the carlines by brackets 10. The hood, which ex-

tends over the platform or vestibule, is constructed as an independent section of the car-roof, so that it can be removed without disturbing the roof proper of the car, this being a very desirable feature of my invention, as the hoods are frequently damaged in end collisions. The hood is made up of a number of plates and angles connected together to form an independent section, and this hood is connected to the car-roof proper and to the framing of the car by rivets, the inner end of the hood being connected to the end carline of the roof proper by bolts or rivets 11, extending through spacing-thimbles 12, as shown in Fig. 4, the eaves-angle 9 of the roof being connected by a strap or brace 13 to an angle 14, which forms a continuation of the eaves-angle. In the enlarged views, Figs. 4 and 5, I have shown only one half of the hood and will limit the description to this half, as the other half of the hood is of the same construction.

A plate 15, which forms the end panel of the hood, is connected to a carline 16, composed of two angles which are placed back to back to form a T, the lower ends of said T-shaped carline and also the lower edge of said plate 15 being secured to a transversely-extending angle 17. A transversely-extending angle 16^a, which is connected to the carline 16, stiffens the plate 15, which is connected thereto. This angle 17 is connected at its opposite ends to the side-plate angles 1 by Z-shaped connecting devices 18, each consisting of two angle-brackets having their vertical legs connected together by rivets 19, as shown in Fig. 4, the Z-shaped bars 20, which form the corner-posts of the car, also being connected to the devices 18 by the rivets 19.

Adjacent to the angle 17 is another transversely-extending angle 21, which is riveted at its opposite ends to said Z-shaped connecting devices 18, and the plates 22, which form the end wall of the car, are connected to this angle 21 by rivets 24, as shown in Fig. 5. The hood-purlins 25 are connected to this T-shaped carline 16 by means of brackets 26 and to the end bow of the hood by means of brackets 28, said end bow consisting of an angle which forms a continuation of the side-plate angles 1, to which it is con-

connected by corner-castings 29, as shown in Fig. 6. The angle 14, which forms a continuation of the eaves-angle of the roof, is also connected at its lower end to the end bow 27 by means of a bracket, and a vertically-disposed stiffening-plate 30 is connected to the angle 14 by rivets 31, as shown in Fig. 4, said plate being provided adjacent its lower edge with a stiffening-angle 32 and with an angle 33, which is connected at its front end to the end bow 27 and at its rear end to the T-shaped carline of the hood by means of a connecting device 34, this connecting device consisting of an angle which is bent into the form of an L and secured to the angle 33 by rivets 35 and to the T-shaped carline 16 by rivets 36, as shown in Figs. 4 and 5.

The lower-deck carlines 37 of the hood consist of angles which are connected by brackets 38 to the angle 33 and to the side-plate angle 1; and for insuring a very rigid construction a diagonal angle-brace 39 is provided, which extends from the side-plate angle 1 to the end bow 27, to which it is secured by rivets, as shown in Fig. 6.

The ceiling of the vestibule is formed by a plate 40, which is connected to the underneath faces of the horizontal legs of the side-plate angle 1 and the end bow 27 and also to the angles 41 and 42. (Shown in Fig. 6.) The angle 41 is riveted to the end wall-plate 22 of the car and is connected at its outer end to the side-plate angle 1. The angle 42 is connected to the inner end of the angle 41 and extends at right angles thereto to the end bow 27, said angle being connected to the diagonal brace 39 by means of a bracket 43. At the center of the vestibule the plate 40 is provided with a substantially rectangular-shaped opening, said plate having an upwardly-projecting flange 44 surrounding said opening. A plate 45 covers said opening and is provided with a flange 46, which is riveted to the upwardly-projecting flange of the plate 40, and the center of plate 45 is provided with a circular opening which is covered by a dome 47, in which the lights of the vestibule are located, said dome being provided with a flange 48, which is connected to the plate 45 by rivets 49. Small domes 50, in which the lights over the steps are located, are arranged over openings in the plate 40 on each side of the central dome, and these small domes are also provided with flanges 51, which are connected to said plate 40 by rivets 52.

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

1. In a hood for a passenger-car roof, a carline conforming in shape to the end carline of the roof proper, an end bow, angles extending from said carline to said end bow and connected thereto, vertically-disposed strengthening-plates connected to said angles, and

laterally-extending lower-deck carlines secured to the lower edges of said plates; substantially as described.

2. In a hood for a passenger-car roof, a carline and an end bow, an angle extending from said carline to said end bow and connected thereto, a vertically-disposed strengthening-plate connected to said angle, and an angle connected to said plate and having deck-carlines fastened thereto; substantially as described.

3. In a hood for a passenger-car roof, an end bow, side plates connected to said end bow and diagonally-extending braces connected to the side plates and to the end bow; substantially as described.

4. In a passenger-car roof having upper and lower decks and side decks, a transversely-extending angle connected to the side plates of the car, a T-shaped carline forming part of the hood-framing and being connected at its ends to said angle, purlins connected to said carline and to the end bow of the hood, and vertically-disposed strengthening-plates forming part of the hood-framing and being connected to the vertically-disposed parts of the T-shaped carline; substantially as described.

5. In a roof construction for passenger-cars, an end hood consisting of a T-shaped carline, a transversely-extending angle to which the ends of said carline are connected, Z-shaped connecting devices for fastening said transversely-extending angle to the side plates of the car, angles extending from the carline to the end bow of the hood and having strengthening-plates connected thereto which form the side decks of the hood, angles fastened to the lower edges of said plates, L-shaped connecting devices for securing said last-named angles to the carline, and brackets for securing the opposite ends of said angles to the end bow of the hood; substantially as described.

6. In a roof construction for passenger-cars, an end hood consisting of a carline and purlins connected to said carline and to the end bow of the hood, a carline forming part of the framing of the roof proper and arranged adjacent to the carline of the hood, spacing devices arranged between the carlines, and fastening devices passing through the spacing devices and through the carlines to connect them together; substantially as described.

7. In a passenger-car roof, side plates, an end bow connected to said side plates, supporting members secured to the end bow and side plates, a ceiling-plate fastened to the side plates, end bow and supporting members and provided in its center with a flanged opening, a dome-carrying plate covering said opening and provided with a flange which is connected to the flange of the plate first referred to and a dome fastened to said dome-carrying plate; substantially as described.

8. In a passenger-car roof, carlines and purlins which are connected together to form the framing for the roof of the car-body, continuous eaves-angles connected to said carlines, and hoods formed separately from the roof-framing of the car-body and consisting of carlines, purlins and strengthening-braces fastened together, angles comprising part of the hood construction and forming continuations of the eaves-angles of the roof, strengthening-plates connected to said angles, means for connecting said angles to the eaves-angles, and independent means for connecting the end hoods to the framing of the roof proper; substantially as described.

9. In a passenger-car-roof construction, a side plate and an end bow formed from angles, a corner-casting securing said mem-

bers together, an angle arranged parallel to the side-plate angle and connected at one end to the end-bow angle, an angle arranged approximately parallel to the end-bow angle and connected at one end to the side-plate angle so that said four members form a rectangle, and a diagonal brace extending across said rectangle and connected to the end bow and to the side plate; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 26th day of May, 1906.

ALLEN E. OSTRANDER.

Witnesses:

DAVID LEVY,
G. V. WASHINGTON.