

No. 713,651.

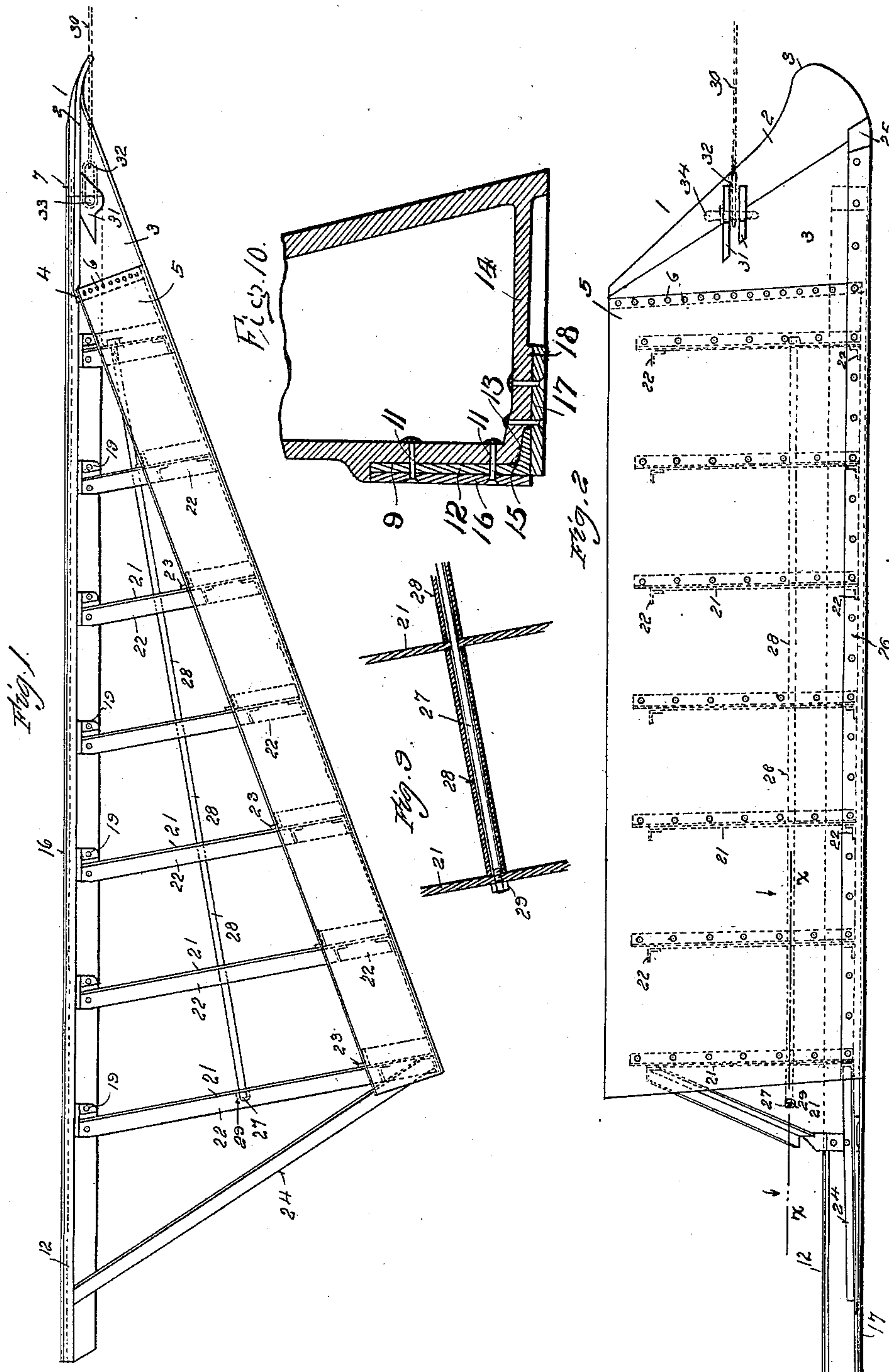
Patented Nov. 18, 1902.

G. W. KING.
BALLAST UNLOADER.

(Application filed Aug. 12, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:
Wm. Laughlin
Irvine Miller

INVENTOR.
George W. King
BY
H. A. Paulman
ATTORNEY.

No. 713,651.

Patented Nov. 18. 1902.

G. W. KING.
BALLAST UNLOADER.

(Application filed Aug. 12, 1901.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 3.

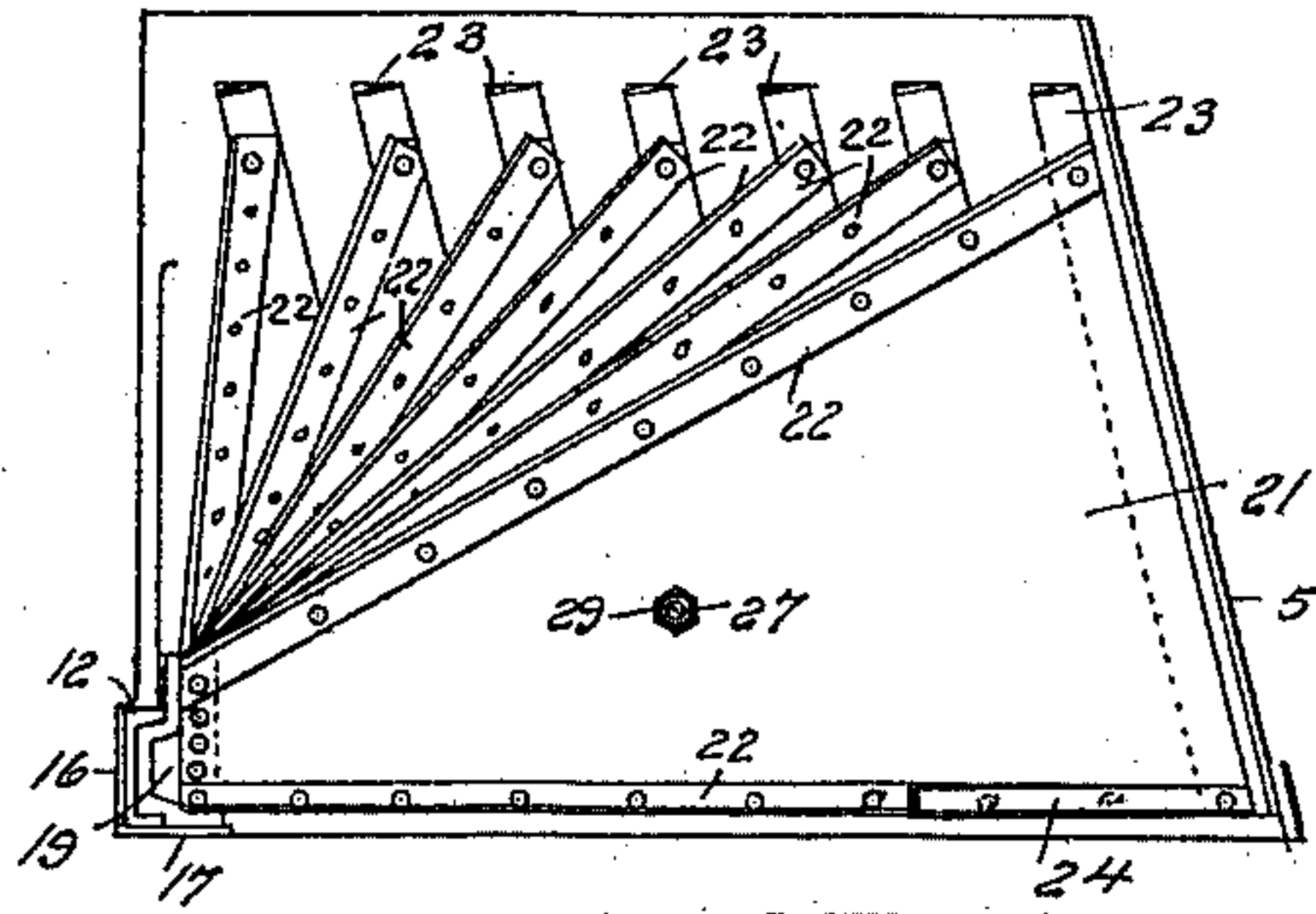


Fig. 4.

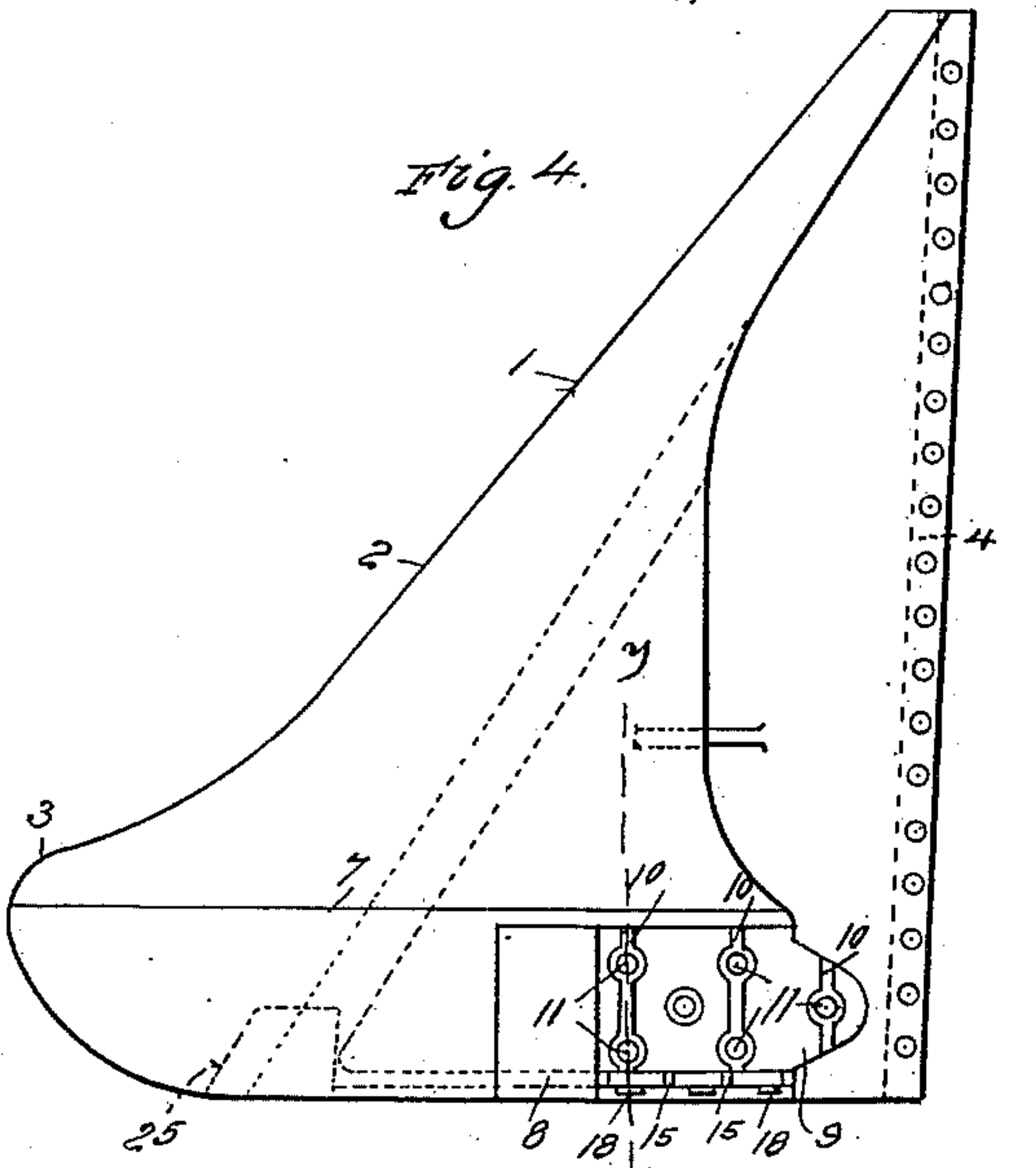


Fig. 5.

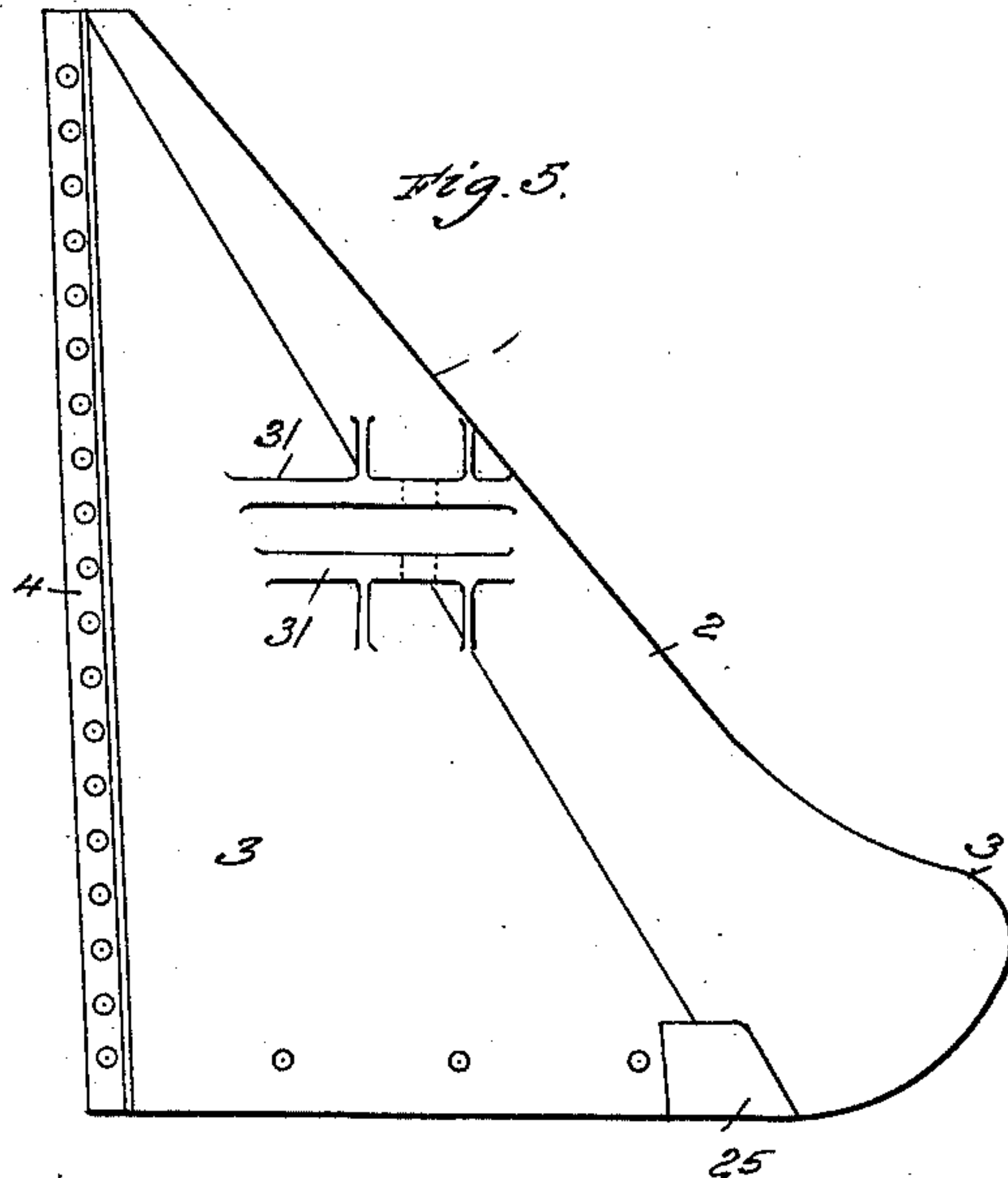


Fig. 6.

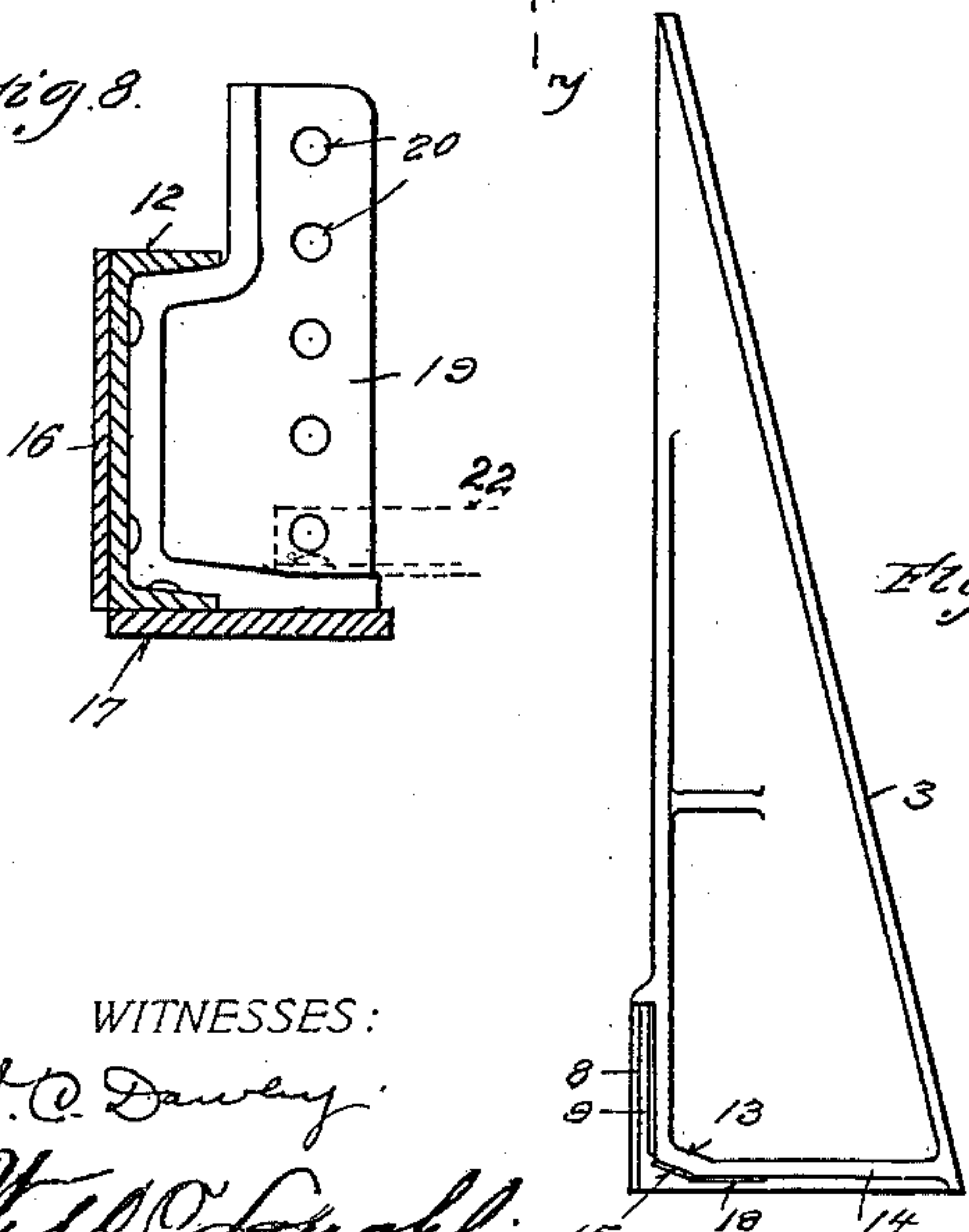
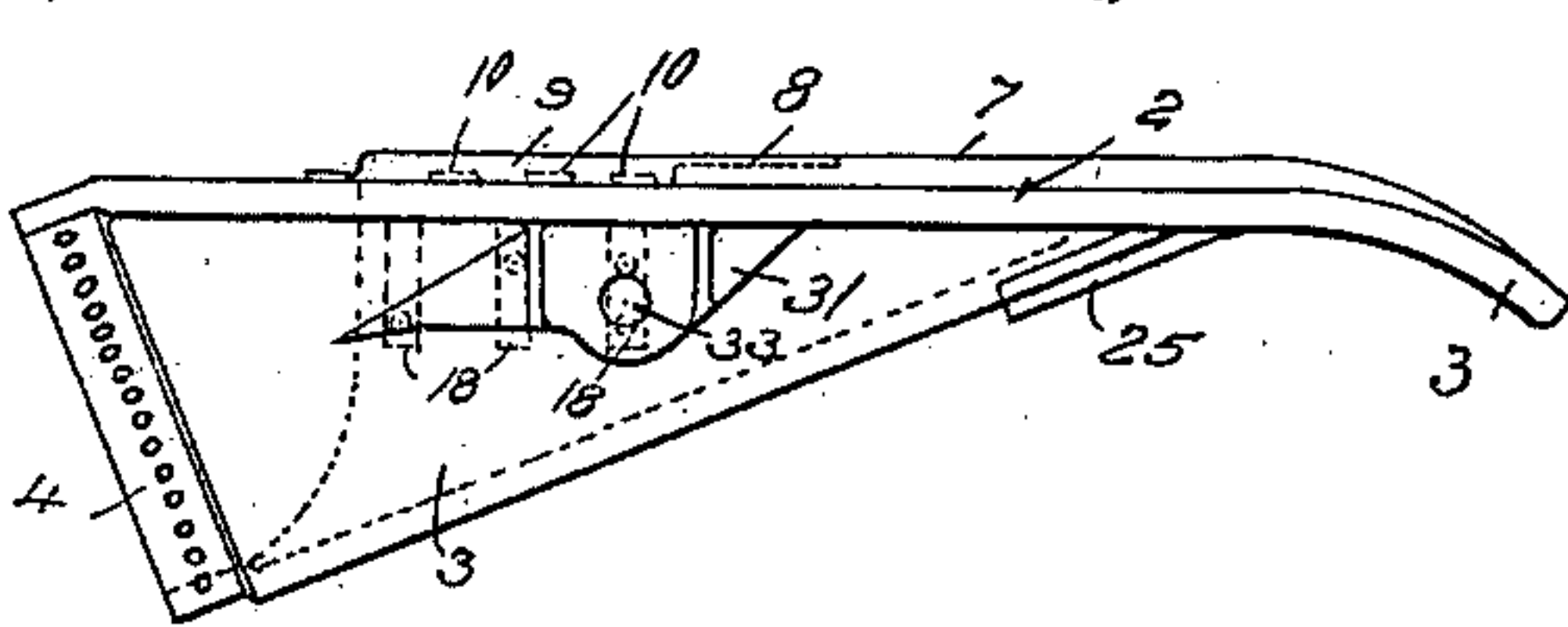


Fig. 7.



WITNESSES:

J. C. Dawley.
W. O. Laughlin.

INVENTOR.

George W. King
BY
H. A. Pauline
ATTORNEY.

UNITED STATES PATENT OFFICE.

GEORGE W. KING, OF MARION, OHIO, ASSIGNOR TO THE MARION STEAM SHOVEL COMPANY, OF MARION, OHIO, A CORPORATION OF OHIO.

BALLAST-UNLOADER.

SPECIFICATION forming part of Letters Patent No. 713,651, dated November 18, 1902.

Application filed August 12, 1901. Serial No. 71,674. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. KING, a citizen of the United States, residing at Marion, in the county of Marion and State of Ohio, have invented certain new and useful Improvements in Ballast-Unloaders, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to ballast-unloaders, and more particularly to that class of structures set forth in Letters Patent of the United States No. 397,165, granted to Henry M. Barnhart February 5, 1889.

15 The present invention has for its object to provide an improved construction having increased strength and durability and better adapted to the work to be done.

20 To these ends the invention consists in certain novel features which I will now proceed to describe and will then particularly point out in the claims.

25 In the accompanying drawings, Figure 1 is a plan view of a structure embodying my invention in one form. Fig. 2 is a side elevation viewed from the moldboard side of the apparatus. Fig. 3 is a rear elevation. Fig. 4 is an enlarged detail view of the point viewed from one side. Fig. 5 is a similar 30 view of the point from the opposite side. Fig. 6 is a rear elevation of the point. Fig. 7 is a plan view of the point. Fig. 8 is an enlarged detail sectional view through the runner. Fig. 9 is an enlarged detail sectional view taken on the line *x x* of Fig. 2 and looking in the direction of the arrows; and Fig. 10 is a detail sectional view taken on the line *y y* of Fig. 4, but with the runner, wearing-strip, and bottom strip in position.

40 Ballast-unloaders of the type to which my invention relates are employed where it is desired to deliver all of the material on the car at one side thereof and are made either right or left handed, as required. I have 45 chosen for purposes of illustration what is known as a "right-hand" unloader, it being understood that my invention is equally applicable to a left-hand unloader, in which the position of the parts are reversed.

50 Referring to the accompanying drawings, 1 indicates the point of the unloader, which

is preferably in the form of a casting having a downward and forward inclined nose-piece 2, terminating in a tip 3, which is turned away from the guiding side of the device and 55 also upward in the manner set forth in the Barnhart patent hereinbefore referred to. This point-casting also comprises a moldboard-section 3, which diverges from the nose-piece at the same angle as the moldboard 60 and which is inclined to the vertical also at at the same angle as the moldboard. At its rear edge this moldboard-section is provided with a seat 4 to receive the forward edge of the moldboard 5, which latter is riveted to 65 the moldboard-section of the point, as indicated at 6. The flat or guiding side of the point is provided at its lower part with a longitudinal rib or enlargement 7, which forms a continuation of the runner and which is provided with a seat 8 to receive the forward end 70 of the wearing-strip, to be hereinafter referred to, and with a second seat 9 to receive the forward end of the runner proper. This latter seat is provided with chipping-pads 10, by 75 means of which a firm and uniform bearing for the runner may be obtained. The forward end of the runner is secured in its seat by rivets passing through rivet-holes 11, provided for that purpose. The runner or guide, which 80 is indicated at 12, is in the form of a channel-bar, the top flange whereof is removed along that portion which fits against the seat 9, the bottom flange extending under an inclined portion 13 of the bottom web 14 of the point, 85 said inclined portion being provided with chipping-pads 15, by means of which a suitable bearing for the flange of the channel may be provided. The runner or channel-guide 12 is provided on its outer face with a 90 wearing-strip 16, the forward end of which fits in the seat 8 so as to lie flush with the surface of the point, said wearing-strip being secured to the channel-guide by rivets or otherwise. 17 indicates a bottom strip se- 95 cured to the under side of the channel-guide, its forward end extending under the web 14, which is raised somewhat above the bottom of the point to accommodate this strip and which is provided with chipping-pads 18 to 100 provide a firm and uniform seat or bearing for said strip. The runner is provided at

suitable intervals with brackets 19, to which the channel-guide, wearing-strip, and bottom strip are riveted, each bracket being provided with rivet-holes 20 to receive the braces hereinafter referred to. These braces extend transversely from the moldboard to the runner, and each brace consists of a sheet or plate of metal 21, strengthened on its top and bottom edges by angle-bars 22 and having secured to its edge adjacent to the moldboard an angle-bar 23, which is riveted both to the bracing-sheet and to the moldboard. The other edge of the bracing-sheet, as well as the extremities of the strengthening angle-bars at its top and bottom edges, are riveted to the corresponding bracket 19. An additional brace 24, consisting of an angle-bar, extends from the heel of the moldboard to the heel of the runner.

The point-section is provided at its lower edge at the forward part of the moldboard-section with a projection 25, which merges into the nose-piece 2 at its forward end, while its rear end forms a shoulder against which abuts the forward end of a wearing-strip 26, riveted to the lower edge of the moldboard, the outer face of said strip being flush with the outer face of the projection 25.

The structure is braced longitudinally by means of a rod 27, passing through the several bracing-sheets 21 and provided between each pair of sheets with a spacing-sleeve 28, as shown in detail in Fig. 9. The ends of the rod 27 are threaded to receive nuts 29, by means of which the parts may be drawn tight and held in place.

Heretofore the draft-cable (indicated in dotted lines at 30) has been connected to the plow by means of a link or swivel, which in turn is connected to the point by a horizontal pin on which it is pivoted. This construction requires a cotter or similar device to keep the pin from working out, and therefore requires a considerable time in connecting and disconnecting the link. In order to obviate this difficulty, I provide upon the point-section two horizontal lugs 31, adapted to receive between them the coupling-link 32 of the draft-cable and having apertures 33 in line with each other to receive a coupling-pin 34, by means of which the link may be secured to the plow. The pin being vertical is kept in place by gravity, and the cable may be readily coupled or uncoupled by lifting the pin.

I do not wish to be understood as limiting myself strictly to the precise details of construction hereinbefore described, and illustrated in the accompanying drawings, as these details may obviously be modified without departing from the principle of my invention.

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

1. A ballast-unloader of the character described having on its point two horizontal

lugs with registering apertures, in combination with a draft-cable having a link, and a vertical coupling-pin passing through said lugs and link, substantially as described.

2. A ballast-unloader of the character described comprising a point, a moldboard and a runner secured to the point and composed of a channel-iron, brackets fitting and secured to said channel-iron at intervals, and braces secured to said brackets and to the moldboard, substantially as described.

3. A ballast-unloader of the character described comprising a point, a moldboard, a runner provided with brackets at intervals, and braces connecting said brackets and the moldboard, each brace comprising a metallic sheet strengthened at its upper and lower edges by angle-bars, said sheet having one of its edges attached to the corresponding bracket, and an angle-bar secured to its other edge and to the moldboard, substantially as described.

4. In a ballast-unloader of the character described, the combination, with the point, moldboard and runner, of transverse bracing-sheets connecting the moldboard and runner and provided with apertures, and a bracing-rod extending through said apertures and provided with spacing-sleeves between the bracing-sheets, substantially as described.

5. In a ballast-unloader of the character described, the combination, with a point and moldboard, of a runner consisting of a channel provided on its outer face with a wearing-strip secured thereto, substantially as described.

6. In a ballast-unloader of the character described, the combination, with a point and a moldboard, of a runner comprising a channel-iron, and a bottom strip secured thereto, substantially as described.

7. A ballast-unloader of the character described comprising a point, a moldboard and a runner consisting of a channel-iron provided at intervals with suitable brackets, braces connecting said brackets with the moldboard, a wearing-strip secured to the outer face of the channel, and a bottom strip secured to the under side of the channel and to the brackets, substantially as described.

8. In a ballast-unloader of the character described, the combination, with a point having a rib forming a continuation of the runner and provided with a seat for the wearing-strip and a second seat for the channel-bar of the runner, said point being provided with a bottom web a short distance above its lower edge, of a runner comprising a channel-bar adapted to fit the channel-bar seat of the point, a wearing-strip secured to the outer face of the channel-bar and fitting in the seat provided therefor in the point, and a bottom strip secured to the under side of the web of the point, substantially as described.

9. In a ballast-unloader of the character described, the combination, with a point having a moldboard-section and a moldboard se-

cured thereto, said point being provided at
its lower edge with a projection at the junc-
tion of the moldboard-section with the nose-
piece, of a strip secured to the lower edge of
5 the moldboard and moldboard-section of the
point, its forward edge being against said
projection, substantially as described.

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

GEORGE W. KING.

Witnesses:

F. H. KING,

GEO. A. CHENEY.