

W. P. DAVIS.

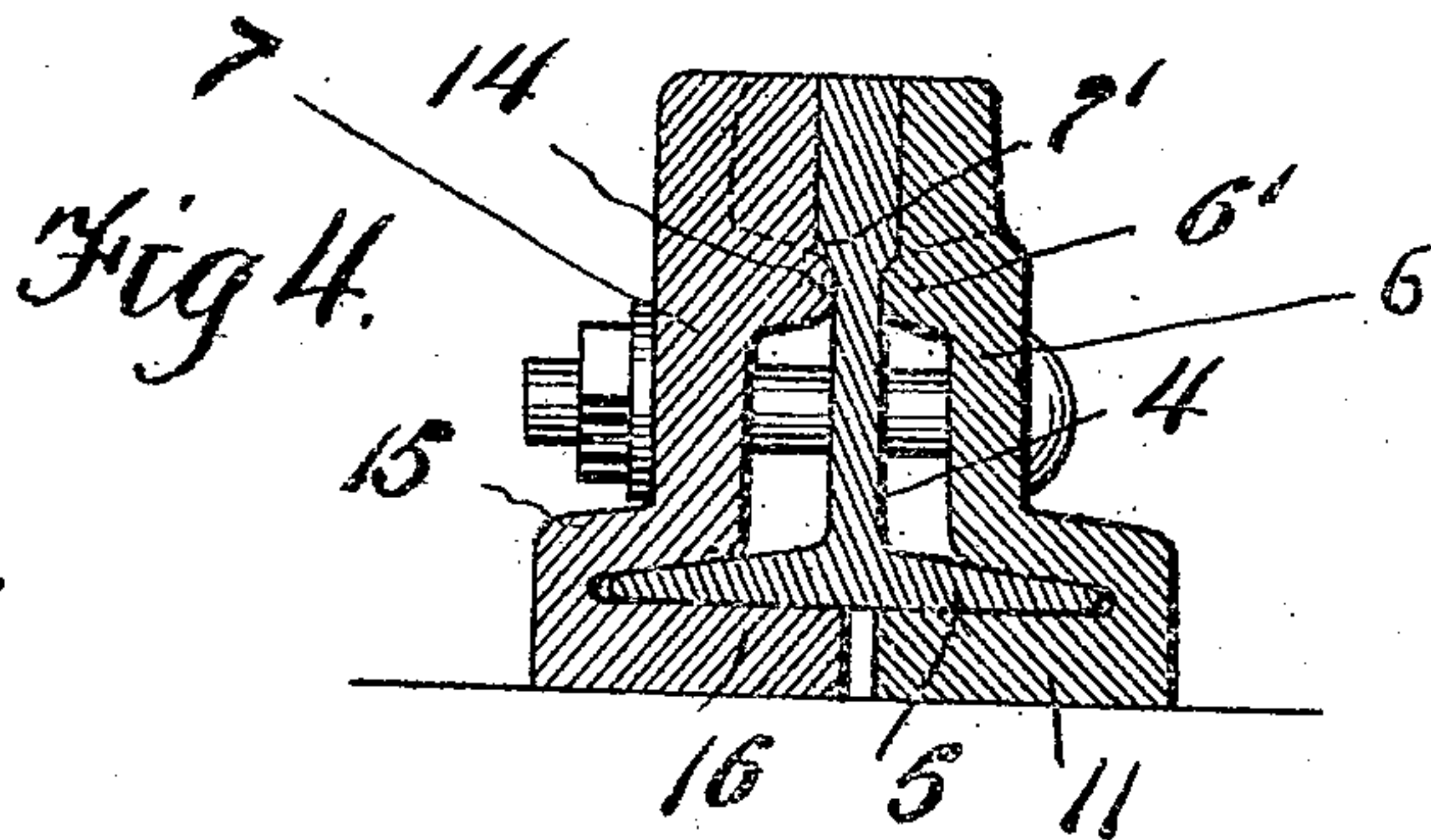
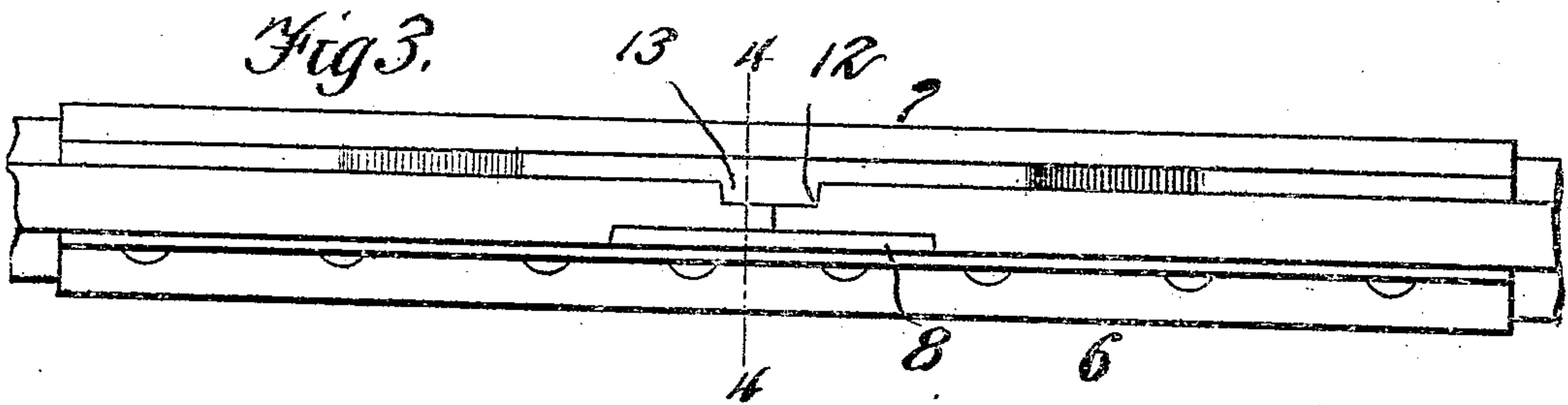
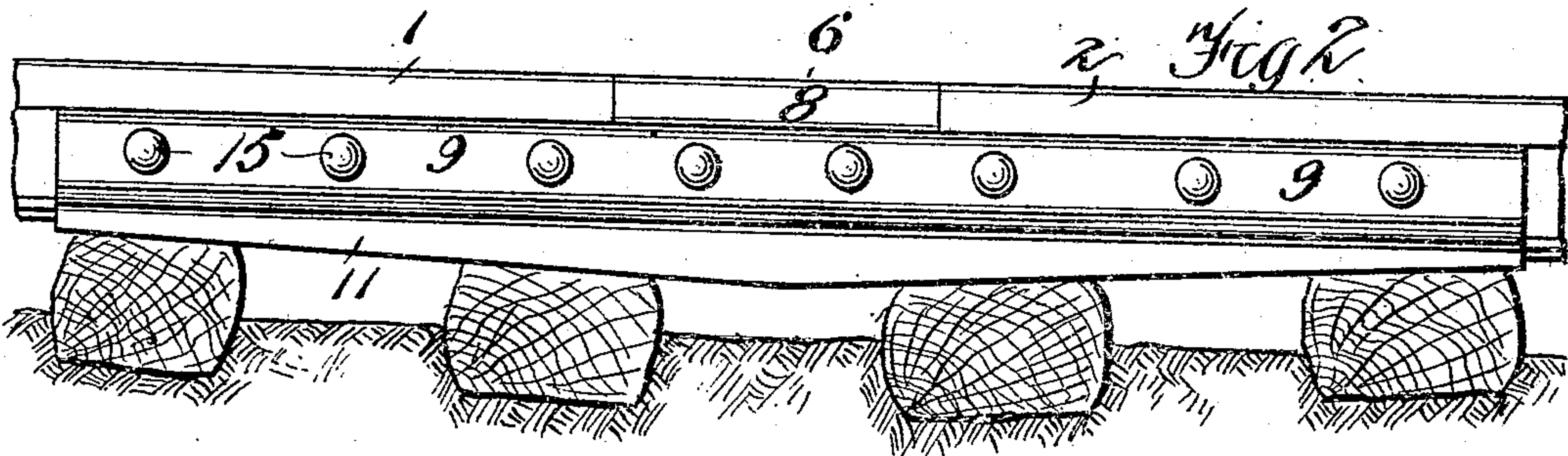
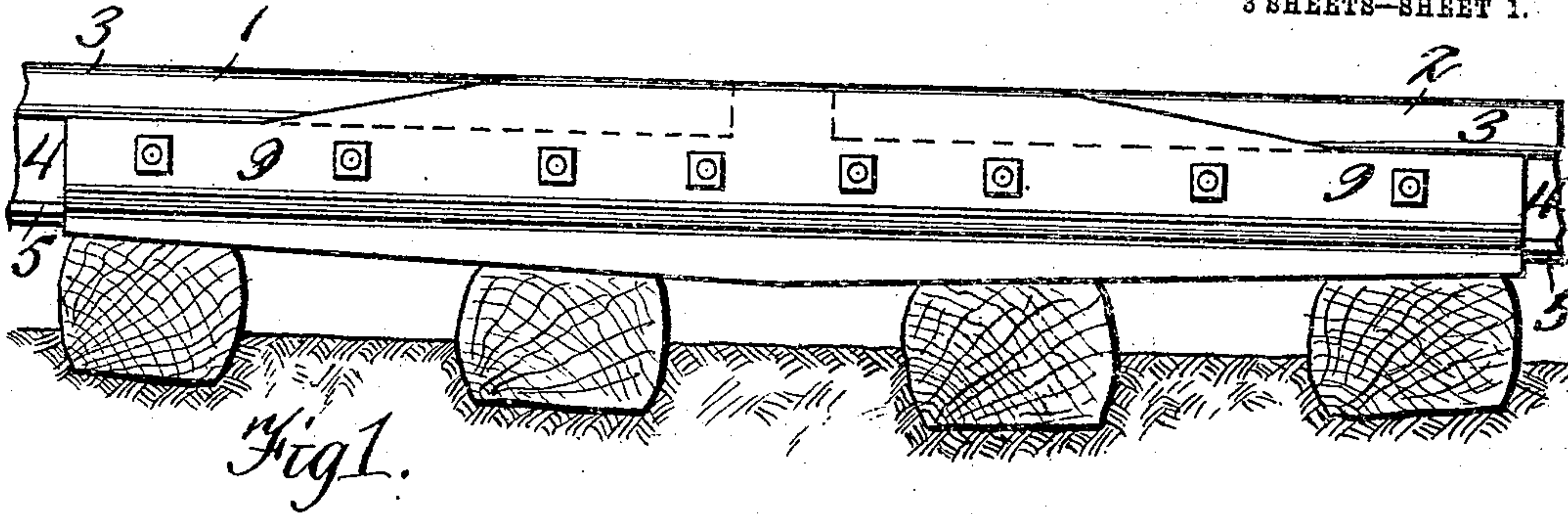
RAIL JOINT.

APPLICATION FILED AUG. 4, 1908.

958,602.

Patented May 17, 1910.

3 SHEETS—SHEET 1.



Witnesses

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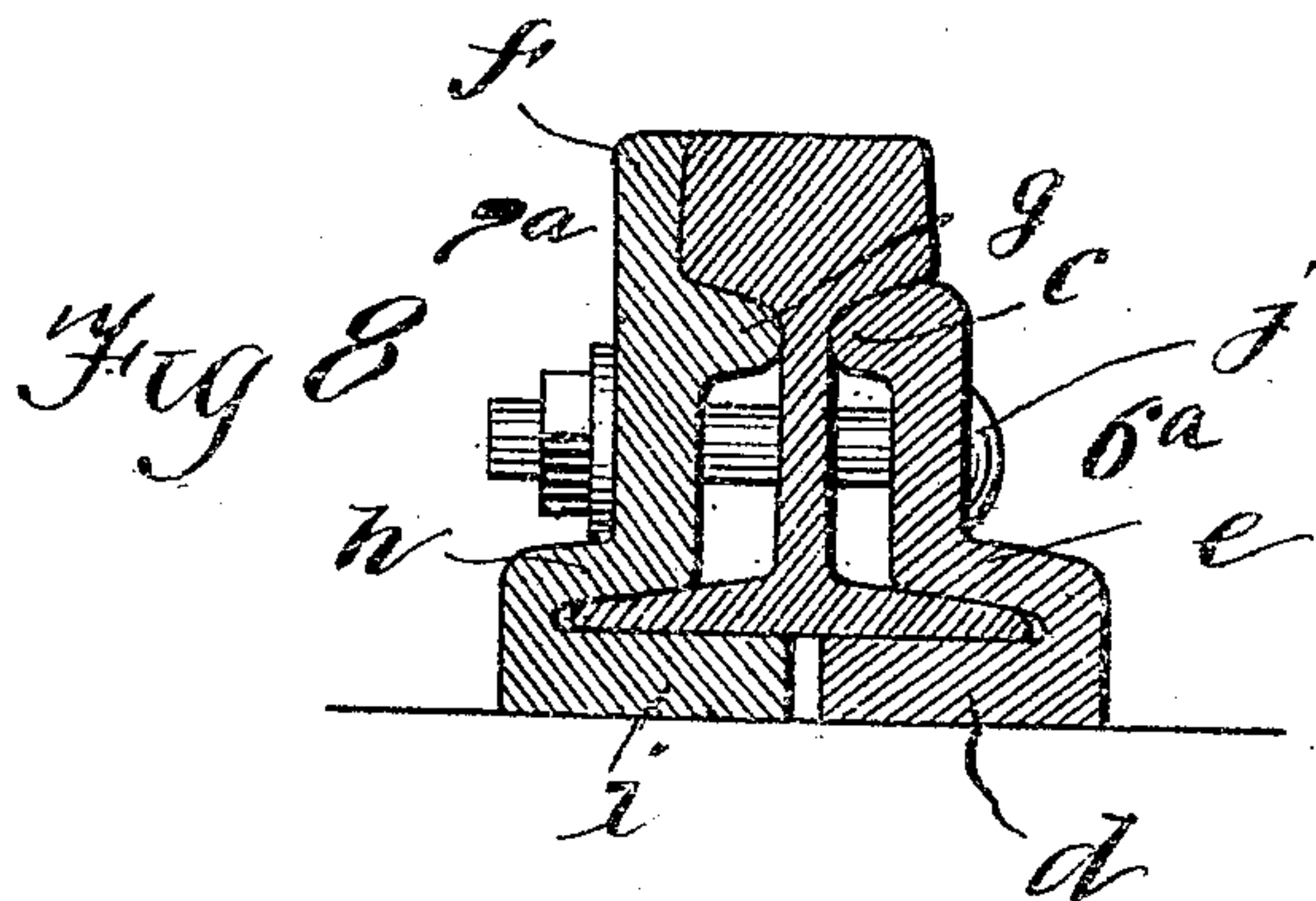
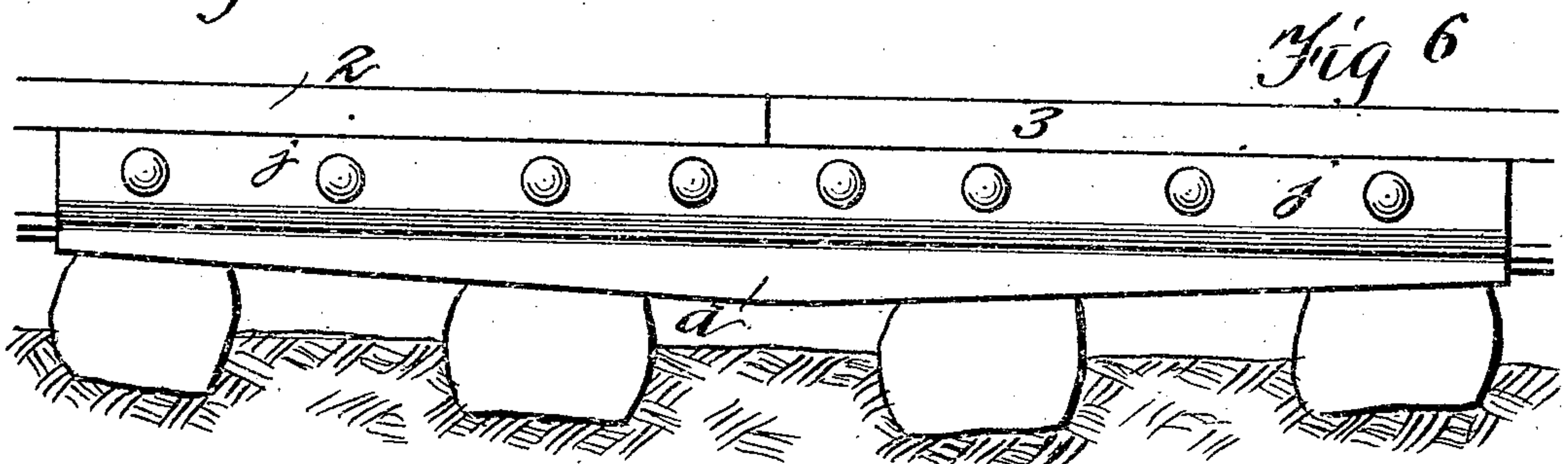
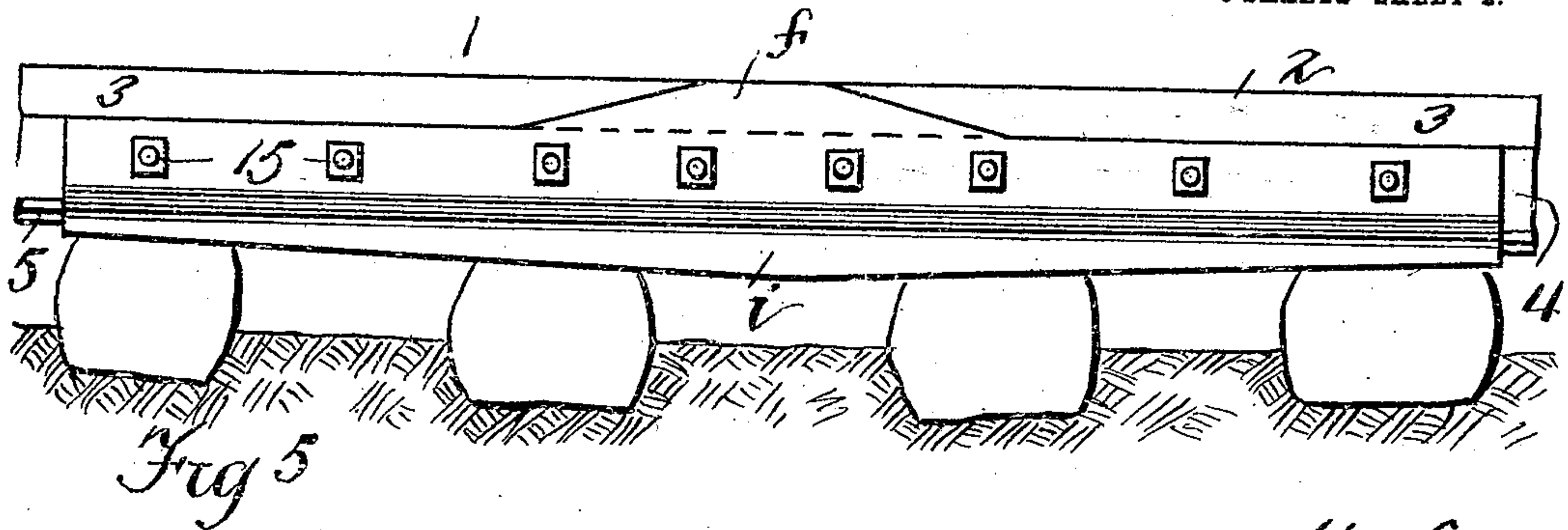
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

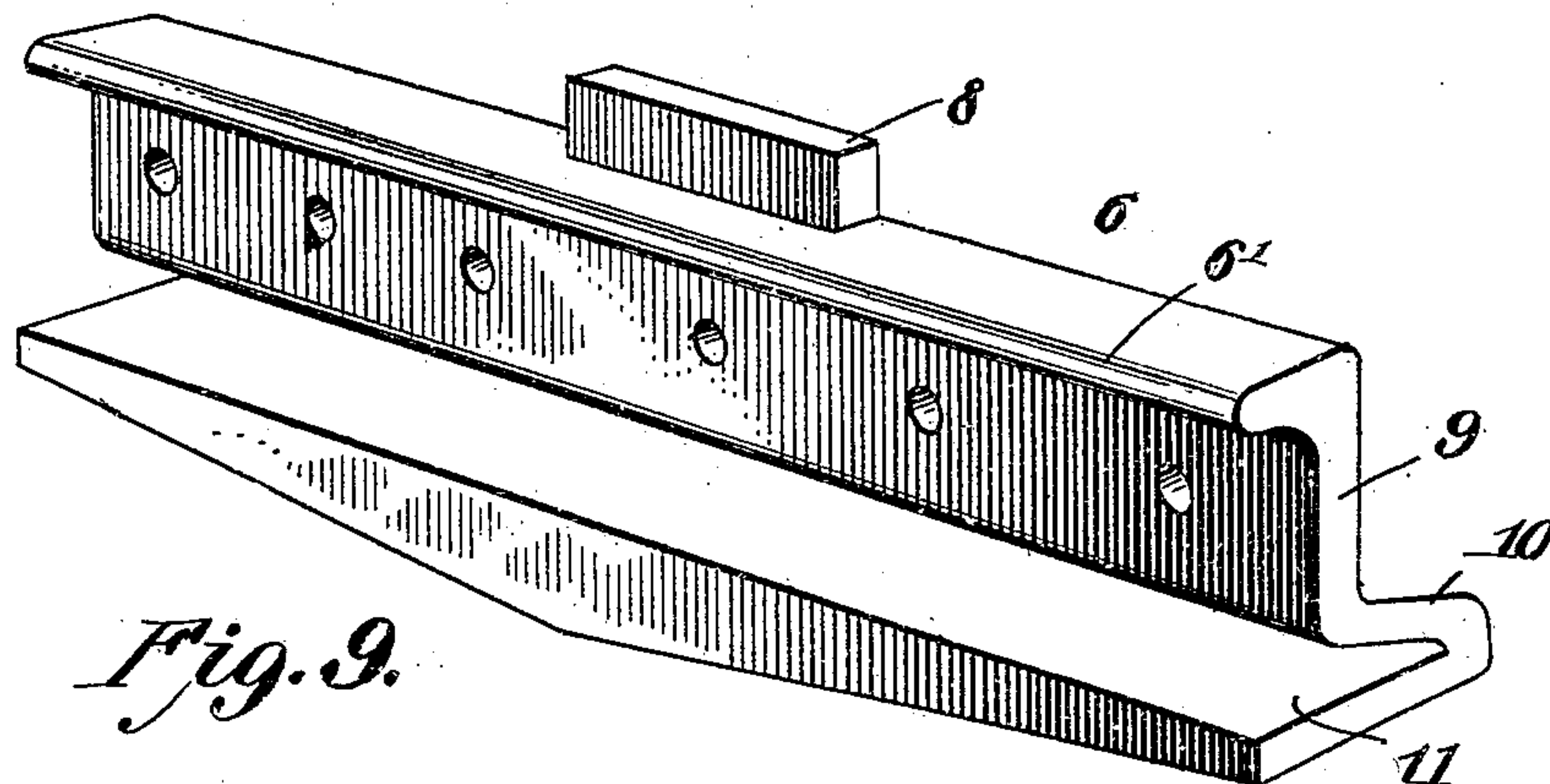


Fig. 9.

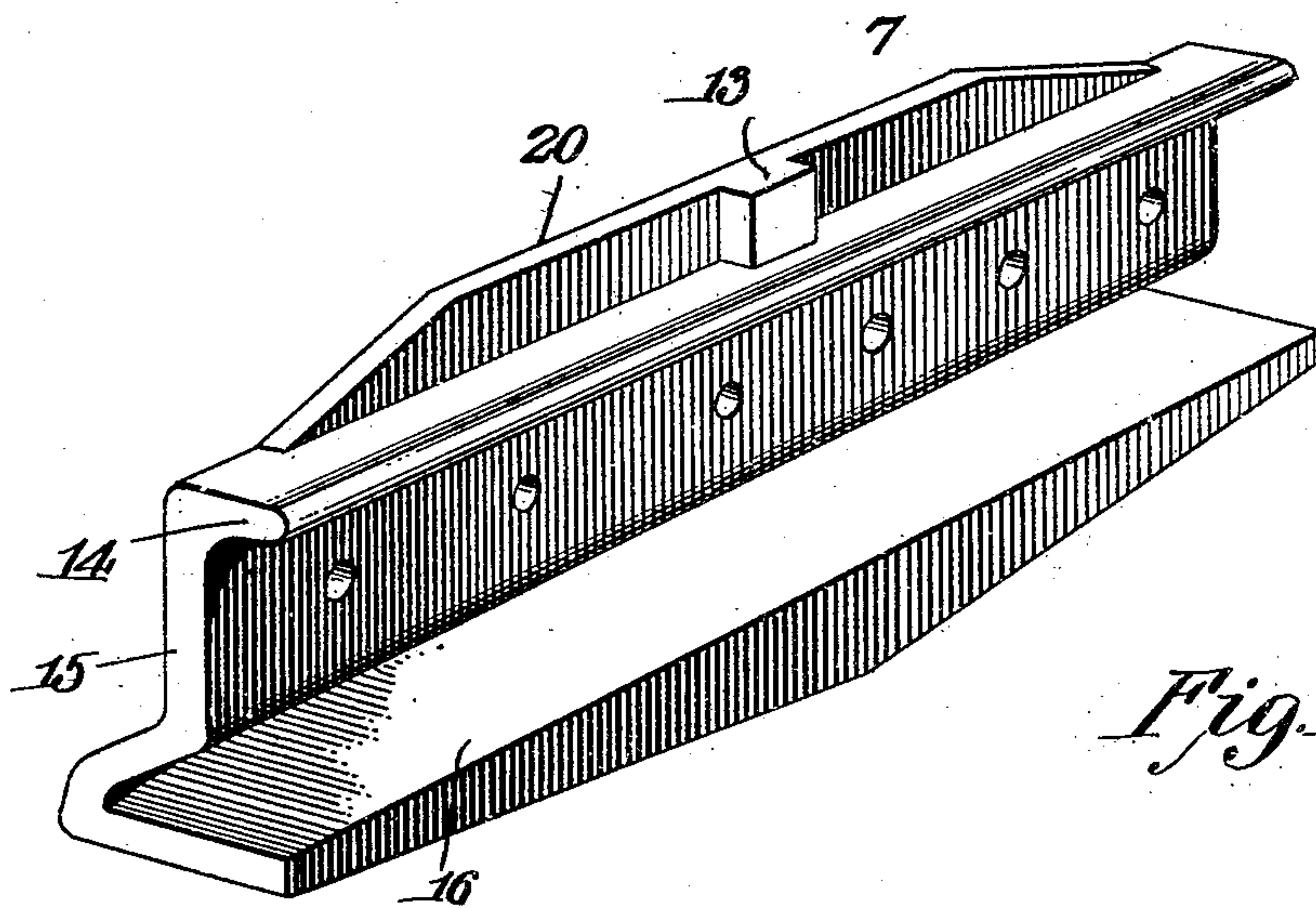


Fig. 10.

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RAIL-JOINT.

958,602.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed August 4, 1908. Serial No. 446,885.

To all whom it may concern:

Be it known that I, WILLIAM P. DAVIS, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail joints or splice means for railroad rails; and the primary object of the same is to provide a joint having structural features which will overcome the defects of the ordinary joints as to noise and jar incident to car wheels moving thereover and loosening the parts of the joint itself, thereby obviating the danger to the rails and injury to the rolling-stock, as well as inconvenience and jar to the traveling public.

A further object of the invention is to embody in a railroad joint a construction which will so unite the rails as to make them practically continuous, and to prevent depression of the joints occurring between the ties.

With these objects in view the invention resides in the novel construction of railway joints hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a contiguous pair of rail ends connected in accordance with the present invention. Fig. 2 is a similar view looking from the opposite side of the rails. Fig. 3 is a top plan view. Fig. 4 is a transverse sectional view upon the line 4—4 of Fig. 3 upon an enlarged scale. Fig. 5 is a side elevation of a slight modification. Fig. 6 is a similar view of Fig. 5, looking from the opposite side of the rails. Fig. 7 is a top plan view of Fig. 5. Fig. 8 is a transverse sectional view upon the line 8—8 of Fig. 7, taken upon an enlarged scale. Fig. 9 is a perspective view of the splice member 6. Fig. 10 is a similar view of the splice member 7.

In the accompanying drawings, and referring particularly to Figs. 1 to 4 inclusive, the numerals 1 and 2 designate the rail sections. These rails 1 and 2 are constructed in the ordinary manner, each being provided with the usual head 3, web 4 and base flange 5. The meeting ends of these rail sections 1 and 2 have the faces of their heads cut away longitudinally so as to provide an elongated opening or pocket 8' upon one of their faces and a reduced opening or pocket 12 upon their opposite faces. The rail joint

is provided with two splice bars or members designated by the numerals 6 and 7. The member 6 is provided with a base portion 11 having its upper portion or face extending horizontally its entire length while its under face inclines from each of its ends toward its center so as to render the middle of the base of a greater strength than the remaining portions thereof. The member 6 is provided with an overlying flange 10 integrally formed with the base 11 and is also provided with a vertically extending integrally formed splice bar or web 9 having its upper portion provided with a longitudinally extending bead or lip 6'. The upper horizontal wall of the web or plate 9 is centrally provided with a vertical, integrally formed longitudinally extending offset or locking member 8. This member 8 has its inner face positioned a suitable distance away from the edge of the bead 6' and the said member is adapted to be positioned within the cut away portion or pocket 8' formed upon one of the faces of the rail members 1 and 2. When the locking member 8 is positioned within the recess or pocket of the rail sections it will be noted that the lip or bead 6' engages directly beneath the heads of the rail sections while the space between the overlying flange 10 and the base 11 engages the base flange upon this side of the rail. It will be further noted that when the member 6 is so positioned the reinforced central portion of the face 11 is positioned directly below the meeting ends of the rails. The cut away portions of the faces of the rail sections 1 and 2 forming the pockets 8' do not project entirely to the webs 4 of the said rails so that the bead 6' contacts beneath the head of the rail the entire length of the member 6. The splice member 7 is also provided with a horizontally straight upper face upon its base 16, while the lower face of this base portion inclines from the end toward the center so as to reinforce and strengthen the said central portion of the base.

The numeral 15 designates an integrally formed overlying flange from which is vertically extended the web or splice plate of the said member 7. This web has its upper portion or head provided with an inwardly extending bead or lip 14 and its outer face or edge provided with an upstanding flange 20 which is centrally provided with an inwardly extending tongue 13. The upper

wall of the flange 20 extends a suitable distance in opposite directions away from the tongue 13 and the opposite edges of the said flange 20 are inclined to their point of connection with the top of the member provided with a bead or lip 14. The tongue 13 is positioned a suitable distance away from the edge of the bead or lip 14 and is adapted to engage the recess or pocket 12 provided by the rail sections 1 and 2. When this tongue 13 is thus positioned, it will be noted that the bead or lip 14 rests beneath the heads of the rail sections while their base flanges are received within the opening provided between the base 16 and the overlying flange 15 of the member 7. The space between the tongue 13 and the edge of the bead or lip 14 engages a suitable shoulder 7' formed between the vertical cut away faces of the rails and the webs of said rails. The web members or plates of the splicing members 6 and 7, as well as the webs of the rail members 1 and 2 are each provided with alining openings adapted for the reception of suitable securing elements whereby the members 6 and 7 are effectively retained upon the rail sections 1 and 2.

From the above description, taken in connection with the accompanying drawings, it will be noted that the device just described provides a simple, strong and effective means for joining the contiguous meeting ends of the pair of rails, one which prevents lateral or longitudinal movement of the said rails, one which effectively strengthens the rails at their point of meeting so as to prevent the sagging of the said rails and also overcoming the defects as to noise and jar incident to car wheels passing thereover.

In Figs. 5 to 8 inclusive I have illustrated a slightly modified form of my improved rail splice. In these figures a pair of splice members 6^a and 7^a are employed. The splice member 6^a is provided with an inclined head *c* adapted to engage beneath the heads of the rail sections. The member is also provided with a base flange *d* adapted to engage beneath the base flange of the rail sections and an overhanging inclined flange *e* adapted to engage the upper face of the base flanges.

The member 7^a is provided with a centrally projecting inclined portion *f* and is also provided with a longitudinally extending bead *g* adapted to engage beneath the heads of the rail sections. The member 7^a is also provided with an inclined flange *h* adapted to engage the upper faces of the

base flanges and a base portion *i* adapted to extend beneath and engage the under face of the base flanges of the rails. The members 6^a and 7^a, as well as the webs of the rail sections are provided with alining slots or openings adapted for the reception of suitable connecting elements *j*.

It will be noted by reference to Figs. 5 and 6 of the drawings, that the base portions *d* and *i* of the members 6^a and 7^a are enlarged at their central point and inclined toward their ends, thus providing a reinforcement for the members at the point where the rail sections are connected.

Having thus fully described the invention what is claimed as new is:

The combination with the meeting ends of a pair of rails, said rails having one side of their heads cut away to provide a comparatively small pocket, the inner wall of the pocket terminating a distance from the web of the rail, the opposite heads of the rail being also cut away to provide a comparatively large pocket, the inner walls of the said pocket also terminating a distance away from the webs of the rails, splice bars for the rails, the splice bar upon one face of the rail being provided with a flange engaging portion having its bottom face inclined from its center toward its ends, the said member being further provided with an overlying flange and a vertical extension terminating in a horizontal portion provided with a longitudinally extending bead, the outer edge of the horizontal portion being provided with an elongated vertical extension, the said extension being provided with a central tongue adapted to fit within the smaller pocket provided by the rails, the opposite splice member provided with the base portion inclined from its center toward its ends, the said member being provided with a flange overlying the base portion and a vertical extension terminating in a horizontal portion provided with a longitudinal bead, and the said horizontal portion being provided with a locking offset adapted to engage the larger pocket provided by the rails, and means for connecting the splice members and the rails.

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

WILLIAM P. DAVIS.

Witnesses:

MELVIN RICE,
J. S. DUDNEY.