

T. DUNBAR & L. J. BERG.

CAR CONSTRUCTION.

APPLICATION FILED MAY 19, 1908.

940,378.

Patented Nov. 16, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

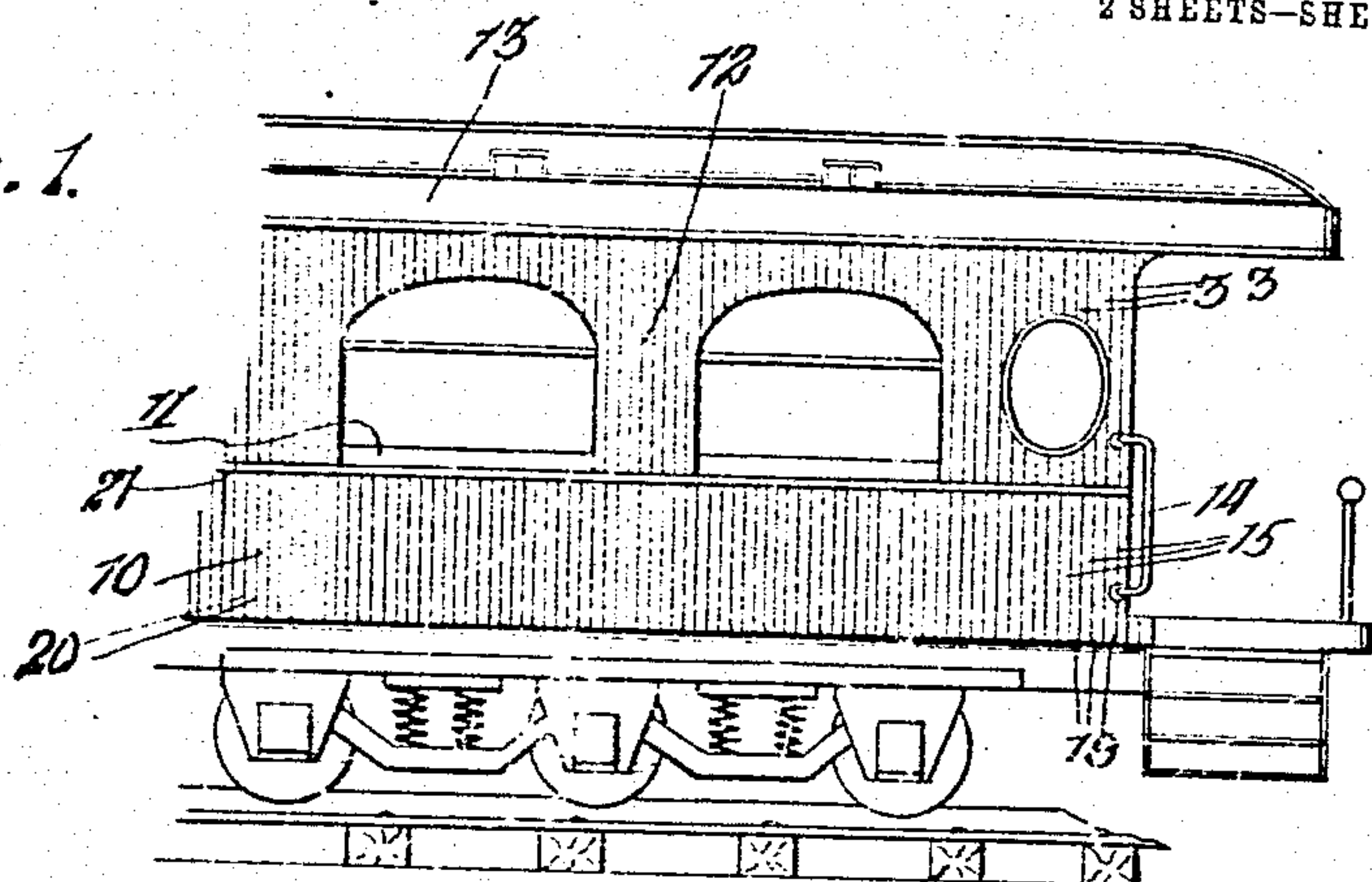


Fig. 2.

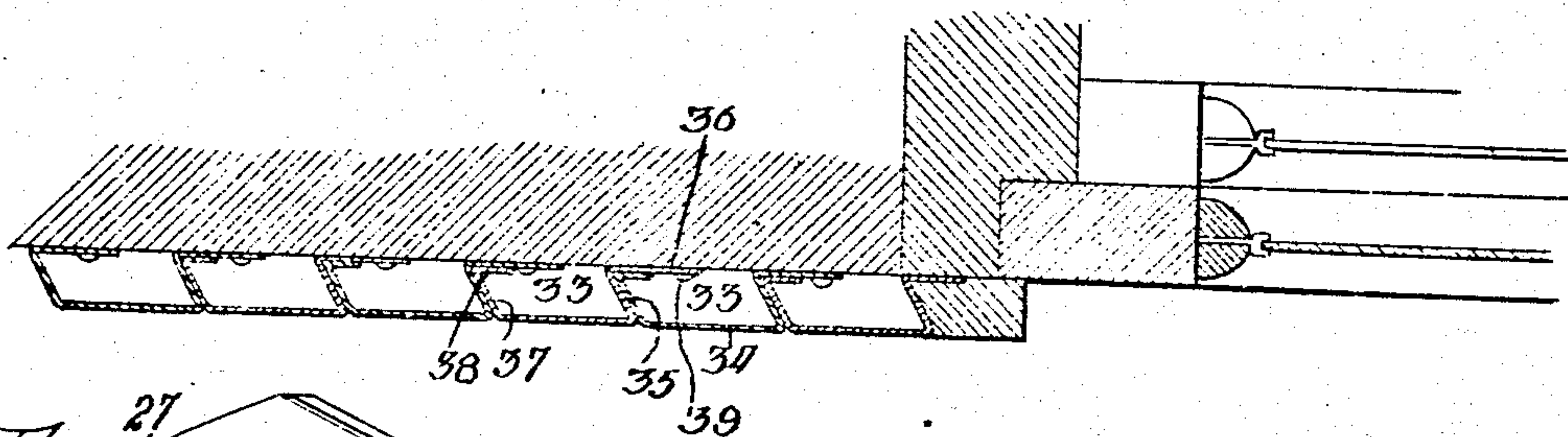


Fig. 3.

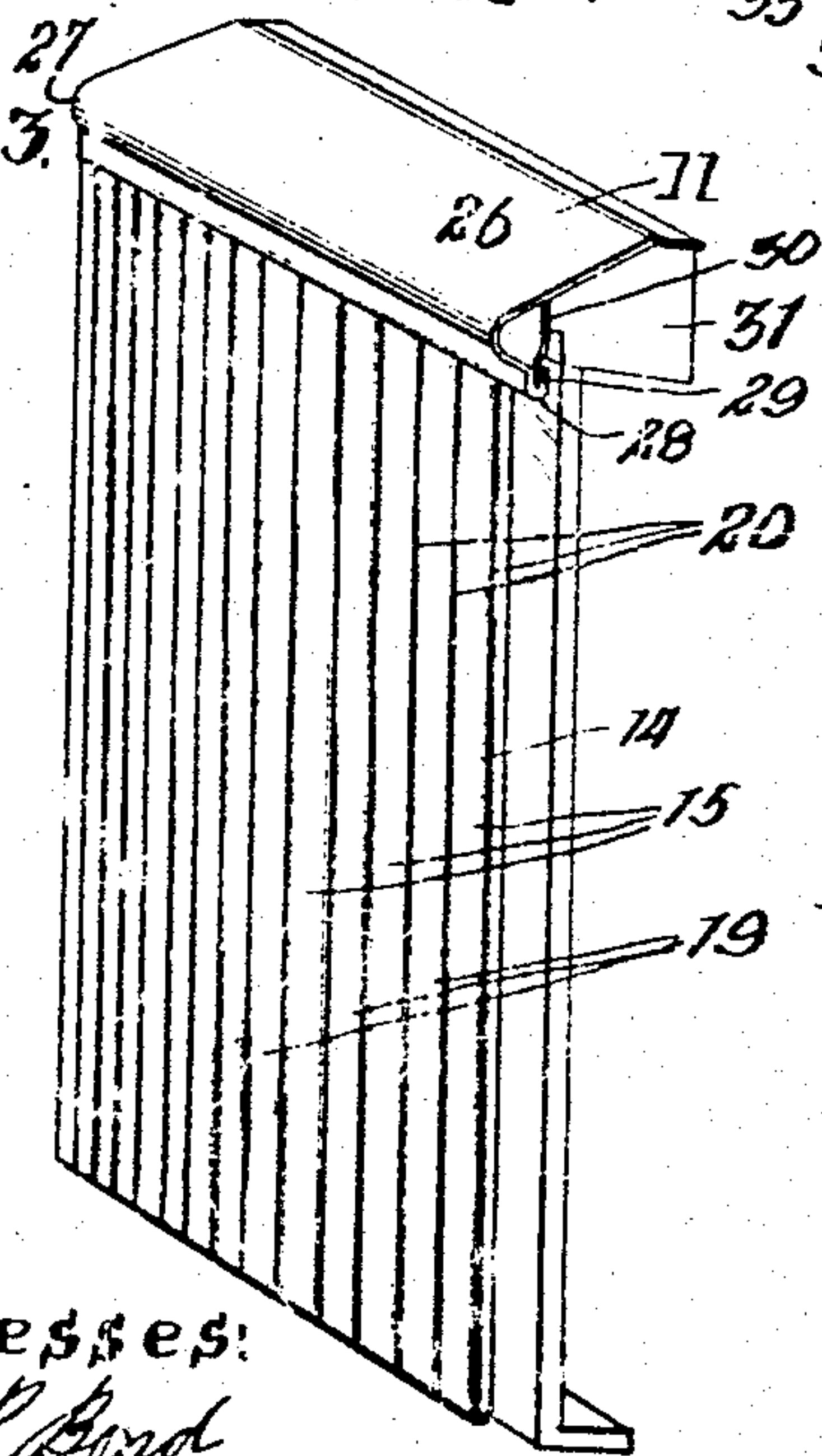


Fig. 4.

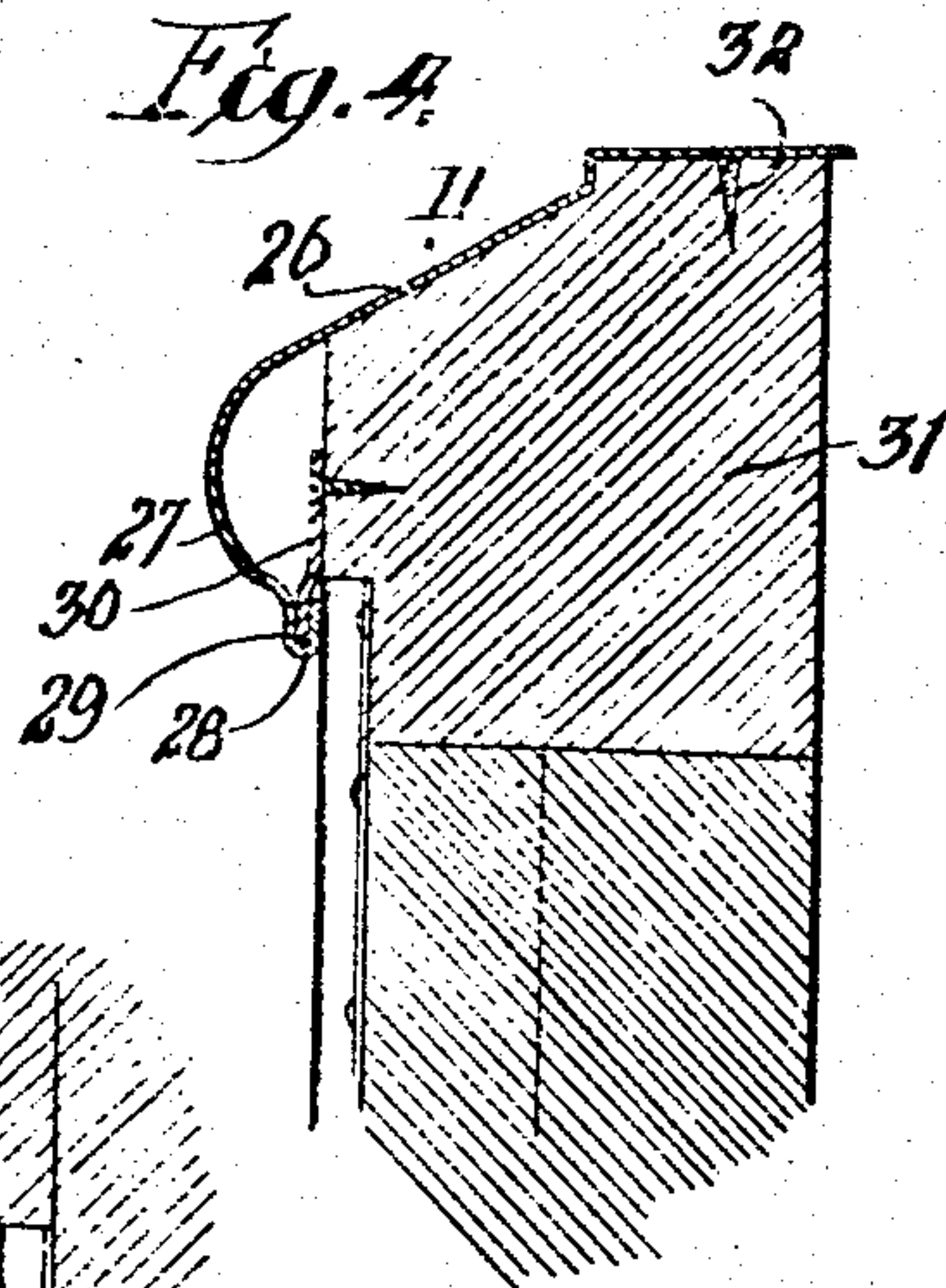
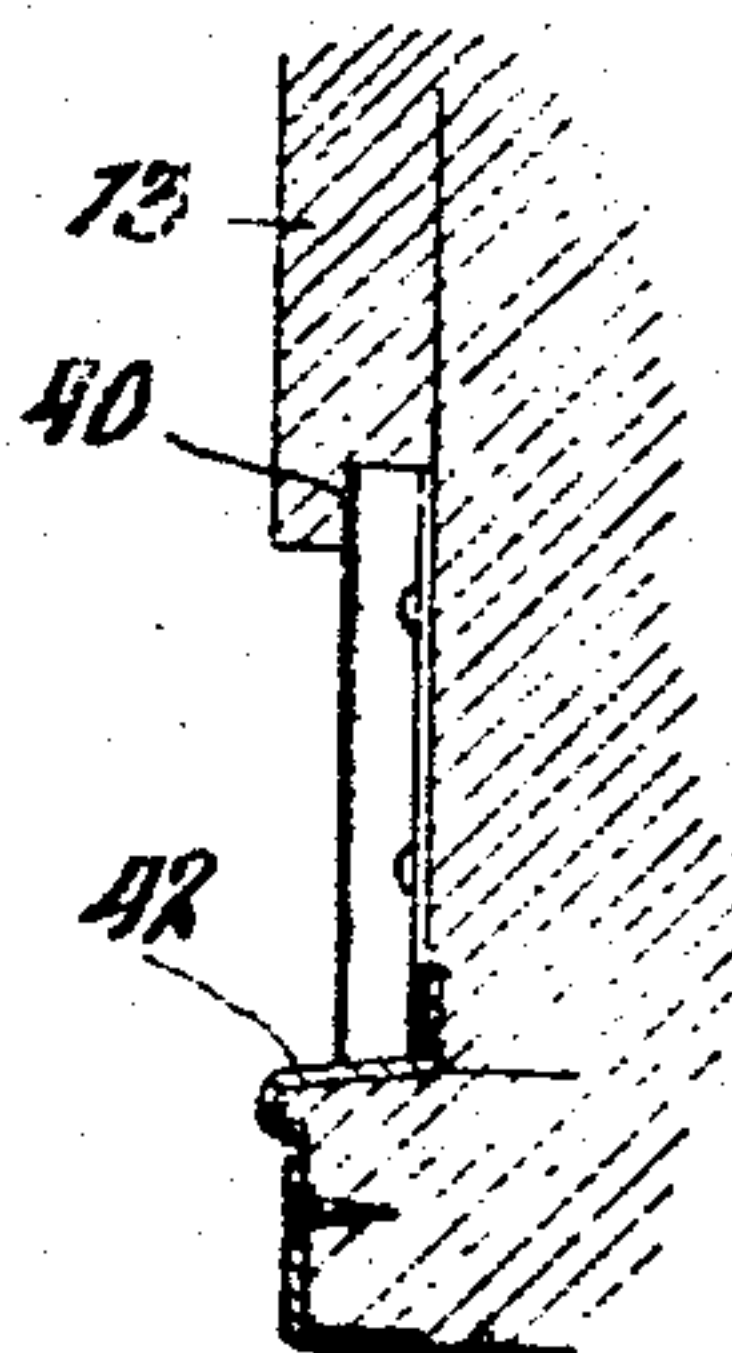


Fig. 5.



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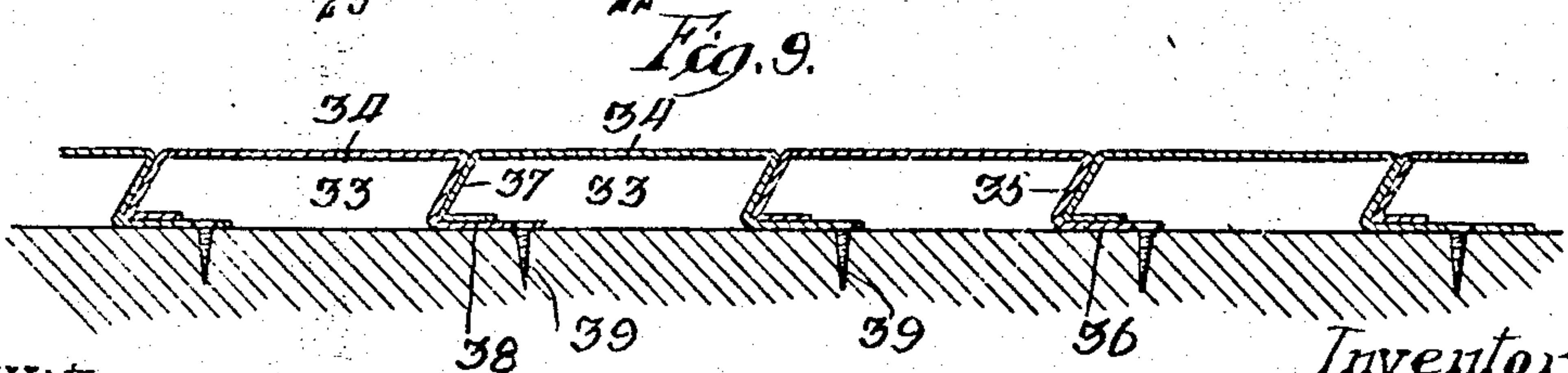
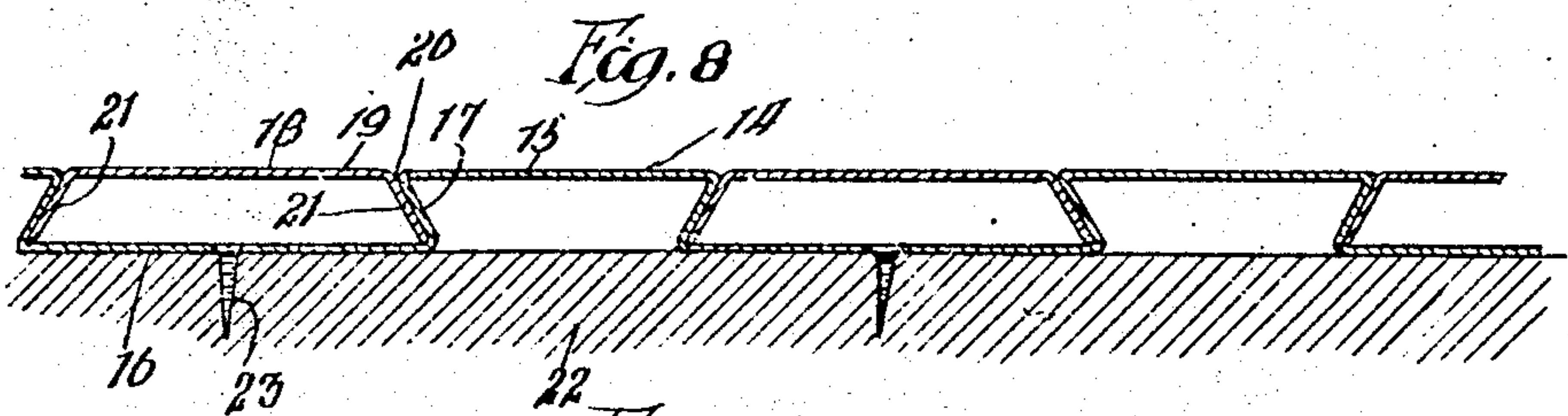
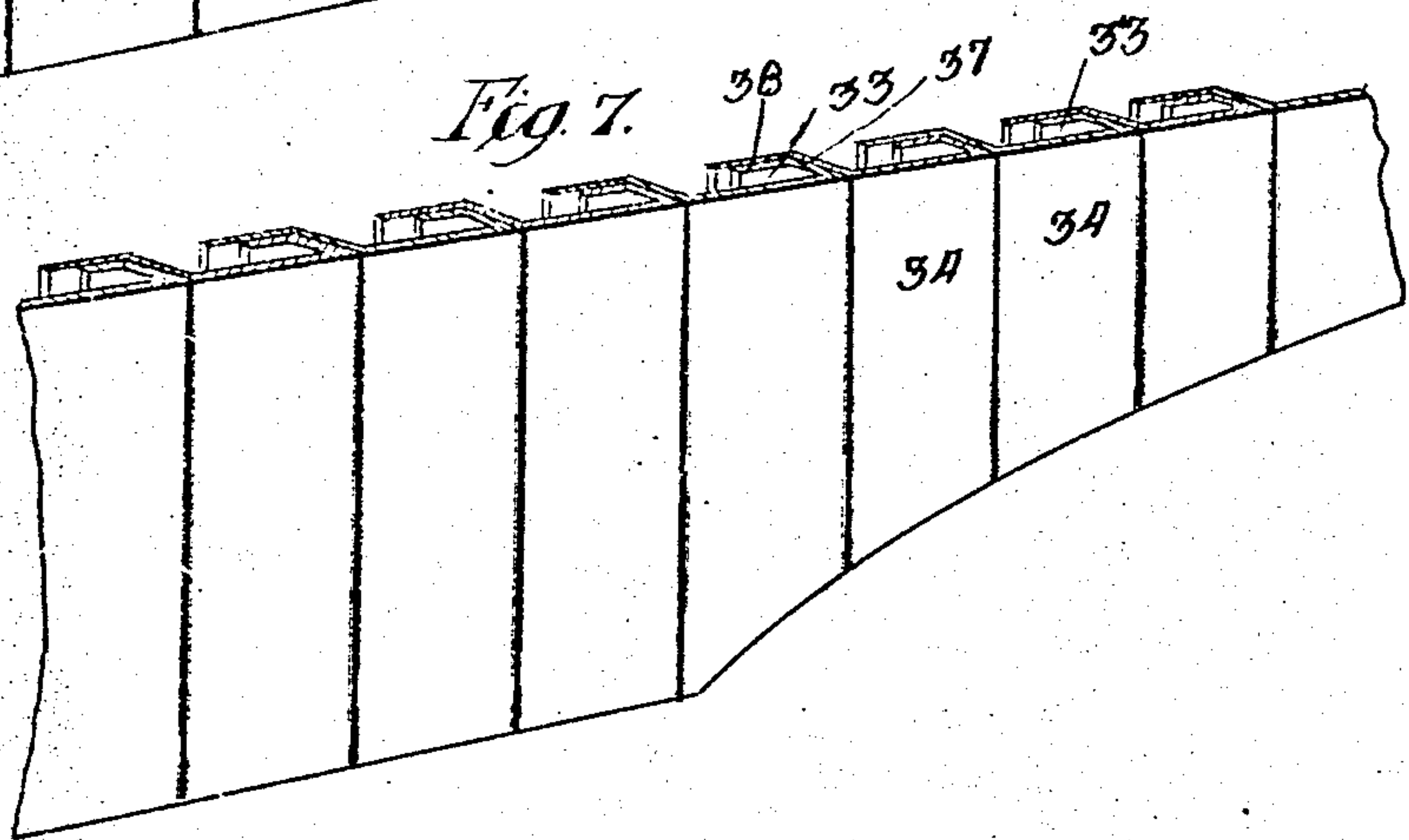
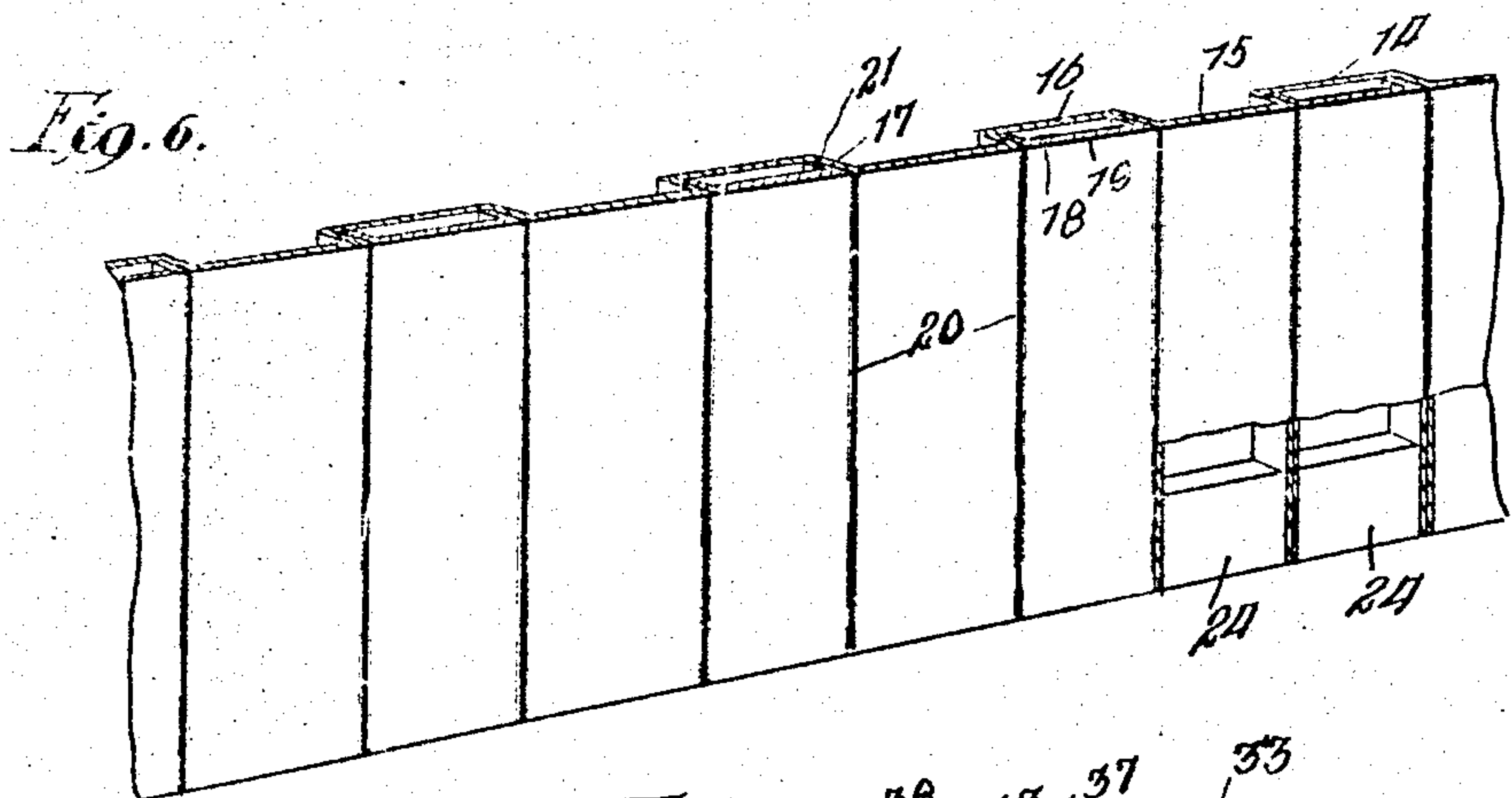
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

THOMAS DUNBAR AND LARS J. BERG, OF CHICAGO, ILLINOIS, ASSIGNORS TO METALLIC SHEATHING COMPANY, A CORPORATION OF ILLINOIS.

## CAR CONSTRUCTION.

940,378.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed May 19, 1908. Serial No. 433,668.

*To all whom it may concern:*

Be it known that we, THOMAS DUNBAR and LARS J. BERG, citizens of the United States, residing at Pullman, Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car Construction, of which the following is a specification.

The present invention relates to the construction of a car wall covered or sheathed with a metallic covering which exactly simulates wooden sheathing in appearance and is highly superior thereto by reason of the added protection afforded to the car.

The invention contemplates the use of two styles of sheathing one of which may be termed the continuous formation and the other the slat formation. The continuous formation is intended to be applied in wide unbroken strips to the lower portion of the car wall below the sash rest; and the slat style of sheathing is intended to be applied above the sash rest to such portions of the car wall as are not well fitted to have the continuous sheathing applied thereto. Both styles of sheathing give exactly the same appearance, and the differences in the formation of the sheathing relate rather to the mode of applying the same to different portions of the car wall rather than to the resulting finish of the sheathing.

Hitherto cars having metallic walls have been constructed, but such cars have ordinarily been objectionable for the reason that they differed so greatly in general appearance from the ordinary wooden sheathed cars that they could not well be employed in connection with such wooden cars on account of the lack of uniformity in appearance which would be presented by trains employing cars of both constructions.

The present invention contemplates a car, which, to the eye, presents absolutely no difference in appearance from the ordinary cars, so that trains made up of both styles of cars will present a uniform appearance. The invention further relates to the sash rest which is constructed with particular reference to use with the metallic sheathing of the general style covered by the present invention, and to the car wall as a whole and the individual parts thereof.

The invention consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings Figure 1 is a side elevation of the end of a car employing the sheathing of the present invention; Fig. 2 a sectional plan view taken between two adjacent windows showing sheathing of the slat formation; Fig. 3 a perspective view of the section of the continuous sheathing as applied to the lower wall of the car; Fig. 4 a cross sectional view taken through the lower wall; Fig. 5 a cross sectional view showing the method of applying the slat sheathing between the window lintel and the name board of the car; Fig. 6 a perspective view of the continuous sheathing; Fig. 7 a perspective view of the slat sheathing; Fig. 8 a cross sectional view of the continuous sheathing; and Fig. 9 a similar view of the slat sheathing.

Referring to Fig. 1, the lower or unbroken wall 10 of the car preferably has the continuous form of sheathing applied thereto, which terminates on a line with the continuous sash rest 11. The upper portions of the wall 12, intermediate and surrounding the windows, which are more or less irregular in size and shape, are preferably covered by the slat formation, which is easier to apply at such points. In the present construction a wooden name board 13 is employed, which receives the upper edge of the slat sheathing 12.

Referring more particularly to Figs. 6 and 8, which illustrate the continuous sheathing, it will be seen that the same comprises a continuous plate or sheet of metal 14, which is provided in its surface with alternating rib sections 15 and channel sections 16, which rib and channel sections are connected by diagonally extending connecting walls 17, which give to the channel sections an inwardly divergent formation, the channels being considerably wider at the bottom than at the top. The channels cooperate with individual strips 18 having outer walls or faces 19, which lie flush with the faces of the rib sections, giving to the entire sheathing an appearance of a plurality of parallel uniform strips separated from one another by seams or cracks 20. The ap-



pearance is one which exactly corresponds with the usual wooden sheathing at present employed in car construction, since it is intended to paint or enamel the sheathing of the present invention so that it will faithfully imitate the appearance of wooden car sheathing. The outer or face wall 19 of each of the individual strip sections has connected therewith inwardly divergent side walls or flanges 21, which dovetail into the channel afforded by the inwardly divergent walls 17 so that after the individual strip section has been driven or slid into place in the channel provided therefor it will be held rigidly in place. If it is desired to secure an exceptionally tight fit the side walls or flanges can be given a divergence sufficient to require a slight contraction in order to drive them to place within the channels, although ordinarily a reasonably tight fit will be sufficient. The continuous sheathing thus formed is applied to the lower wall 22 of the car, below the sash rest, by securing the continuous channel plate or strip 14 by means of screws 23 which are entered through the inner walls of the channel portions so that, when the individual slats or strips are inserted within the channels the screw heads will be entirely concealed and a smooth finish provided, unbroken save only by the parallel seams or joints such as usually appear in the sheathing of a wooden car. In order to provide dead air spaces, a plurality of wooden plugs 24 are driven into the open ends of the channel and rib portions of the sheathing, so that a plurality of dead air spaces are afforded which serve to insulate the car more thoroughly against heat and cold.

The upper edge of the continuous sheathing, formed as above specified, is covered and protected by a continuous sash rest 11, which comprises a sloping body portion 26, which, at its lower edge, merges into an outwardly rounded portion 27 the lower edge 28 of which is reversely bent or turned to afford a U shape channel which receives the lower edge 29 of a connecting strip 30, which is screwed or otherwise rigidly secured to the frame of the car 31 immediately below the window openings. The lower edge 29 is off-set sufficiently to provide for the engagement of the reversely turned or hooked edge 28 of the sash rest, which latter is secured only near its upper edge by means of screws 32 which are entered into the top of the frame 31 which comprises the window sill. The bent or turned lower edge of the sash rest closely abuts against the outer face of the continuous sheathing, near the upper edge thereof, and serves to provide a very attractive finish for the upper edge of the continuous sheathing and at the same time thoroughly pro-

protects the sheathing at this point against displacement and against the admission of dirt or moisture.

The slat formation of sheathing which is intended to be secured to the car wall in individual sections is preferably applied to those portions of the car which are of such limited extent or irregular shape as to render the application of continuous strips difficult or impossible. The strip sections of the continuous sheathing, it will be understood must be driven to position from the end, within the channels, and under certain conditions it is difficult or impossible to successfully do this, for which reason the individual slat sheathing is provided. The latter comprises a plurality of strips or sections 33, each of which is in the form of a channeled strip of metal bent or died to provide an outer or face wall 34, which is provided, along one edge, with a diagonally inwardly extending side wall 35 terminating in an attaching flange 36 parallel with the face of the strip. The face plate or portion 34 is provided, along its other edge, with a diagonally outwardly extending side wall 37 of less depth than the companion side wall and terminating in an inwardly extending flange 38 which forms an elbow or angle adapted to dovetail into the angle afforded by the attaching side wall of the next adjacent slat or section. The slats thus formed are laid edge to edge, and each is secured along one edge by means of bolts or screws 39 which are entered through the inwardly extending attaching flange 36. The opposite edge of the strip thus secured is held in place by the engagement of the unattached wall 37 with the abutting attached wall of the next adjacent section, with which it dovetails, so that the strips thus formed and laid will be held in place against displacement. It is obvious that the individual slats, thus formed, can be fitted into any corner or small area which it is desired to sheath, since they do not need to be driven endwise to place and can be more readily formed, cut and fitted than the continuous sections of sheathing. The upper ends of the slats or sections thus formed are preferably entered into a groove 40 in the name board 13 of the car, which, as shown, is formed of wood, although it might be otherwise formed. The ends of the slats or sections above the windows rest upon a metallic lintel plate 42 of channel formation. By combining the two styles of sheathing thus formed and secured, the sheathing operation will be greatly facilitated for the reason that the continuous sheathing can be very quickly applied to wide or extended areas like that afforded by the lower car wall, since the continuous channeled plate can be laid against the intended surface and



attached thereto by inserting the required number of screws or rivets into the channels. Thereafter the individual strips or sections required to complete the continuous sheathing can be driven to place and the operation is complete. The continuous sheathing affords a maximum of strength by reason of its corrugated unbroken formation so that, where it can be thus rigidly secured it is desirable to use it. At the same time, by finishing the upper portions of the wall with the slat or individual form of sheathing no difficulty will be experienced in applying the sheathing to restricted areas or irregular surfaces, to which it would be difficult, if not impossible, to apply the other style of sheathing. The continuous sash rest forms a ledge from end to end of the car, which serves to top off the upper edge of the lower or continuous section of sheathing and at the same time affords a rest for the lower ends for the upper slat sections of sheathing.

The sheathing is highly superior to a sheathing of flat metallic plates in that it is much stronger by reason of its corrugated or channeled formation, is much more attractive in appearance and is more impervious to changes in temperature by reason of the provision of the dead air spaces.

What I claim as new and desire to secure by Letters Patent is:

1. A car wall having spaces above the windows covered by a metallic sheathing composed of vertically disposed slat sections of channel formation, each of the sections comprising a face wall having along its edges side walls, one of the side walls being secured to the car wall and the other side wall interlocked into the next adjacent secured wall, leaving seams between the sections in simulation of a car having wooden sheathing, and a metallic sheathing covering the remainder of the car having an appearance identical with the sheathing above the windows, and a continuous sash rest located intermediate the upper and lower sheathing and overlying the upper edge of the lower sheathing and serving to protect the same, substantially as described.

2. A car wall having its lower portion covered by a metallic sheathing terminating below the window line, a continuous sash rest having its lower edge reversely bent or turned to provide a hooked or channeled edge overlying the upper portion of the lower sheathing, and a rigidly secured attaching strip entered into the hooked edge of the sash rest, and an upper sheathing extending down to the sash rest and composed of individual sections each comprising a face wall having on one side an obliquely inwardly extending attaching wall terminating in an attaching flange and having along its other

edge the outwardly obliquely extending wall adapted to interlock with the next adjacent attaching wall, and attaching means, as screws, entered through the attaching flanges of the individual sections of the sheathing, substantially as described.

3. A car wall having its lower portion covered by a metallic sheathing terminating below the window line, a continuous sash rest overlying the upper edge of the lower sheathing and serving to protect the same, and an upper sheathing extending down to the sash rest and composed of individual sections each comprising a face wall having on one side an obliquely inwardly extending attaching wall terminating in an attaching flange and having along its other edge the outwardly obliquely extending wall adapted to interlock with the next adjacent attaching wall, and attaching means, as screws, entered through the attaching flanges of the individual sections of the sheathing, substantially as described.

4. A car wall having its lower portion covered by a metallic sheathing terminating below the window line, a continuous sash rest having its lower edge reversely bent or turned to provide a hooked or channeled edge overlying the upper portion of the lower sheathing, and a rigidly secured attaching strip entered into the hooked edge of the sash rest, and an upper metallic sheathing intermediate the window spaces and extending down to the sash rest, substantially as described.

5. In combination with a car sheathing, an outwardly rounded metallic sash rest having its lower edge reversely bent or turned to form a hooked or channeled edge overlying and protecting the upper edge of the sheathing, and a rigidly secured attaching strip entered into the hooked or channeled edge of the sash rest for holding the same in close contact with the underlying sheathing, substantially as described.

6. A car wall having, below the window line, a continuous longitudinal sash rest, and having the surface of the car wall, adjacent to the sash rest, covered by sheathing composed of vertically disposed slat sections extending at right angles to and abutting against the sash rest, each of the sections comprising a face wall having, along its edges, side walls, one of the side walls being secured to the car wall and the other side wall interlocked into the next adjacent secured wall, leaving seams between the sections in simulation of a car having wooden sheathing, substantially as described.

7. A car wall having, below the window line, a continuous longitudinal sash rest, and having the surface of the car wall, adjacent to the sash rest, covered by metallic sheathing composed of individual vertically dis-



posed sections extending at right angles to and abutting against the continuous sash rest, and each comprising a face wall having, on one side, an obliquely inwardly extending  
5 attaching wall terminating in an attaching flange, and having, along its other edge, an outwardly obliquely extending wall adapted to interlock with the next adjacent attaching wall, and means, as screws, entered through the attaching flanges of the individual sections of the sheathing, substantially as described. 10

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