

No. 886,541.

PATENTED MAY 5, 1908.

E. R. ROBINSON.
RAIL.

APPLICATION FILED JULY 24, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

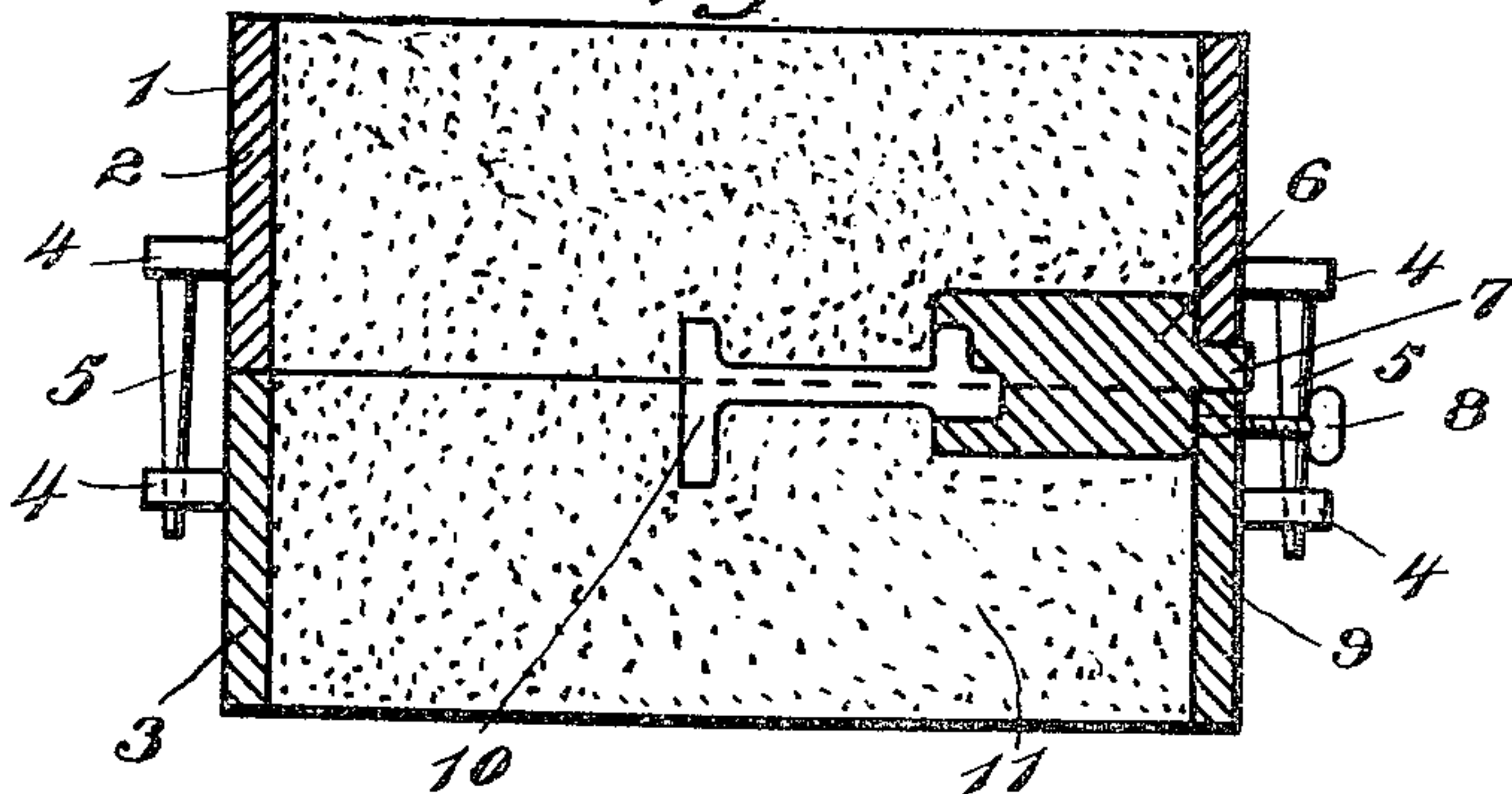


Fig. 2.

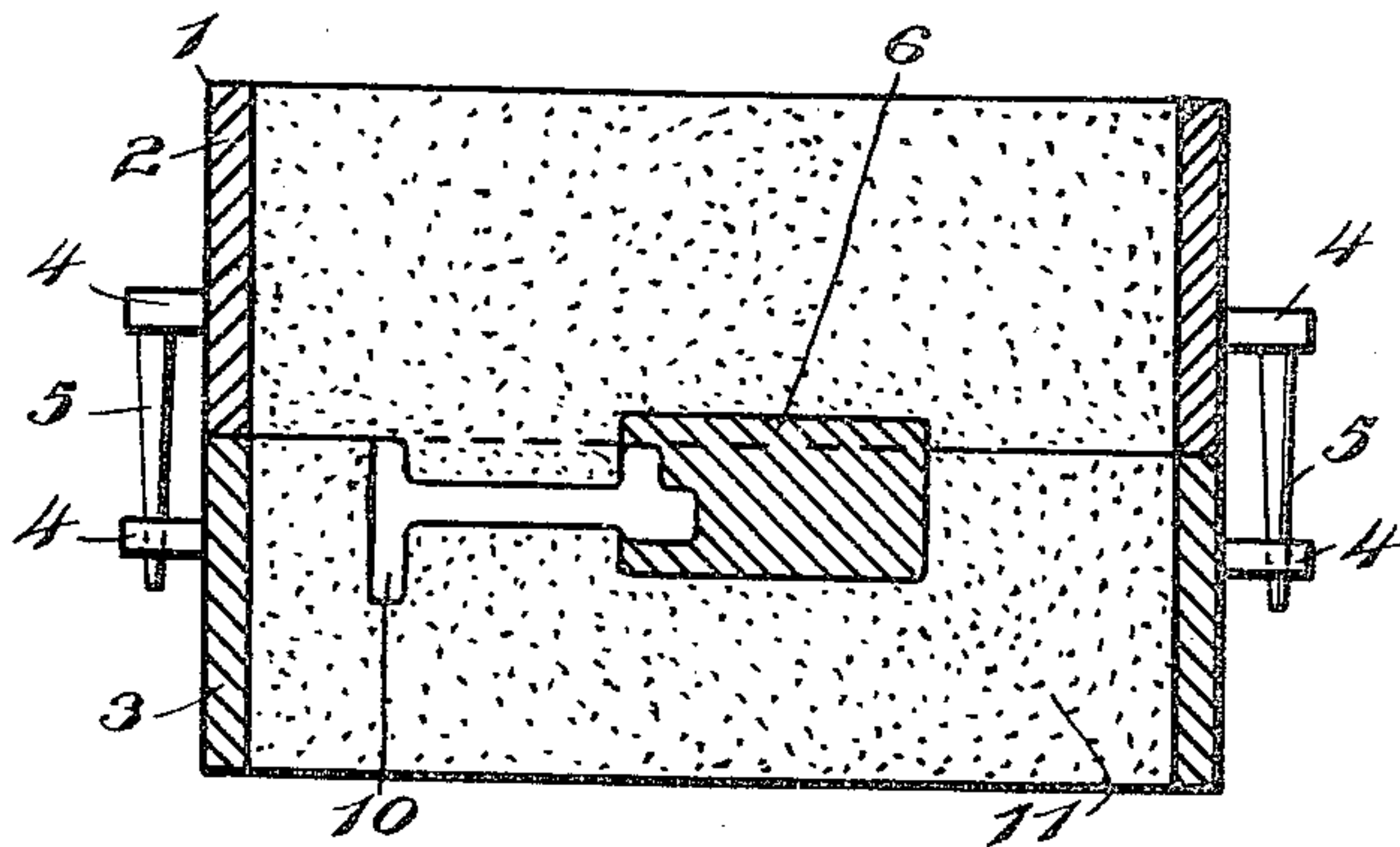
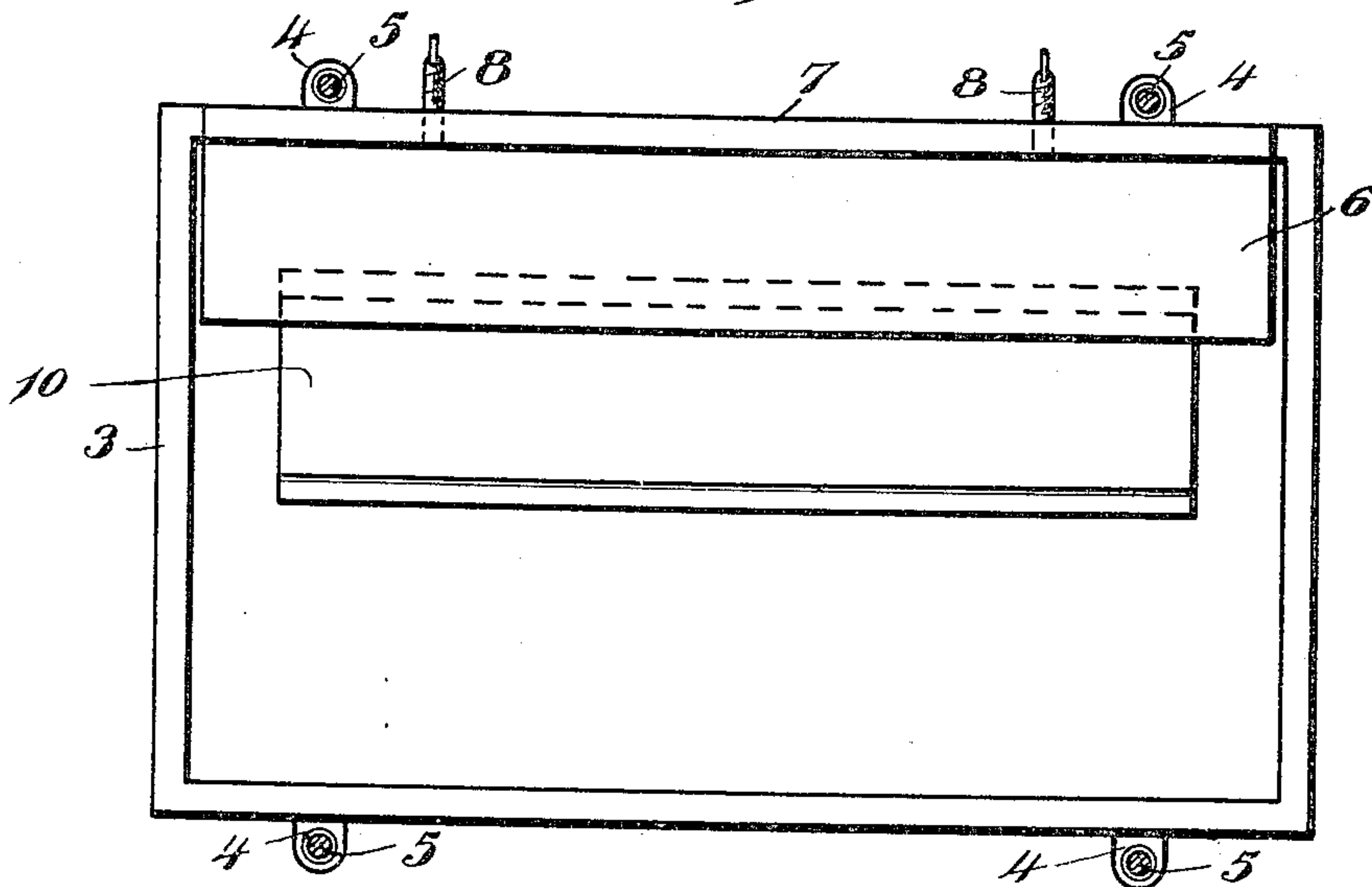


Fig. 3.



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2 SHEETS—SHEET 2.

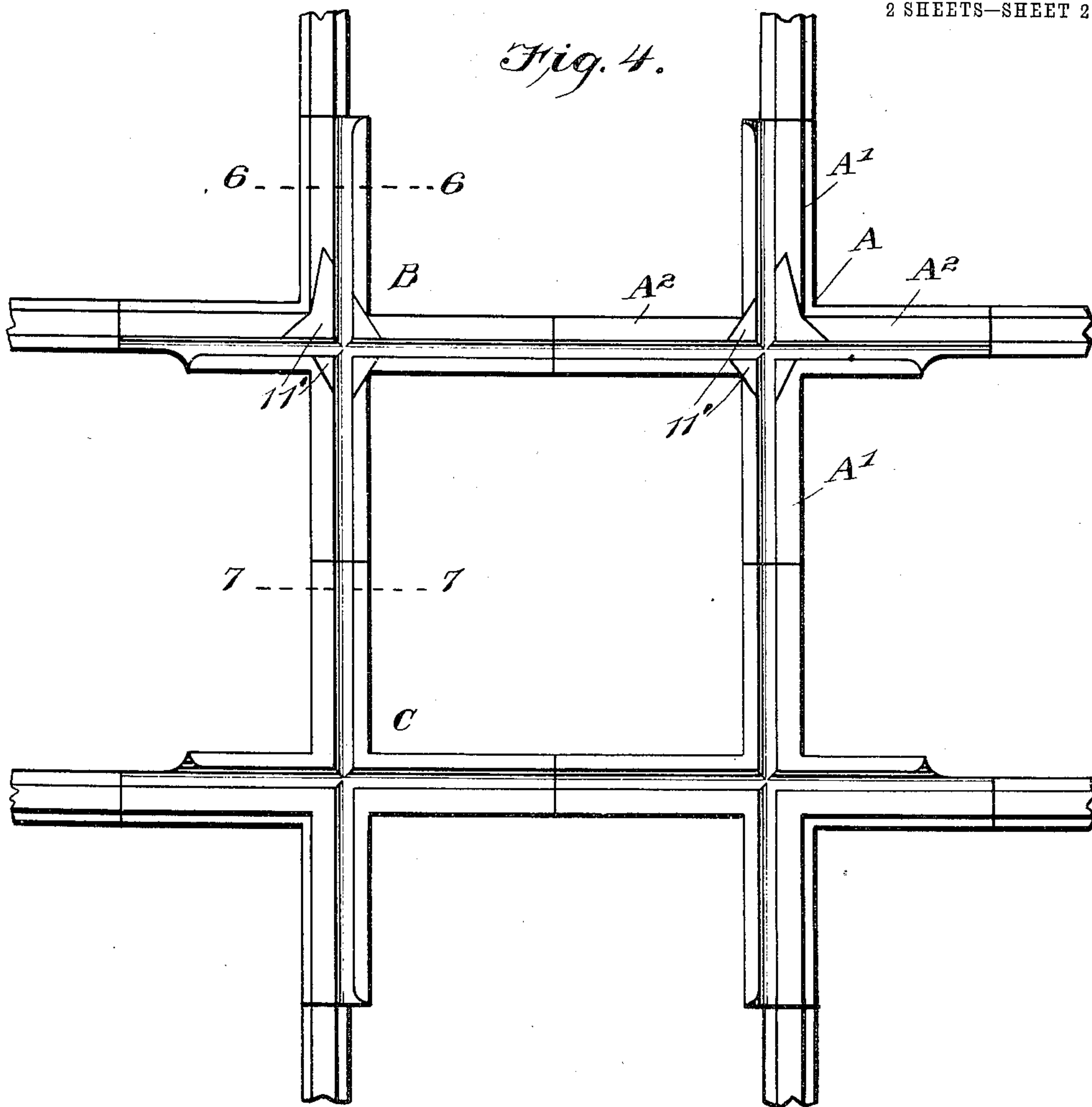


Fig. 6.

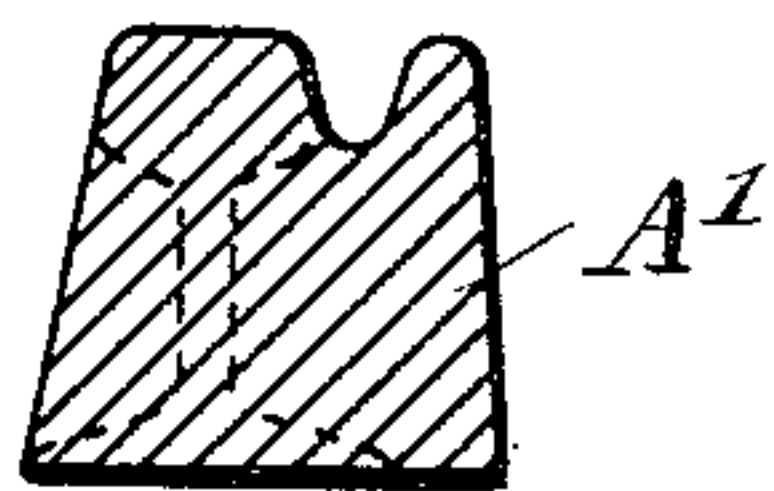


Fig. 5.

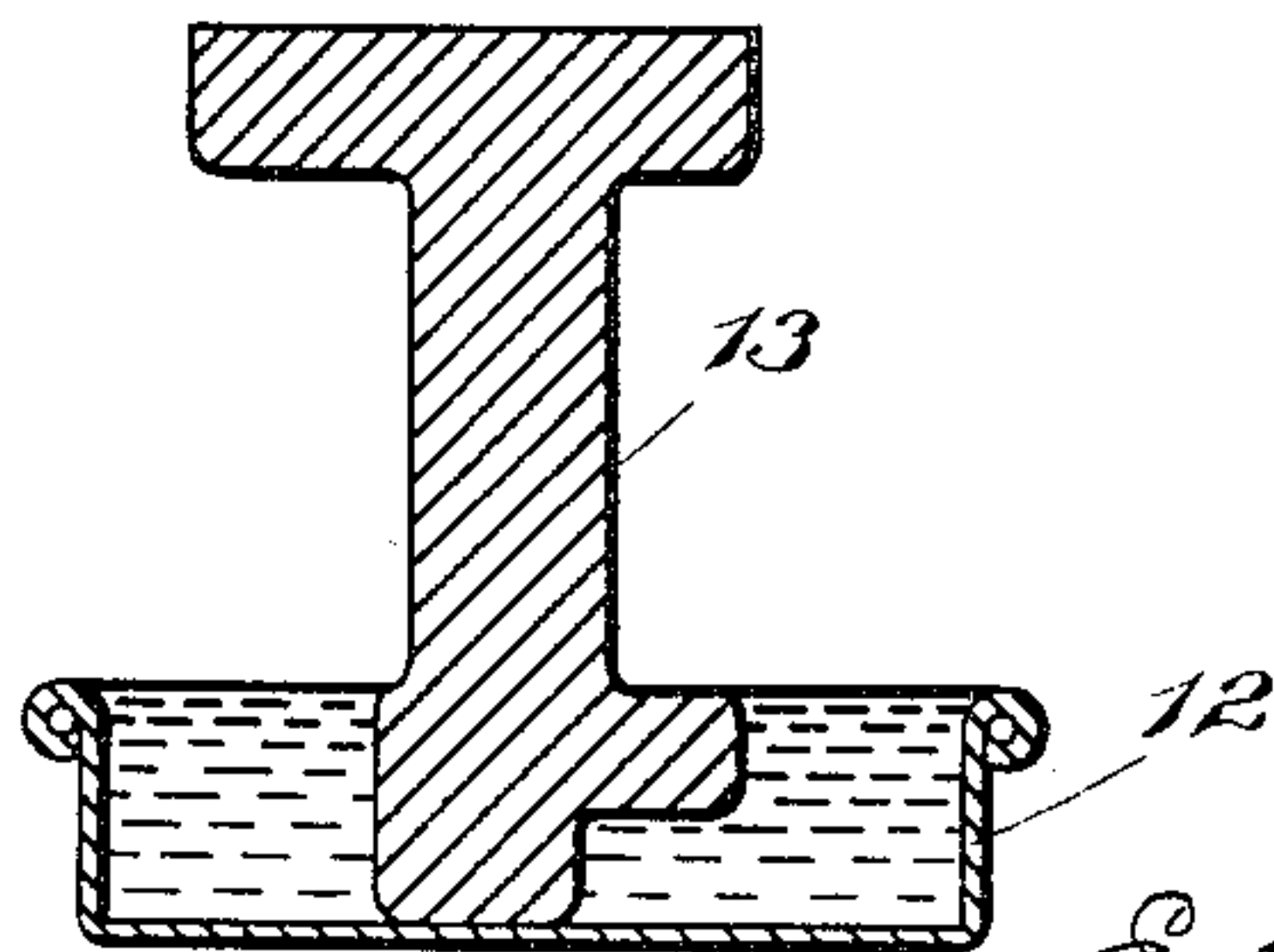
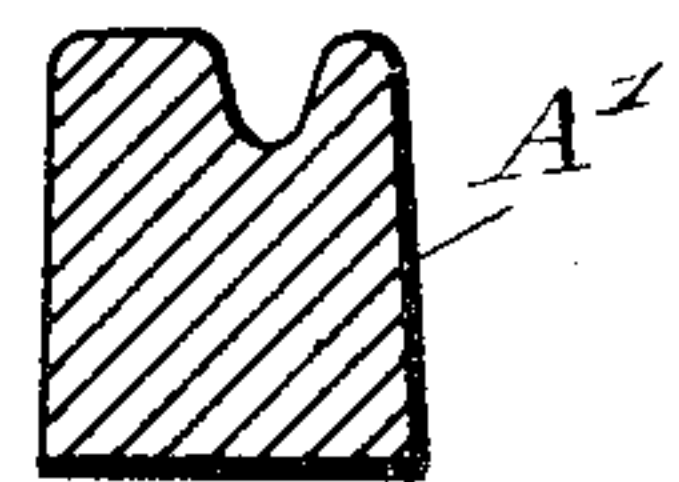


Fig. 7.



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UNITED STATES PATENT OFFICE

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RAIL.

No. 886,541.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed July 24, 1906. Serial No. 327,478.

To all whom it may concern:

Be it known that I, ELBERT R. ROBINSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Rails; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to rails, switches, crossings, frogs and the like for railroads and has for its object to provide a rail, switch, frog or crossing wherein the face or tread of the same is provided with a chill and the web and flange allowed to remain soft, as of course is obvious I can chill the face or tread and also the flange of the rail leaving the web soft. The purpose of thus chilling a portion of the rail is in order to harden the tread and wearing surface thereof in such manner that it will withstand the continual passage of the heavy rolling stock now commonly used on railroads. By so chilling the face or tread of the rails and the like I am able to produce a rail which is so far superior to the usual rails now in use that it will greatly outwear and outlast the usual rails.

On November 14, 1904, I made application for Letters Patent of the United States covering the subject-matter of this application, which prior application was number 232,759.

Referring to the accompanying drawings: Figure 1 is a vertical section through a mold employed for chilling a rail, the chill being fitted between the top and bottom of the mold. Fig. 2 is a similar view showing chill centered within the mold. Fig. 3 is a top plan of lower section of mold showing chill and rail in position. Fig. 4 is a plan view of the crossing. Fig. 5 is a transverse sectional view through a pan and rail illustrating method of chilling the rail. Fig. 6 is a transverse sectional view taken on line 6—6 of Fig. 4. Fig. 7 is a transverse sectional view taken on line 7—7 of Fig. 4.

Like numerals of reference indicate the same parts throughout the several figures in which:

1 indicates the mold which comprises the upper member 2 and the lower member 3, said members 2 and 3 being provided as shown with projecting lugs 4 for accommodating the pegs 5.

6 indicates the chill which as shown in Fig. 1 is provided with an extension 7 which is fitted between the upper section 2 and the lower section 3 of the mold in order to rigidly hold the chill in position, a thumb screw 8 passing through the side 9 of the lower section 3 and engaging the chill 6 being also provided.

10 indicates the rail which as shown in Figs. 1 and 2 is embedded in the sand 11.

Referring now particularly to Fig. 2 it will be seen that the chill 6 is not engaged by or fitted between the upper and lower section of the mold, but is embedded centrally in the sand as shown.

Referring now to Fig. 4 which illustrates a crossing, it will be seen that the same may be constructed as shown at A having the intersecting rails A^1 and A^2 cast integral, which corner of the crossing may be so constructed that when placed in position it forms a complete crossing, or the two corners B and C may be cast integral as shown, or if desired the entire crossing may be formed integral or cast in one piece as shown in Fig. 4. The corners 11' are chilled in order to excessively harden these points which are subjected to a great shock by reason of the wheels of the rolling stock striking the crossing at the intersection of the tracks, or the entire crossing can be chilled if desired.

Referring now to Fig. 5 which illustrates a method of chilling, 12 indicates a pan filled with water and 13 indicates the rail having the face or flange thereof immersed in the water.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent of the United States is:

1. A railroad crossing having its intersecting rails cast integral, the treads or faces of the rails being chilled while in the mold and

the balance of the rails soft, substantially as described.

2. A railroad crossing having two intersecting rails cast integral, the treads or faces
5 of the rails being chilled in the mold, substantially as described.

3. A rail cast in the form and shape in which it is to be used and having its face or

tread chilled while in the mold, substantially as described.

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

ELBERT R. ROBINSON.

Witnesses:

C. M. FORREST,

E. HUGH DUFFY.