

No. 756,088.

PATENTED MAR. 29, 1904.

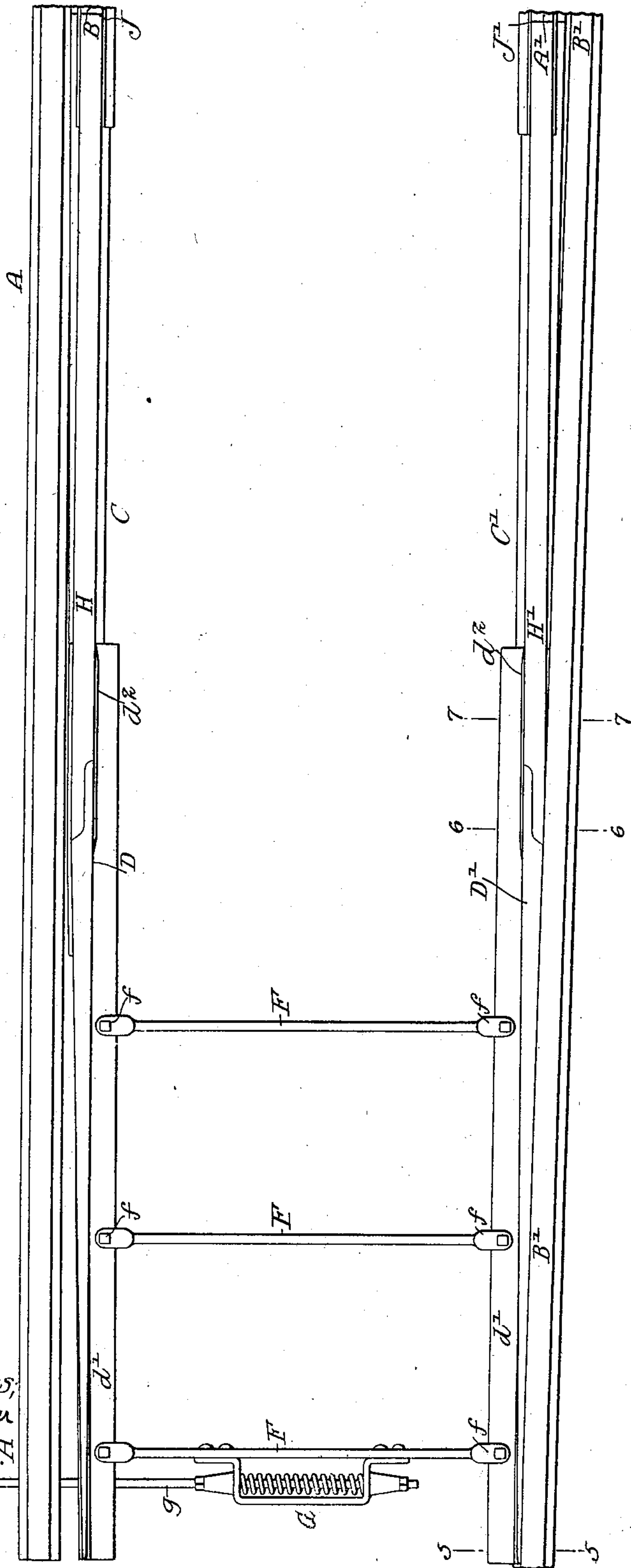
W. WHARTON, JR. & V. ANGERER.
RAILWAY SWITCH.

NO MODEL.

APPLICATION FILED DEC. 30, 1903.

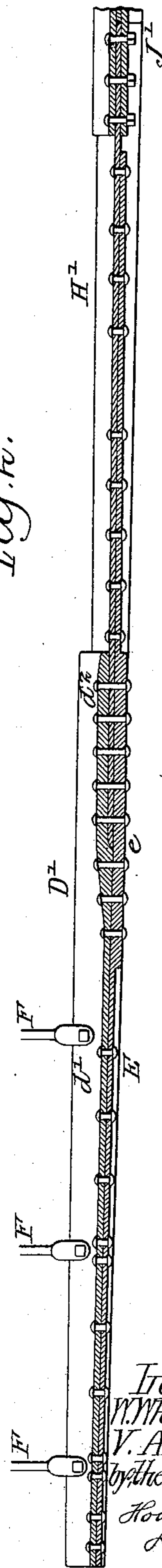
2 SHEETS—SHEET 1.

Fig. 1.



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Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

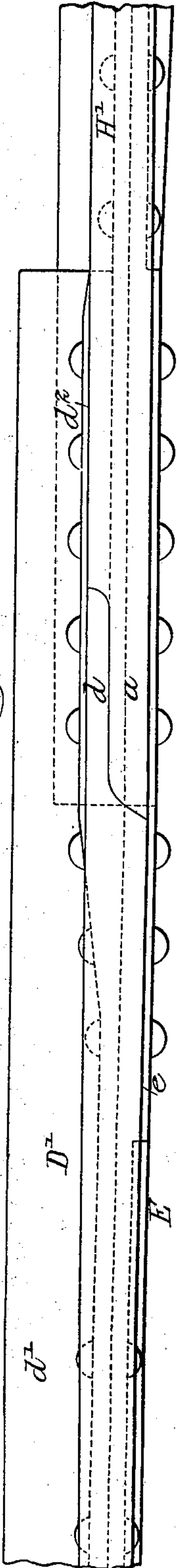


Fig. 4.

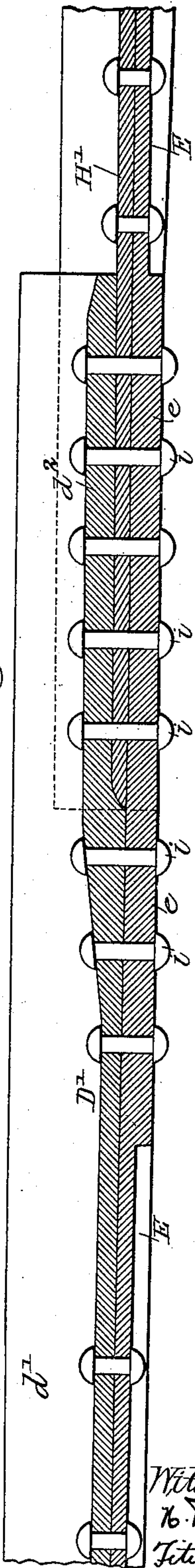


Fig. 5.

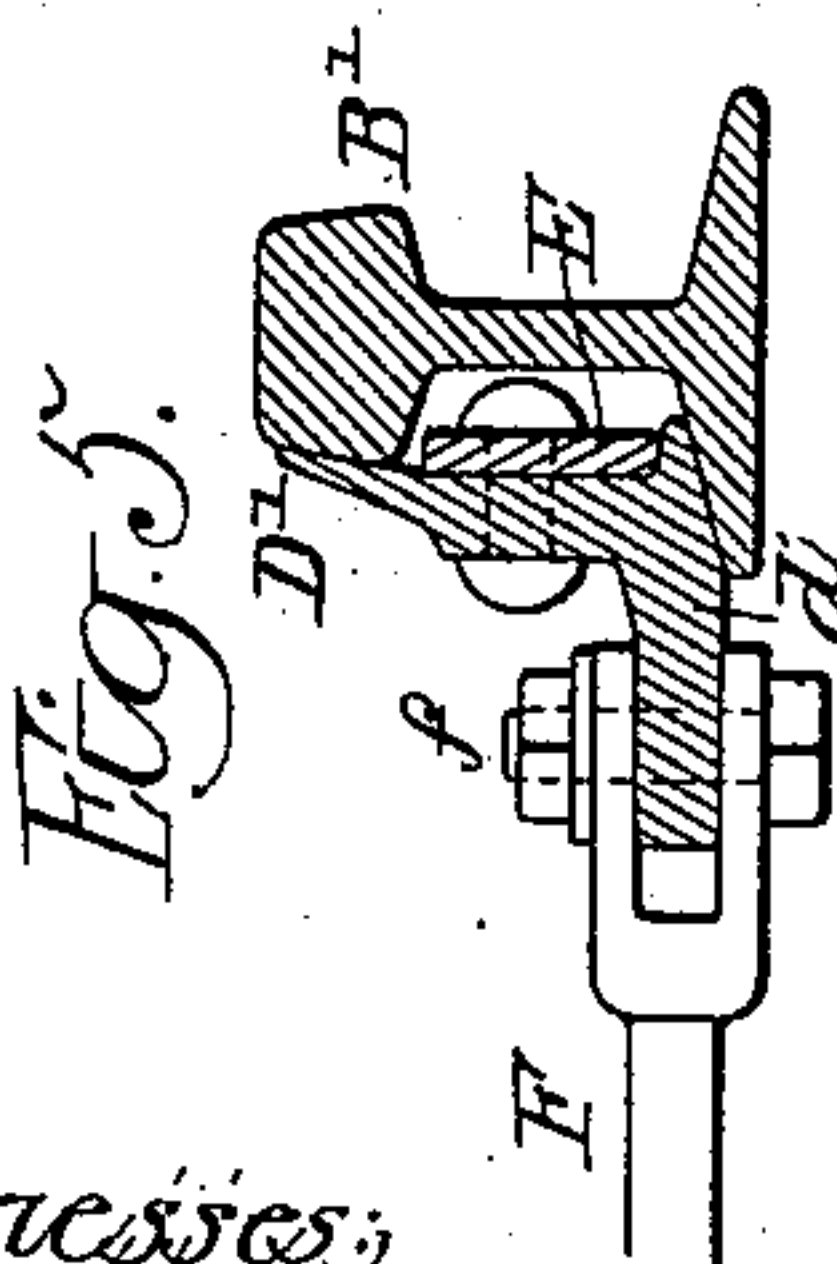


Fig. 6.

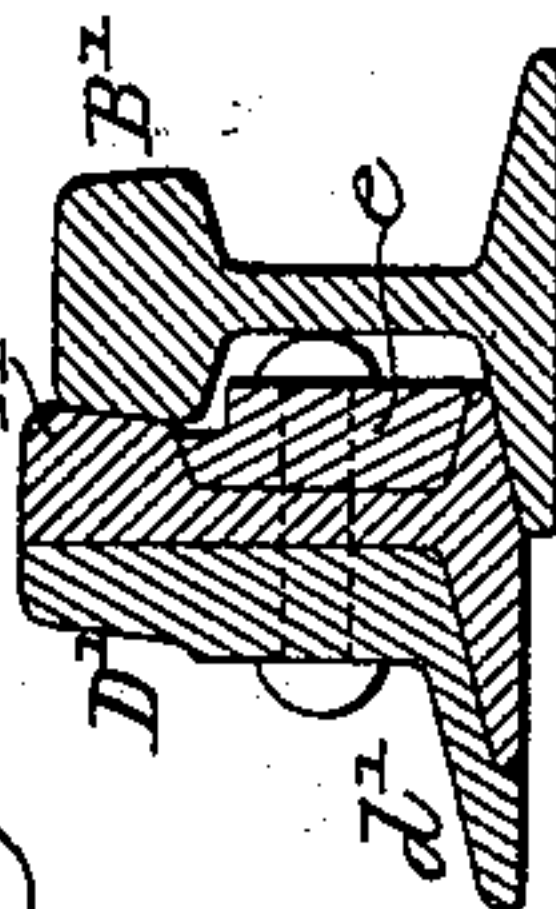


Fig. 7.

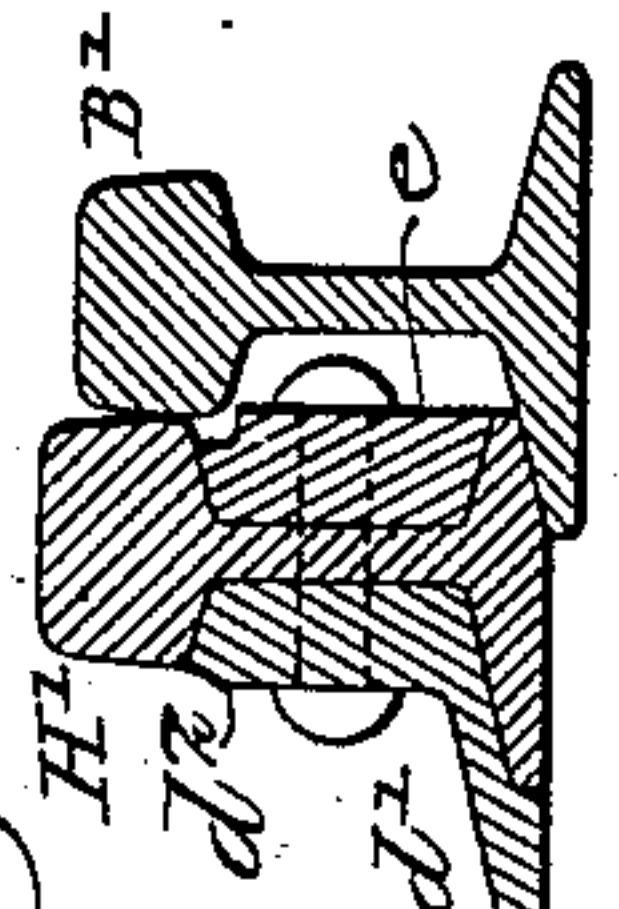
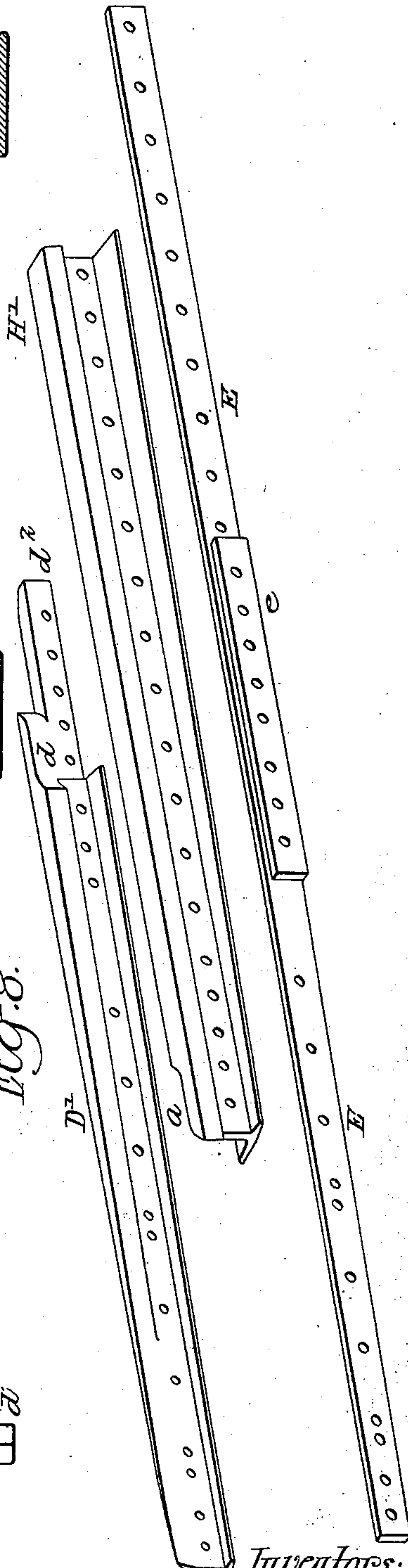


Fig. 8.



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UNITED STATES PATENT OFFICE.

WILLIAM WHARTON, JR., OF PHILADELPHIA, AND VICTOR ANGERER, OF RIDLEY PARK, PENNSYLVANIA, ASSIGNORS TO WILLIAM WHARTON, JR., & COMPANY, INCORPORATED, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 756,088, dated March 29, 1904.

Application filed December 30, 1903. Serial No. 187,136. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM WHARTON, Jr., a resident of Philadelphia, and VICTOR ANGERER, a resident of Ridley Park, Pennsylvania, citizens of the United States, have invented certain Improvements in Railway-Switches, of which the following is a specification.

The main object of our invention is to lengthen the life of the switch-rails of a railway-switch, a further object being to so make the switch-rail that its point can be removed and renewed, the invention comprising certain details of construction hereinafter described.

In the accompanying drawings, Figure 1 is a plan view of a railway-switch illustrating our invention. Fig. 2 is a sectional plan view of one of the switch-rails. Fig. 3 is an enlarged plan view of a portion of the switch-rail. Fig. 4 is an enlarged sectional plan view of that portion of the rail shown in Fig. 3. Fig. 5 is a transverse section on the line 5 5, Fig. 1. Fig. 6 is a transverse section on the line 6 6, Fig. 1. Fig. 7 is a transverse section on the line 7 7, Fig. 1; and Fig. 8 is a perspective view of certain detached parts illustrating our invention.

A and A' are the rails of the main track, and B and B' are the rails of the siding or turn-out.

The type of switch illustrated is what is known as a "point-switch," the switch-rail C being hinged at J in continuation of the siding-rail B and the switch-rail C' being hinged at J' in continuation of the main rail A'. Each of the said switch-rails has a tapered point at its free end, so that when required the tapered point may be moved up to and lie against the inner side of the adjacent fixed rail of the track, one position of the switch being shown in Fig. 1.

The thin tapering points of point-switches are subjected to excessive wear, and consequently are worn out much sooner than the other parts of the switch-rails, and when the

point is worn out the whole rail must be discarded and be replaced by a new one.

We overcome the above objection by making each switch-rail in two pieces. The body-pieces H H' are ordinary rails, while the point-pieces D D' are preferably made of hard metal, such as manganese steel, and they are rigidly secured to the body-pieces H and H' in the manner described hereinafter.

We will describe the invention in connection with the switch-rail C'. The body portion of this rail in the present instance is an ordinary T-rail having its head partially cut away, as at *a*, Fig. 8, for a certain distance from one end to fit a correspondingly-shaped end *a'*, Fig. 8, of the point portion D', so that when the two portions are coupled together the joint between the body portion H' and the pointed portion D' will not extend directly across the head. The shape of this joint may be modified, as desired, the object being to do away with a right-angle transverse joint. The point portion D' is preferably provided with a flange *d'*, extending the full length of the portion D', as illustrated in the drawings, and in order to strengthen the joint between the point portion D' and the body portion H' we extend the under part of the point portion D' beyond the joint, so that this extended under part *d''* will lie under the head of the T-rail, which constitutes the body portion H', and be bolted or otherwise firmly secured to the body portion, as shown in Figs. 2, 3, and 4.

E is a reinforcing bar or plate which is secured to the point portion D' and also to the body portion H' and is of such a length as to materially strengthen the entire switch-rail. It is preferably increased in thickness at *e* opposite the joint between the body portion H' and the point portion D'.

When the parts are assembled, the web of the T-rail constituting the body portion H' is clamped between the extension *d''* of the point portion and the thickened portion *e* of the plate E. We have shown rivets *i* attaching the parts together; but it will be understood that other

means of fastening may be employed without departing from our invention.

In order to laterally strengthen switches of this character and to simplify their construction, we make the flange d' of the point portion D' of such a width that it not only strengthens the point, but we can also secure the tie-bars F directly to the flange d' by means of the bolts or pins f , said tie-bars being forked at each end to receive the flanges.

In the drawings we have shown the position of the lateral flange d' to be at the lower or bottom part of the point portion D'; but it may be desirable in some instances to raise the position of this flange, and we therefore do not limit our invention or confine ourselves to the position thereof shown in the drawings.

The point portion D' being easily detached from the body portion H', it can be taken off when worn out and be replaced by a new point portion without the expense of renewing the entire switch-rail.

By making the point portion D' of the switch-rail of a very hard metal, such as manganese steel, the thin and relatively delicate part of the same at and near the extreme point will resist wear for a much longer time than usual, while the remainder or body portion H' may be made of Bessemer steel or other less expensive material.

The mechanism for throwing the switch can be attached thereto by any of the usual methods. We have shown in the drawings a switch-rod g , which is coupled to one of the tie-bars through a spring-box G; but other suitable

means of attachment may be used without departing from our invention.

We claim as our invention—

1. The combination in a railway-switch, of a switch-rail made in two sections, and a reinforcing bar or plate secured to the web of the point-section and to the web of the body-section, substantially as described.

2. The combination in a railway-switch, of the body-section of a switch-rail, a point-section having a prolongation beyond the joint extending longitudinally along the web of the body-section, a reinforcing bar or plate on the opposite side of the body-section and extending beyond the joint along the side of the point-section, and means for securing the several parts together, substantially as described.

3. The combination in a railway-switch, of the body portion of a switch-rail, a point-section having a prolongation extending beyond the joint along the web of the body-section, a reinforcing bar or plate on the opposite side of the body-section and extending beyond the joint along the side of the point-section and increased in thickness at the joint, and means for securing the several parts together, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM WHARTON, JR.
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Witnesses:

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