

No. 732,847.

PATENTED JULY 7, 1903.

G. S. GRANT.
FOLDING CAR BODY.
APPLICATION FILED SEPT. 19, 1902.

NO MODEL.

3 SHEETS—SHEET 1.

Fig. 1.

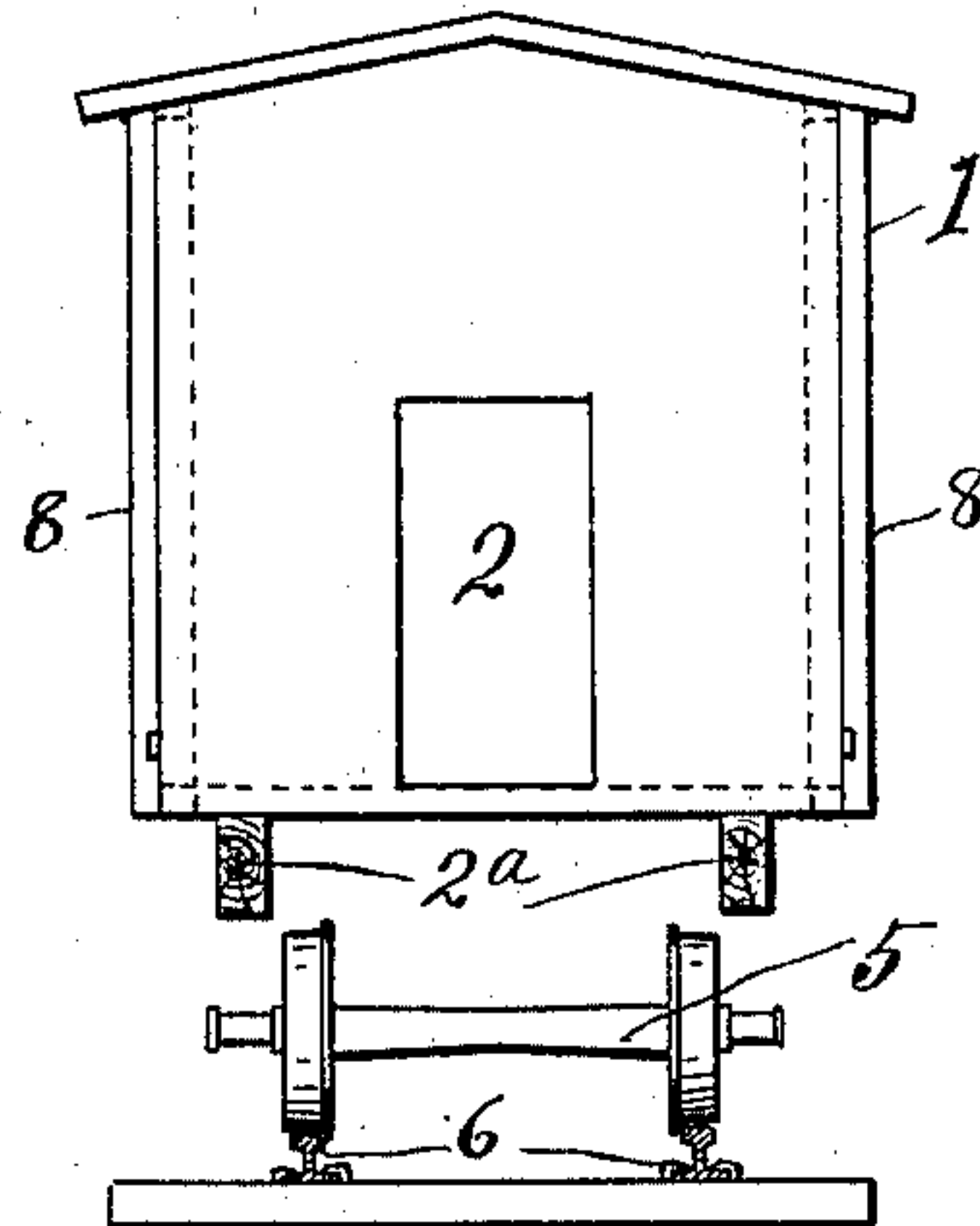


Fig. 2.

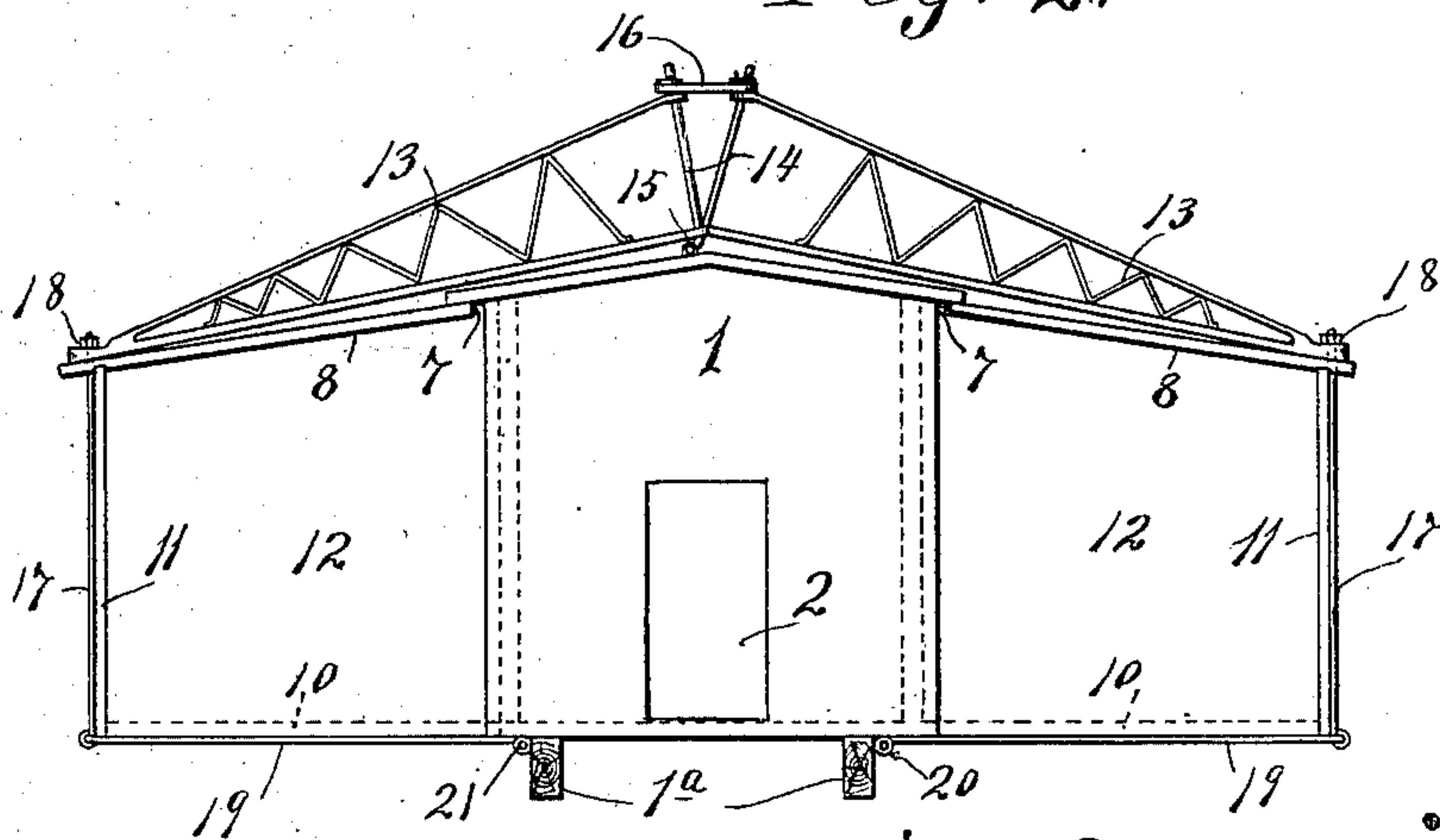
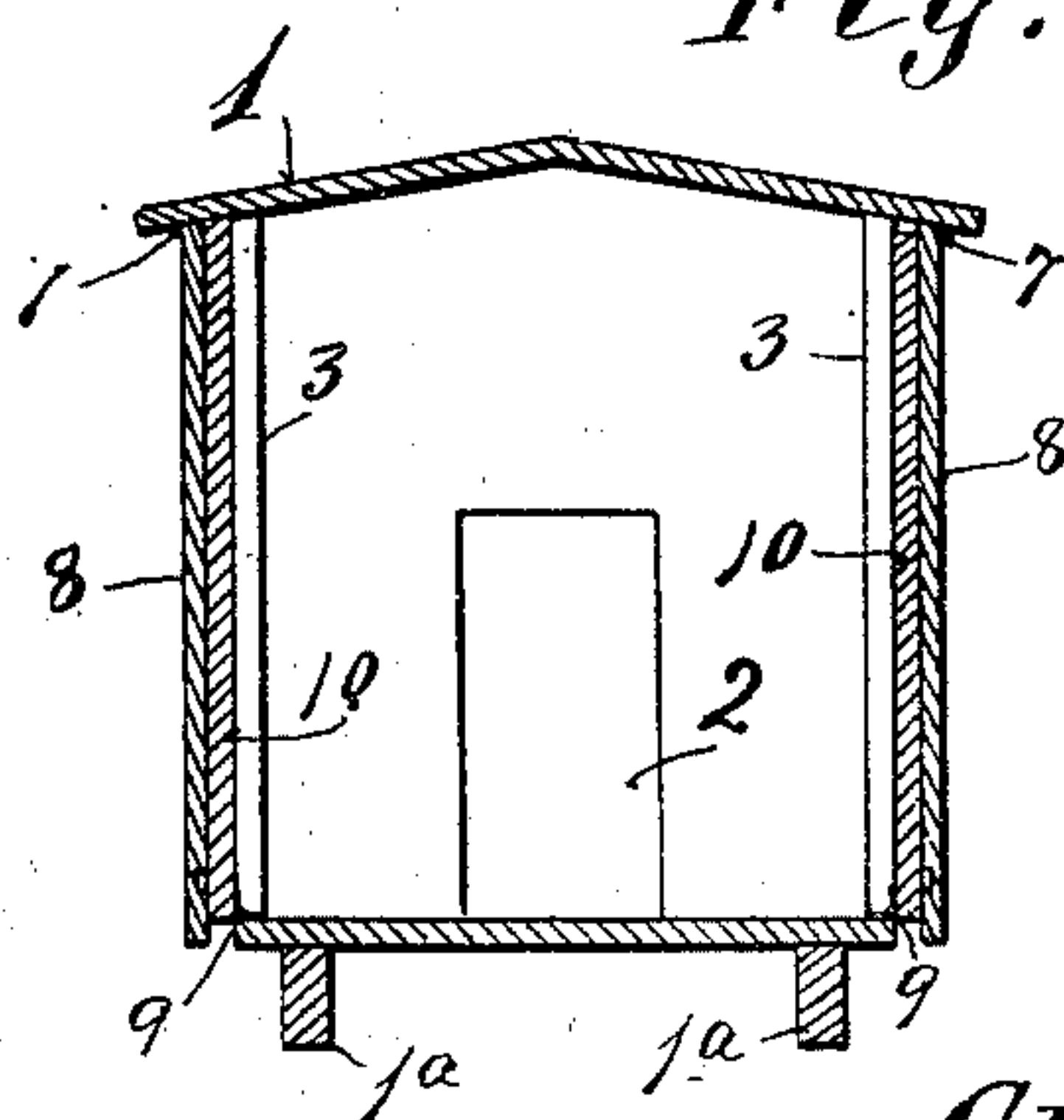


Fig. 3.



Witnesses.

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3 SHEETS—SHEET 2.

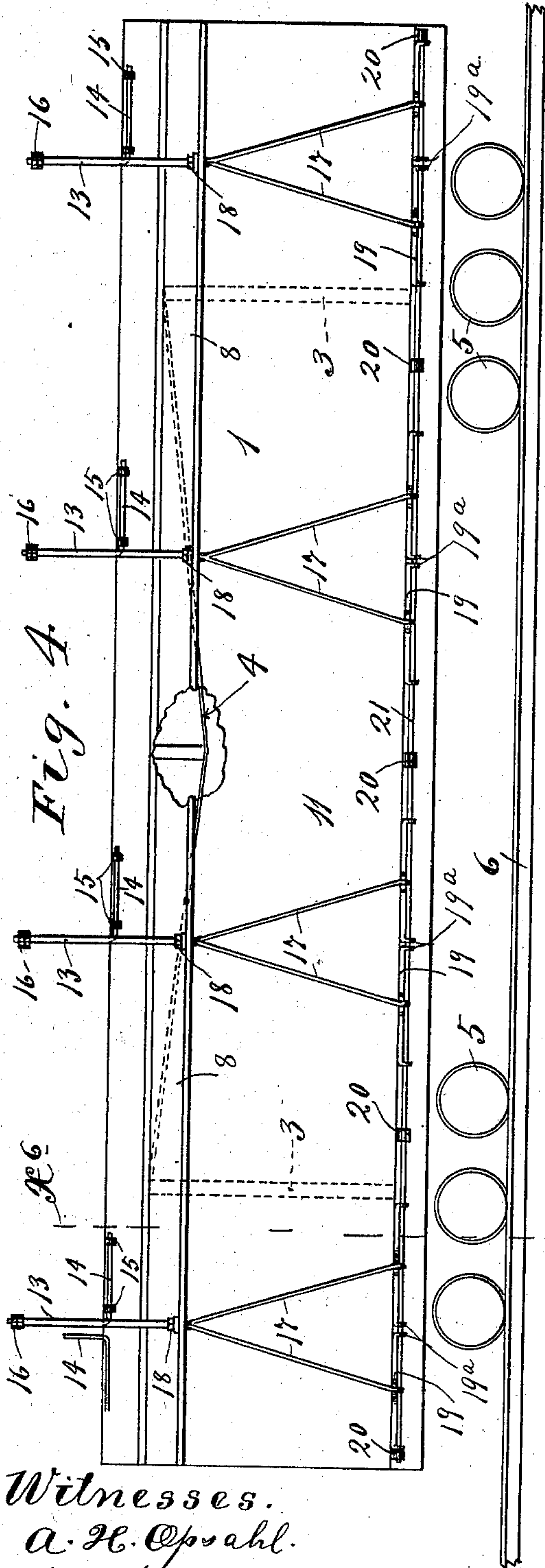
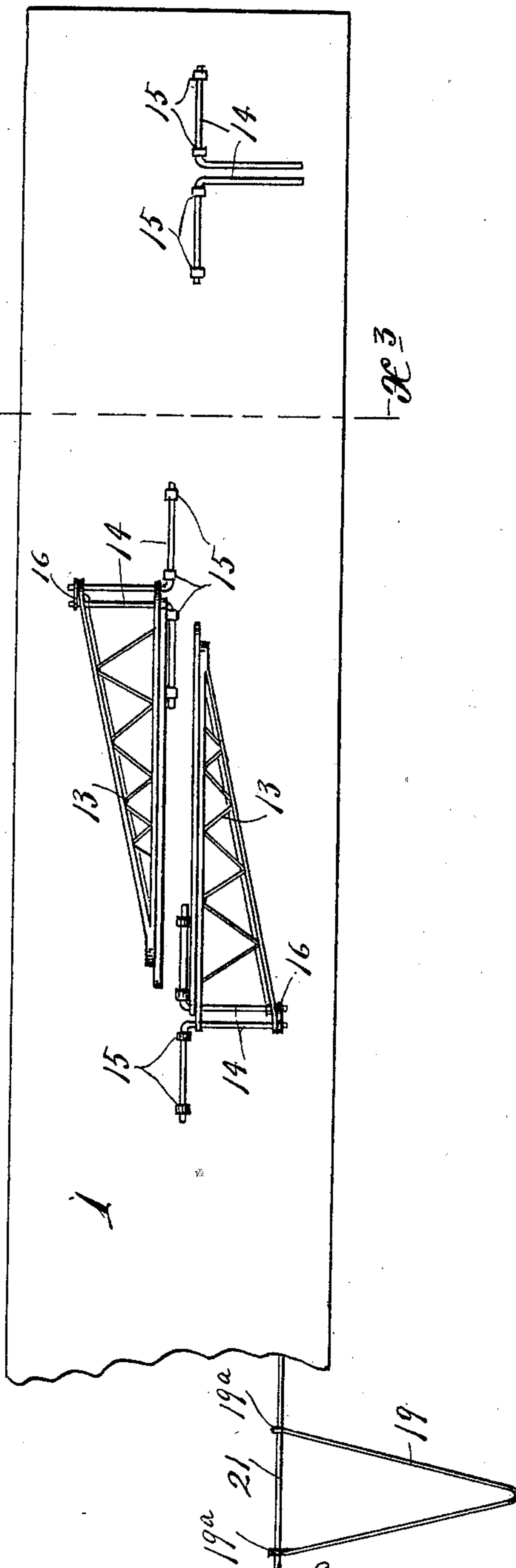


Fig. 4.

Fig. 5.



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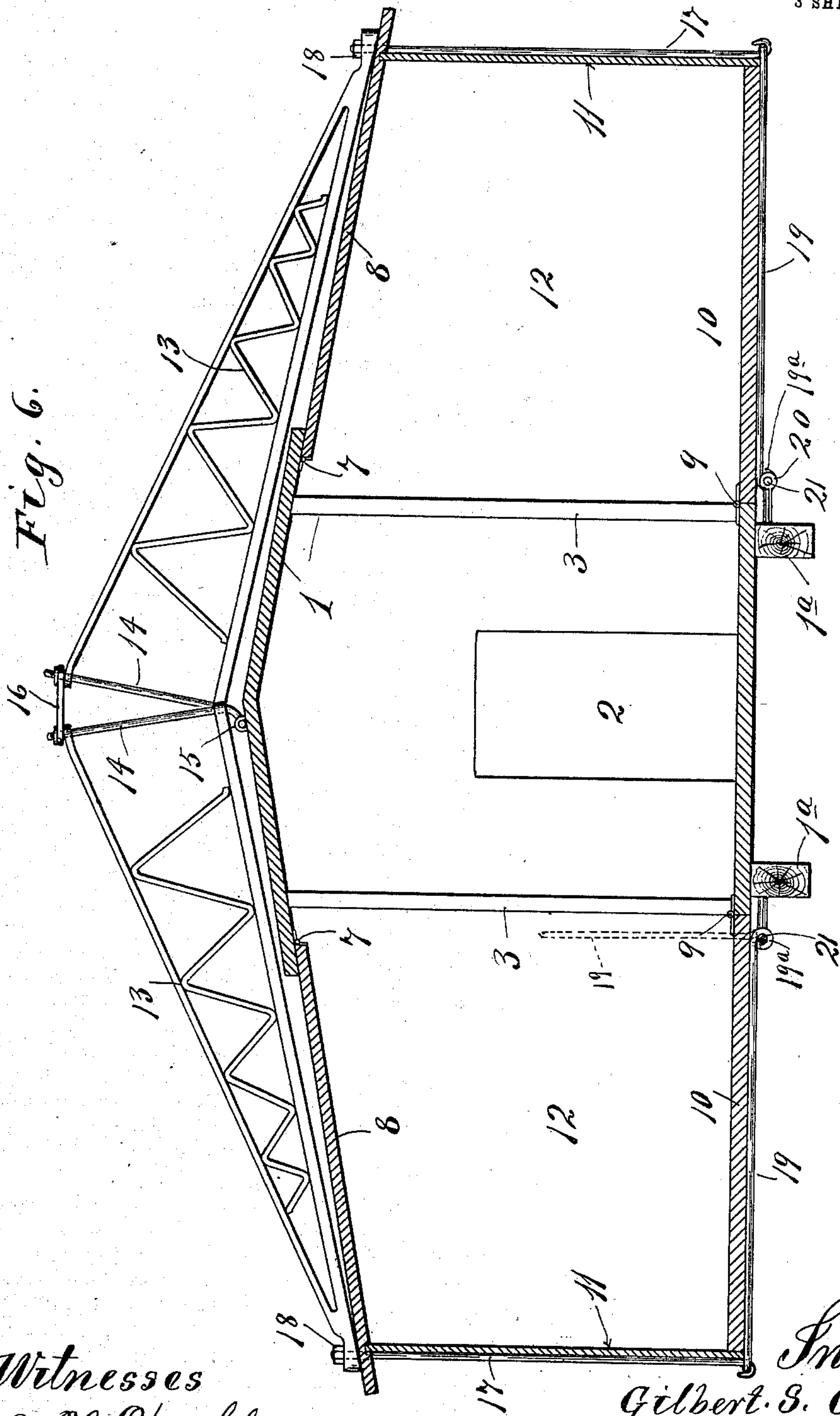
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3 SHEETS—SHEET 3.

Fig. 6.



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UNITED STATES PATENT OFFICE.

GILBERT S. GRANT, OF CENTURIA, WISCONSIN.

FOLDING CAR-BODY.

SPECIFICATION forming part of Letters Patent No. 732,847, dated July 7, 1903.

Application filed September 19, 1902. Serial No. 124,061. (No model.)

To all whom it may concern:

Be it known that I, GILBERT S. GRANT, a citizen of the United States, residing at Centuria, in the county of Polk and State of Wisconsin, have invented certain new and useful Improvements in Folding Car-Bodies; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide a laterally expansible and contractible car-body adapted when spread out or expanded to serve as a theater or entertainment hall and when folded or contracted to be moved anywhere on a railway where ordinary cars may be moved.

To the above ends the invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 is a view in end elevation, showing a car embodying the several features of my invention and the body of the car being folded or contracted and the car-trucks being shown only in part. Fig. 2 is an end elevation of the body of the car, showing the same expanded laterally. Fig. 3 is a transverse vertical section taken on the line $x^3 x^3$ of Fig. 5. Fig. 4 is a side elevation of the car with the body thereof expanded, some parts being broken away and others removed. Fig. 5 is a plan view of the car with the body thereof contracted or folded, as shown in Figs. 1 and 3, some parts being broken away and others being removed; and Fig. 6 is an enlarged transverse section taken through the body of the car on the line $x^6 x^6$ of Fig. 4.

The numeral 1 indicates the main body portion of the car, which portion corresponds very much to the body of an ordinary box-car, except that it is left open at its sides. In the ends of the body 1 are doors 2, and at the open sides thereof are roof-supporting columns or posts 3, located quite near to the ends of the car-body. The intermediate portion of the roof—to wit, that portion between the longitudinally-spaced posts 3—is prefer-

ably supported by trusses 4, which leave the intermediate portion of the car free from posts or columns, which would obstruct the view.

The numeral 5 indicates the car-trucks, which in the drawings are shown only in part, but may be of any standard or suitable construction.

The numeral 6 indicates a railway-track.

To each side of the roof of the car is hinged at 7 a folding roof extension or supplemental section 8, which extends from end to end of the car. Likewise to each side of the floor of the car-body 1 is hinged at 9 a folding floor extension or supplemental section 10, which also extends from end to end of the car. The folding sections 8 and 10 are of such length that they may be folded, as shown in Figs. 1 and 3, and thereby completely close the sides of the car and provide a car-body of normal or standard dimensions. By reference to said Figs. 1 and 3 it will be noted that the floor-sections 10 must be folded first upward against the posts 3 and that the folding roof-sections 8 being then turned downward over said sections 10 will even under the action of gravity alone hold the said sections folded. However, hooks or other fastening devices may of course be provided for holding the folding sections in their folded positions. Nevertheless, the above-noted feature is important, since it greatly reduces the possibility of accidents.

When the car-body is expanded laterally by turning outward the sections 8 and 10, as shown in Figs. 2, 4, and 6, supplemental car sides 11 are placed between the extended edges of the cooperating sections 8 and 10, as best shown in Fig. 6. These sections 11 extend from end to end of the car, and they preferably fit in grooves formed in the sections 8, while they overlap the ends of the sections 10. Supplemental end sections 12 fill in the end openings left between the sections 8 and 10 and supplemental sides 11 in the ends of the car-body 1. These supplemental end sections 12, like the sides 11, may fit in grooves in the sections 8 and overlap the sections 10, and they may be detachably but rigidly secured at their lower ends to the ends of the sections 10 by hooks and eyes, by bolts, or any other suitable devices.

The lateral extensions of the car-body are supported from trussed brackets located on the top of the car-body 1 and by hangers which embrace the said extensions, as will now be described.

Located at various intervals along the top of the car-body 1 are folding trussed brackets 13, which when extended, as shown in Figs. 2, 4, and 6, project outward beyond the positioned supplemental sides 11. At their inner ends these brackets or trussed arms 13 are directly pivoted on L-shaped rods 14, the horizontally-bent stems of which are pivoted in bearings 15 on the top of the car-body 1. The said brackets or arms 13 are arranged in pairs, and the upper ends of their pivot-rods 14 are tied together by links 16. At its free end each bracket 13 is perforated, and through this perforation and through a perforation in the outer edge of the corresponding roof-section 8 is passed the screw-threaded upper end of a forked hanger 17. A nut 18 is placed on the screw-threaded upper end of each hanger 17 above the free end of the bracket 13. The depending prongs of the hangers 17 are hooked and engage the crotches of V-shaped floor-supports 19. (Best shown in Figs. 4, 5, and 6.) The floor-supports 19, at the inner ends of their prongs, are provided with hooks 19^a, through which and bearing lugs or eyes 20 on the beams 1^a of the car-body 1 are passed through long coupling-rods 21, which extend nearly or quite from end to end of the car. As is evident, when the body of the car is extended laterally and supported as shown in Figs. 2, 4, and 6 the entire weight on the lateral extensions is taken by the overhead trussed brackets or arms 13 and that the weight on the one side of the car reacts against that on the other.

As preliminary to folding the sides of the car or contracting the body of the same laterally the nuts 18 are removed from the upper ends of the hangers 17, and the said hangers are then removed. This being done, the floor-supports 19 may be readily folded upward between the overlapped extensions 8 and 10. The side pieces 11 and end pieces 12 are of course then removed, and the folding sections 8 and 10 are folded, as already described. The brackets 13 may then be folded in pairs on top of the car, as clearly shown in Fig. 3, and the car may then be moved the same as any other car of a train.

The general purpose of a car of this char-

acter has already been briefly indicated. It will be found extremely serviceable for use as a traveling theater, entertainment hall, or amphitheater. If used to give free shows to large crowds standing around the car, the sides 11 would be removed and spacing posts or stakes could be substituted therefor. For open-air gospel meetings or for advertising shows the car would probably be used as just stated. Of course when the car is contracted or closed up it will be very serviceable for transporting various furniture, such as chairs and other articles, which may be used in connection with a theater, entertainment hall, or for other purposes to which the car may be put.

It will of course be understood that the invention above described is capable of considerable modification within the scope of my invention as herein set forth and claimed.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. A car-body having supplemental roof and floor sections for expanding the same laterally, in combination with brackets supported from the top of the car and provided with connections for suspending the lateral extensions of said car-body, substantially as described.

2. A car-body having hinged roof and floor extensions at its open sides, in combination with supplemental end and side sections, and means for supporting the lateral extensions of said car-body involving overhead truss-brackets mounted on the top of the car-body, hangers depending from the free ends of said brackets, and floor-supports connecting the depending ends of said hangers to the floor of said car-body, substantially as described.

3. The combination with a car-body having laterally-extensible side sections, of means for supporting said lateral extensions comprising truss-brackets mounted on the top of the car-body, and hangers depending from the free end of said brackets and connected to the car-floor, which truss-brackets are adapted to be folded onto the top of the car, when not in use, substantially as described.

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

GILBERT S. GRANT.

Witnesses:

W. M. BRUGGER,
F. J. LYMAN.