

No. 827,071.

PATENTED JULY 31, 1906.

J. H. ANDERSON.

VEHICLE BODY.

APPLICATION FILED JULY 20, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

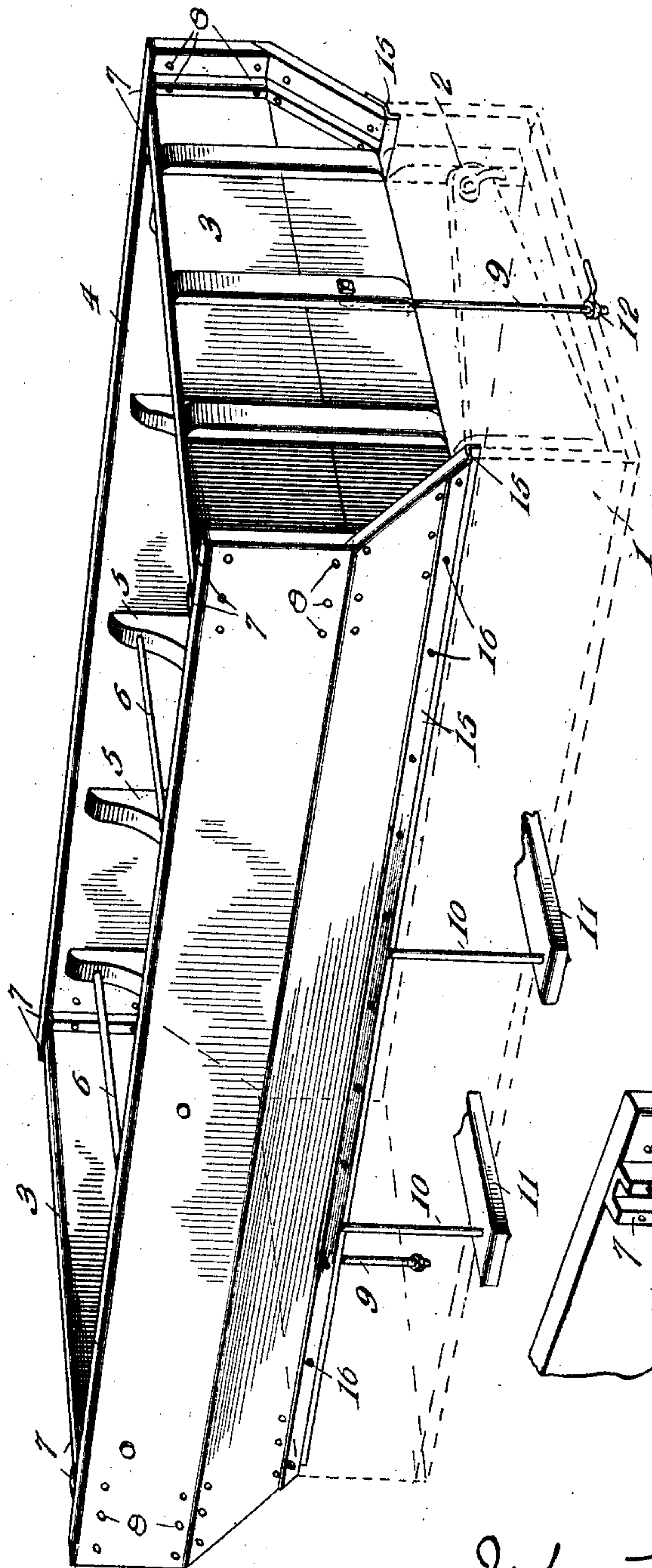
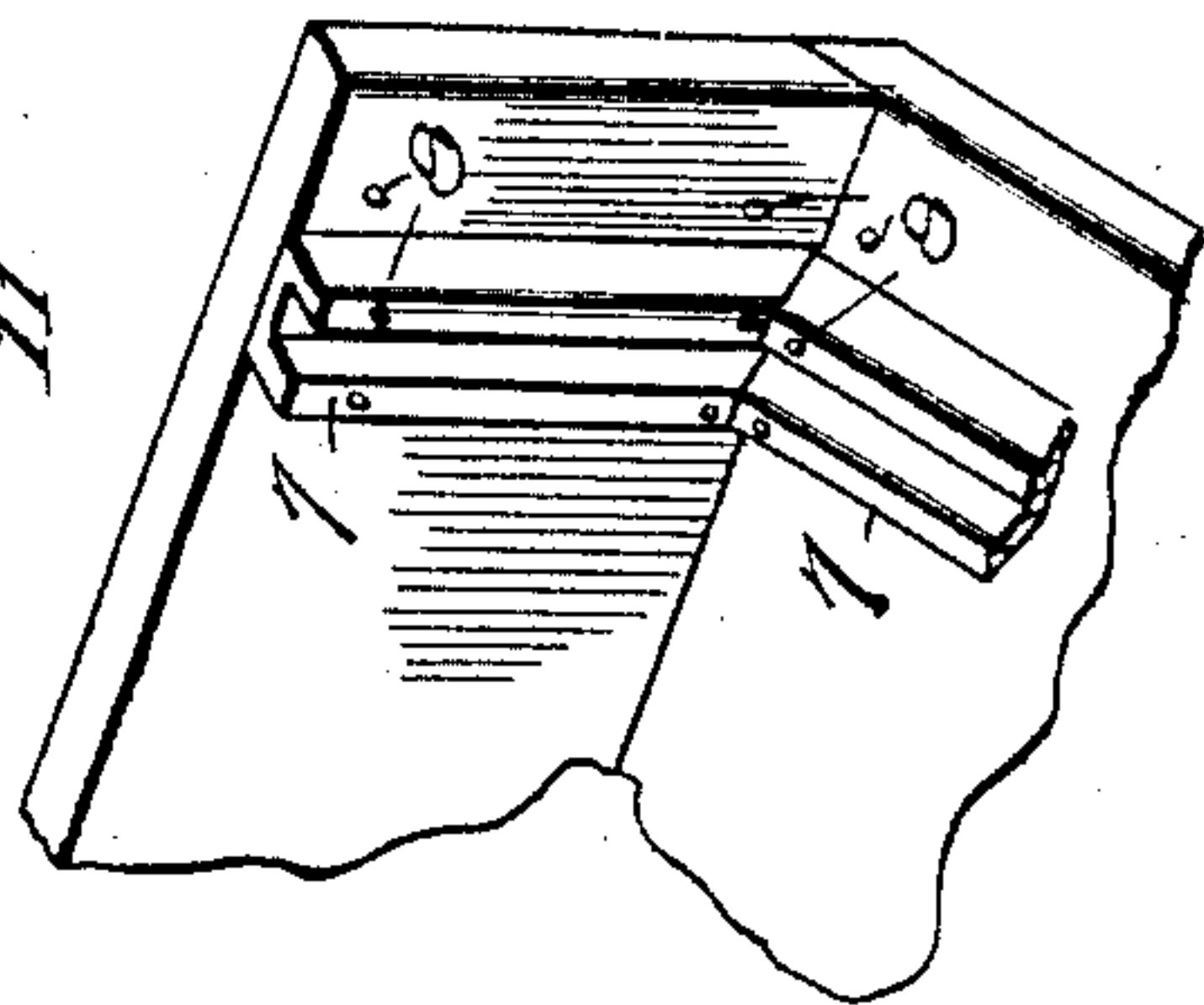


Fig. 2.



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2 SHEETS—SHEET 2.

FIG. 2.

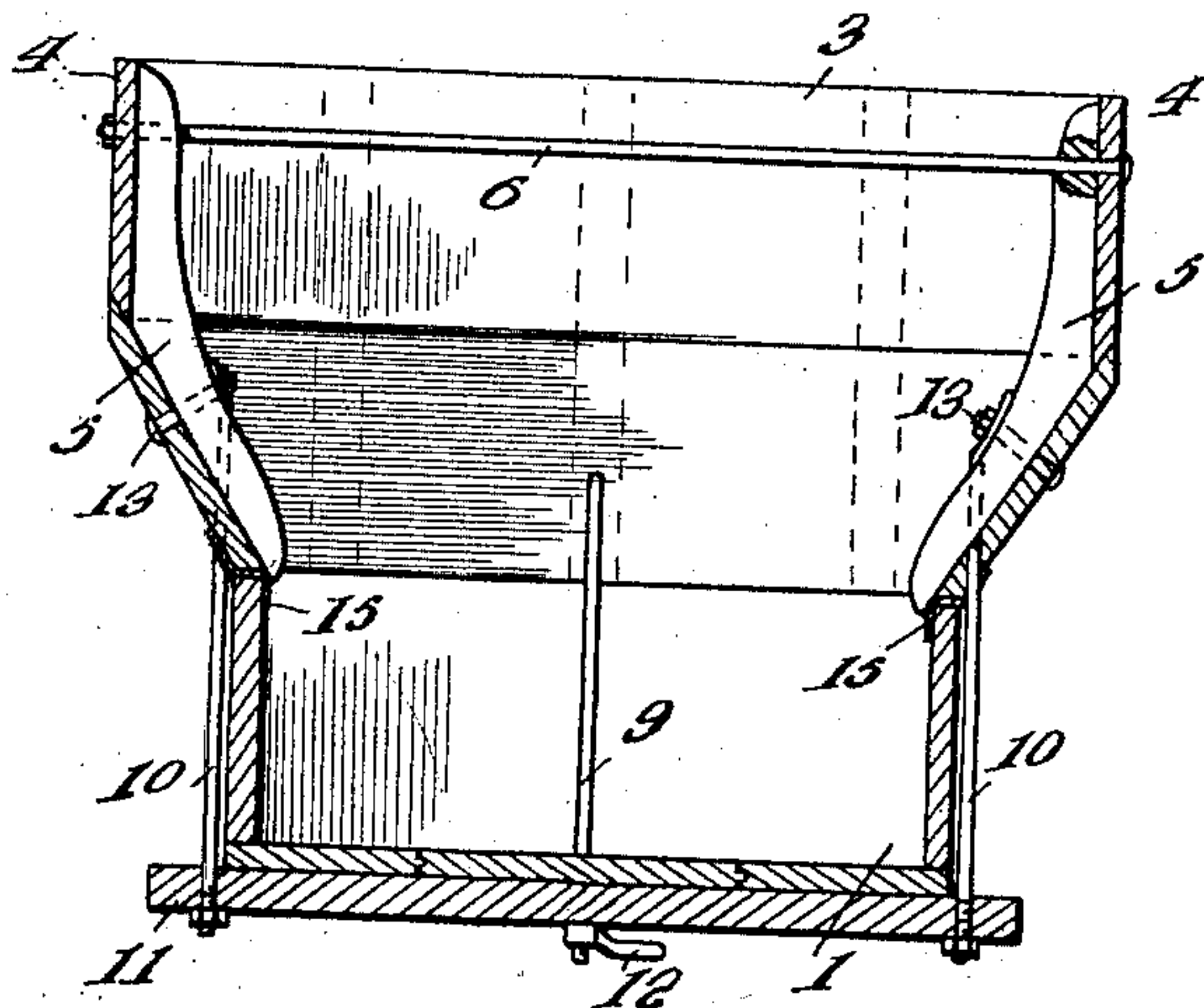


FIG. 3.

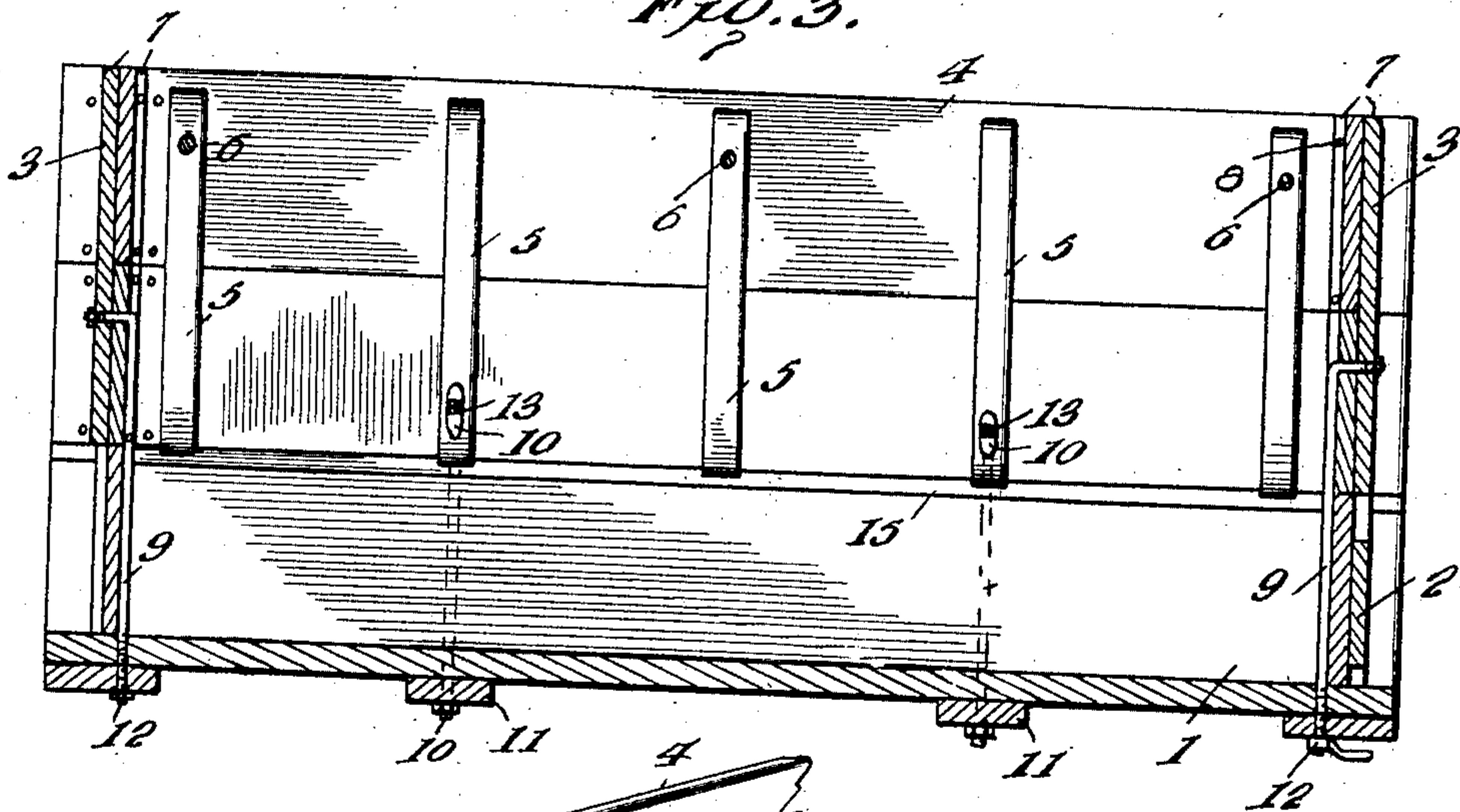
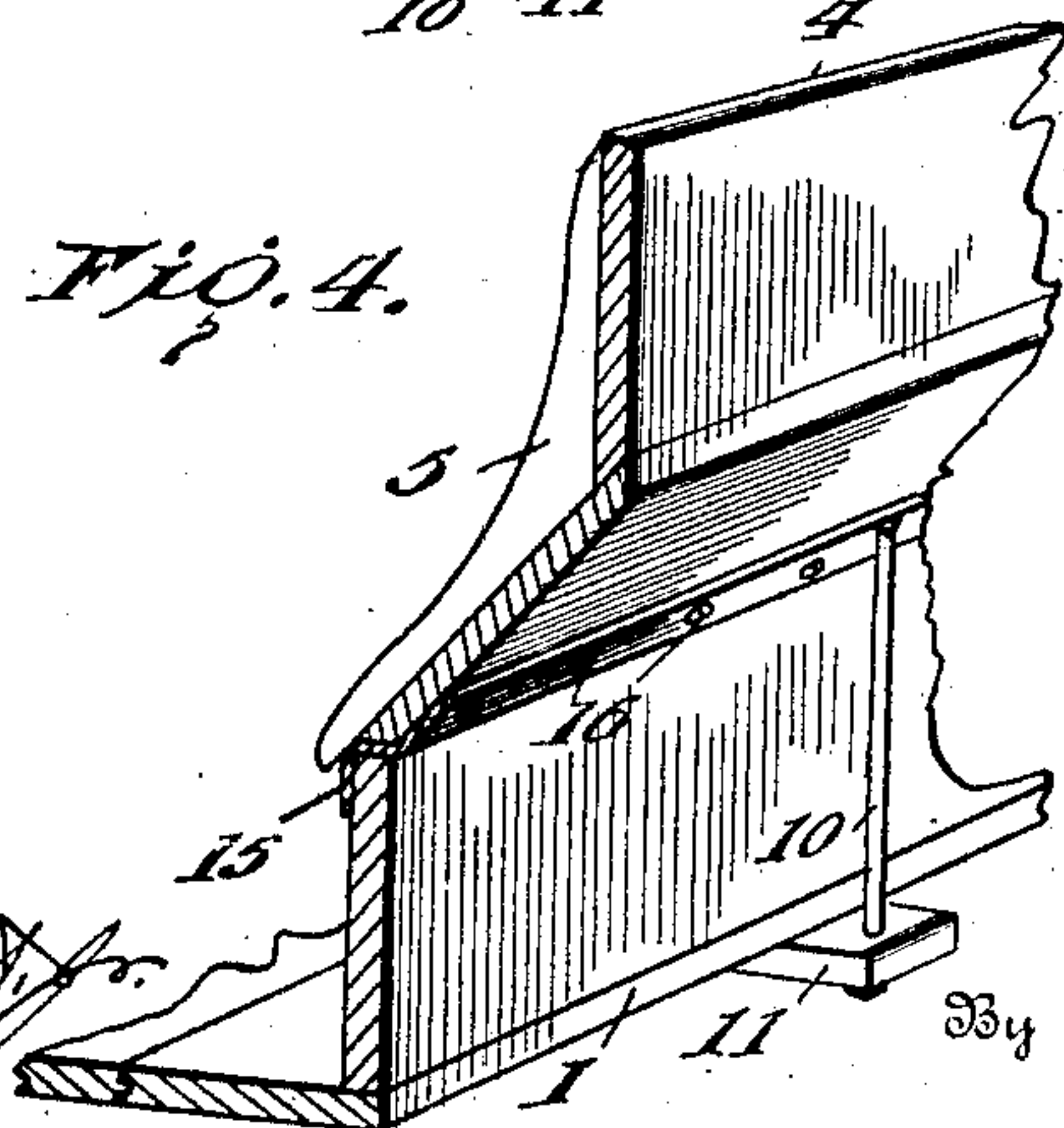


FIG. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN H. ANDERSON, OF ST. PAUL, MINNESOTA.

VEHICLE-BODY.

No. 827,071.

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To all whom it may concern:

Be it known that I, JOHN H. ANDERSON, a citizen of the United States, residing at St. Paul, Ramsey county, Minnesota, have invented certain new and useful Improvements in Vehicle-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.

This invention relates to certain improvements in wagon bodies or boxes, and more particularly relates to an attachment for a wagon-body.

An object of the invention is to provide an improved attachment or top extension for a wagon-box whereby the capacity of a wagon-box, such as an ordinary wagon-body, without changes in its construction can be increased for the purpose of carrying a large load—for instance, a load of wheat or other small grain.

Another object of the invention is to provide a flaring top extension for an ordinary wagon-box with means whereby the extension can be readily applied to or removed from the wagon-body, thereby providing an attachment whereby an ordinary wagon-box without changing its construction can be strengthened and converted into a grain-tank at a comparatively slight expense and with comparative ease on the farm or in the field.

A further object of the invention is to provide certain improvements in combinations of elements and arrangements of parts whereby a highly-efficient attachment will be provided for the purpose of readily converting an ordinary wagon-box into a grain-tank of greatly-increased capacity over the capacity of the ordinary wagon-box.

The invention consists in certain features of construction and arrangements of parts, as more particularly pointed out hereinafter.

Referring to the accompanying drawings, which show what I now consider the preferred embodiment of my invention from among other constructions within the spirit and scope of my invention, Figure 1 is a perspective view of my top extension for a wagon-box, dotted lines indicating the ordinary wagon-box upon which the attachment is secured. Fig. 2 is a cross-sectional view, the wagon-box being shown in full lines. Fig. 3 is a longitudinal sectional view, the wagon-box being shown in full lines. Fig. 4 is a detail

perspective view showing a side portion of the top box. Fig. 5 is a detail perspective showing a portion of the end of a side of the top box to illustrate the form of grooved cleats employed for the end-gates.

In the drawings, 1 is any suitable wagon-body—such, for instance, as an ordinary rectangular wagon-box having the longitudinal vertical sides, a bottom floor, a front end-gate, and any suitable removable rear end-gate 2. The capacity of the ordinary straight side farm wagon-box is comparatively restricted and is not sufficient to render such boxes useful for the economical or convenient transportation of grain and the like.

My invention contemplates an improved attachment capable of ready application to and removal from wagon-boxes for the purpose of converting the same into what are commonly known as "grain-tanks." In carrying out this conception I provide an improved wagon-box top extension carrying and provided with means for detachably securing the same on an ordinary wagon-box to thereby greatly increase the capacity of the wagon-body thus formed. The top extension rests on the top edges of the wagon-box and extends upwardly therefrom and is formed with flaring sides to provide great carrying capacity and to keep the center of gravity of the load as low as possible—that is, to keep the load as near the plane of the running-gear as possible.

The attachment comprises the front and rear end-gates 3 and the two longitudinal sides 4. The sides are usually formed with the top vertical portions and the downwardly and inwardly inclined or converging lower portions at their lower edges adapted to meet the top edges of the sides of the wagon-box to which the extension is applied. The longitudinal planks or boards forming the sides 4 of the extension are secured to vertical angular knees 5, and a number of the spaced parallel knees 5 are distributed along each side so that corresponding knees of the two sides are opposite each other. Each knee 5 is usually composed of one piece of wood and is formed with the vertical upper end portion and the downwardly and inwardly inclined lower portion, corresponding to the shape of each side 4 in cross-section. The planks forming said sides are nailed or otherwise secured to said knees and against the outer edges thereof, so that the knees are vertically arranged

within the flaring top box or extension. Suitable means can be provided to secure the two sides of the said top box or extension together and to brace the same. For instance, I show
 5 several cross bolts or rods 6, extending through the opposite sides and through the upper ends of opposite knees and transversely across the extension. I usually arrange such rods or bolts at the opposite ends of the extension and also at one or more intermediate
 10 points.

The end-gates 3 at their edges fit between the sides of the extension, and the said end edges of said gates conform to the cross-sectional shape of said sides. The end-gates can
 15 be secured or confined by suitable means. For instance, I show longitudinally-grooved bars or strips 7, arranged vertically at the inner faces of the sides and extending from the top to the bottom edges thereof, so that the
 20 end edges of the end-gates can drop vertically and longitudinally into said grooves. The grooved strips 7 can be bolted or otherwise secured to the sides of the extension, but
 25 I preferably adjustably secure the said grooved strips 7 for at least one of said end-gates, so that said grooved strips can be adjusted longitudinally of the extension according to the length of the wagon-box to which
 30 the extension is to be applied and to cause the end-gates of the extension to rest in the same vertical planes as the end-gates of the wagon-box. Suitable means can be provided to secure and adjust said grooved
 35 strips. For instance, I can employ bolts passing through longitudinal slots in the sides of the extension or longitudinal series of bolt-holes can be provided for said grooved strip-securing bolts, which are indicated by
 40 the numeral 8 in the drawings.

Suitable means are provided to clamp or lock the flaring top box or extension on the wagon-body, with the lower longitudinal
 45 edges of the extension sides resting on and forming a comparative tight fit or joints with the top edges of the wagon-box and with the lower edges of the extension end-gates resting on the top edges of the wagon-box end-gates and forming comparatively tight joints therewith. For instance, as means which might
 50 be employed for this purpose I show vertical bolts 9, secured to and depending from the attachment end-gates, and vertical bolts 10 depending from intermediate portions of the attachment and connecting with bottom
 55 cross or clamping bars 11. I show each attachment end-gate provided with one of the vertical bolts 9, arranged about centrally between the ends of the gate. The upper end of
 60 each bolt 9 is bent laterally or at right angles and passed through the end-gate and a central cross-bar thereof, so that the bolt passes down at the inner face of the end-gate and is rigidly secured thereto by a nut on the outer
 65 end of the bolt and screwing down against

the outer face of the gate. The bolt passes down at the inner faces of the extension end-gate and of the wagon-box end-gate and through the floor and bottom end cross-bar of the wagon-box and at its lower end is provided with a nut 12, screwing up against the
 70 bottom face of said end cross-bar of the wagon-box floor, so that the extension end-gates are drawn down tightly onto the top edges of the wagon-box end-gates.

The nut 12 for the rear end-gate is preferably provided with a lateral handle, so that the bolt or rod receiving the snap can be easily loosened to permit removal of the wagon-box end-gate for the purpose of dis-
 80 charging a load of grain or other material. I usually employ, for instance, two pairs of bolts 10 and a pair of cross or clamping bars 11, arranged at the intermediate or central portion of the extension. The bolts 10 are
 85 secured to and depend from the lower ends of certain knees 5 and extend down at the outer faces of the sides of the wagon-box and through the projecting outer ends of the cross or clamping bars 11, arranged trans-
 90 versely beneath and projecting beyond the floor of the wagon-box. The lower ends of the bolts 10 are provided with nuts screwing up against the bottom faces of the cross-bars 11 to draw the top extension tightly down
 95 into position on the wagon-box and to draw the cross-bars 11 up against the floor of the wagon-box to brace and strengthen the floor and to tightly maintain the parts in proper positions. The upper ends of the bolts 10
 100 are preferably bent laterally or at an angle to fit down on the upper faces of the lower portions of the knees, to which they are secured by the small or carriage bolts 13, passed through the angle ends of the bolts 10 and
 105 through the end portions of the knees.

While I can arrange means for adjusting the grooved end-gate-receiving strips 7 about as described, yet, if desired, the holes for the carriage or other bolts 8 can be bored in the
 110 top box at the proper positions, according to the length of the particular size or type of wagon-body to which the particular top box is intended. In other words, the bolt-holes can be formed at the time the top box is being first fitted to a particular wagon-body.

For the purpose of forming a grain-tight joint between the side edges of the top box and wagon-body I preferably employ means to lap or close the joint between said edges
 120 and to take up or allow for unevenness in the top edges of the wagon-body. I employ a flexible strip for this purpose. For instance, I show each lower longitudinal edge of the top box provided approximately throughout
 125 its length with a flexible or elastic longitudinal metal strip or bar 15, facing said lower edge to rest on the top edge of the wagon-body. Said longitudinal metal strip is usually formed of thin band-iron longitudinally
 130

bent to form the angular portion fitting the outer surface of the lower edge portion of the top-box side, the flat or horizontal portion facing the lower edge of said top-box side and the depending inner angular portion, which forms a lip, depending at the inner face of the wagon-body side and lapping or closing the joint between the top box and wagon-body and preventing leakage of grain. The angle-iron grain or sealing strips 15 are secured at 16 only along the outer upwardly-projecting angular portions at the outer faces of the top-box sides, leaving the horizontal and depending portions thereof free to yield and spring in conforming to uneven surfaces and in tightly closing the joints between the top box and wagon-body.

My attachment or top box can be manufactured as an article of manufacture and sold for application on the farm or in the field to wagon-boxes then in use and can be usually applied to or removed from such wagon-boxes without requiring the assistance of expert help or mechanics. In fact, my top box can be easily applied to or removed from an ordinary wagon-box in a short space of time by one man. By using my invention an ordinary wagon-box can be strengthened and converted into a grain-tank at a cost considerably below the price ordinarily paid for grain-tanks.

What I claim is—

1. As an article of manufacture, a detachable flaring top box for converting an ordinary wagon-box into a grain-tank, comprising internal vertical angular knees, sides rigidly secured to said knees and having the lower inwardly-inclined portions, end-gates fitted between said sides, and series of bolts carried by and depending from the end-gates and sides to extend beneath the floor of the wagon-box and provided with clamping means to draw the wagon-box and top box tightly yet detachably together, substantially as described.

2. As an article of manufacture, a flaring top box for converting an ordinary wagon-box into a grain-tank, comprising sides having vertical internal angular knees, bolts at their upper ends rigidly secured to said knees and depending from the interior of the top box to extend outside of and below the wagon-box, and provided with clamping means to extend removably beneath the wagon-box and tightly draw the top box and wagon-box together, substantially as described.

3. As an article of manufacture, a flaring top box for converting an ordinary wagon-box into a grain-tank, comprising sides having inwardly-inclined lower portions and internal angular knees, vertical bolts depending from said sides and at their lower ends provided with clamping means to extend below the wagon-box to tightly draw the wagon-box and top box together, the upper ends of

said bolts passing through said knees and sides and rigidly secured thereto, substantially as described.

4. A detachable top box for ordinary wagon-boxes comprising sides having the vertical top portions and inwardly-inclined lower portions and vertical internal angular knees to which said sides are secured, vertical grooved strips secured to the end portions of the inner faces of said sides, end-gates fitted down in the grooves of said strips, vertical bolts secured to and depending from said gates and adapted to extend below the floor of a wagon-box and at their lower ends provided with clamping means, and vertical bolts secured to said knees and depending therefrom and adapted to extend down outside of the wagon-box and at their lower ends provided with clamping means adapted to removably extend beneath and engage the wagon-box floor, substantially as described.

5. A detachable flaring top box for a wagon-box, provided with means for clamping the same to a wagon-box and having a rear end-gate at its lower edge adapted to rest on the rear end-gate of the wagon-box, and provided with a vertical bolt at its upper end secured to said top-box gate and arranged at a face thereof and adapted to extend down beside a face of the wagon-box gate and through the floor of the wagon-box and provided with a bottom-clamping nut below the wagon-box, whereby said nut can be loosened to permit renewal of the wagon-box end-gate.

6. As an article of manufacture, a detachable flaring top box for converting an ordinary wagon-box into a grain-tank, comprising flaring sides, securing means between the same, end-gates, angle-iron sealing-strips secured to and arranged longitudinally of said sides and facing the lower edges thereof and having the inner depending flanges to extend down the inner faces of the wagon-box sides when the top box is seated thereon, said top-box end-gates adapted to rest on the wagon-box end-gates, and series of depending securing devices from the top-box end-gates and the top-box sides, and adapted to tightly yet removably draw the top box and wagon-box and their respective gates together, substantially as and for the purposes described.

7. As an article of manufacture, a detachable flaring top box for converting a wagon-box into a grain-tank comprising flaring sides, end-gates, said gates provided with means for removably locking the same down on the wagon-box end-gates, and a series of clamping devices secured to and carried by said sides and depending therefrom and adapted to removably extend down at the exterior of and beneath an ordinary wagon-box and tightly yet removably clamp together the top box and wagon-box, substantially as described.

8. A detachable flaring top box for con-

verting a wagon-box into a grain-tank, comprising sides having the top vertical portions and the lower inwardly-inclined portions, internal vertical angular knees secured to said sides, end-gates between said sides, series of bolts fixed to and depending from said sides and adapted to extend down at the exterior of a wagon-box and provided with means to extend beneath the wagon-box and draw the sides of the top box and wagon-box tightly yet removably together, substantially as described.

9. A wagon-box and its end-gates, in combination with a removable flaring top box having end-gates and provided at its end-gates and intermediate points with clamping devices extending beneath the wagon-box and removably engaged therewith to tightly draw the wagon-box and its gates and the top box and its gates together, said clamping devices being attached to and carried by said top box, whereby a wagon-box can be converted into a grain-tank.

10. A removable flaring top box for wagon-boxes, having sides with vertical top portions and inwardly-inclined lower portions provided with and having fixed thereto series of depending clamping devices adapted to removably extend down at the exterior of and beneath an ordinary wagon-box and tightly yet removably clamp together the sides of the top box and the sides of the wagon-box, substantially as described.

11. A wagon-box, in combination with a detachable top box having sides with vertical top portions and inwardly-inclined lower portions provided with series of vertical bolts arranged along and rigidly secured thereto and depending at the exterior of the wagon-box, cross-bars removably extending beneath the wagon-box and receiving said bolts, and adjustable nuts on the lower ends of said bolts for drawing said cross-bars tightly against the bottom of the wagon-box, substantially as described.

12. As an article of manufacture, a top box for converting a wagon-box into a grain-tank having sides with vertical top portions and inwardly-inclined lower portions, end-gates, connecting means between said sides, and series of clamping devices fixed to the

opposite sides and adapted to removably extend down at the opposite sides of and transversely beneath the wagon-body to brace and strengthen the wagon-body and tightly yet removably draw together the sides of the wagon-body and top box.

13. As a new article of manufacture, a removable flaring top box for converting a wagon-box into a grain-tank, comprising flaring sides, means connecting the sides, end-gates, and series of clamping devices secured to and carried by said sides and depending therefrom and adapted to removably extend down at the exterior of and beneath an ordinary wagon-box and tightly yet removably clamp together the top box and wagon-box, substantially as described.

14. As a new article of manufacture, a removable top box for converting a wagon-box into a grain-tank, comprising sides having vertical top portions and inwardly-inclined lower portions, internal vertical angular knees to which said sides are secured, metal sealing-strips arranged longitudinally of said sides and secured to the outer faces of the lower portions thereof and extending inwardly across the lower edges of said lower portions and having the inner depending flanges to extend down the inner faces of the wagon-box sides, and means carried by said top box for removably clamping together the top box and wagon-box, substantially as described.

15. A flaring top box for converting a wagon-box into a grain-tank comprising sides having inwardly-inclined lower portions and internal knees, and clamping devices fixed to and carried by said sides and adapted to removably secure together the top box and wagon-box, said clamping devices comprising bolts depending from said lower portions of the sides at points outside of the lower edges of said inclined lower portions and passed up through said inclined portions and secured, substantially as described.

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

JOHN H. ANDERSON.

Witnesses:

W. W. HIGGINS,
O. H. NELSON.