

(No Model.)

2 Sheets—Sheet 1.

F. KRUCKEBERG.
HOSE BRIDGE.

No. 504,530.

Patented Sept. 5, 1893.

Fig. 2.

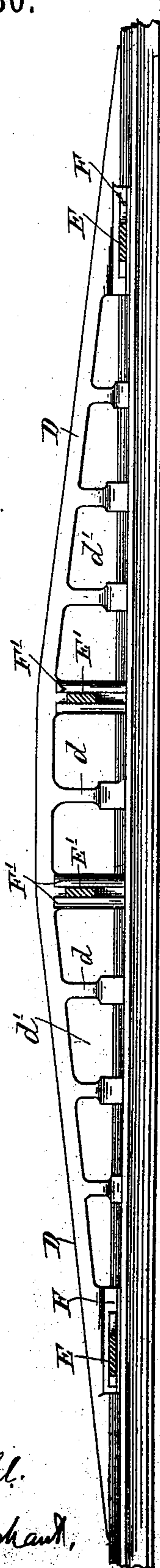
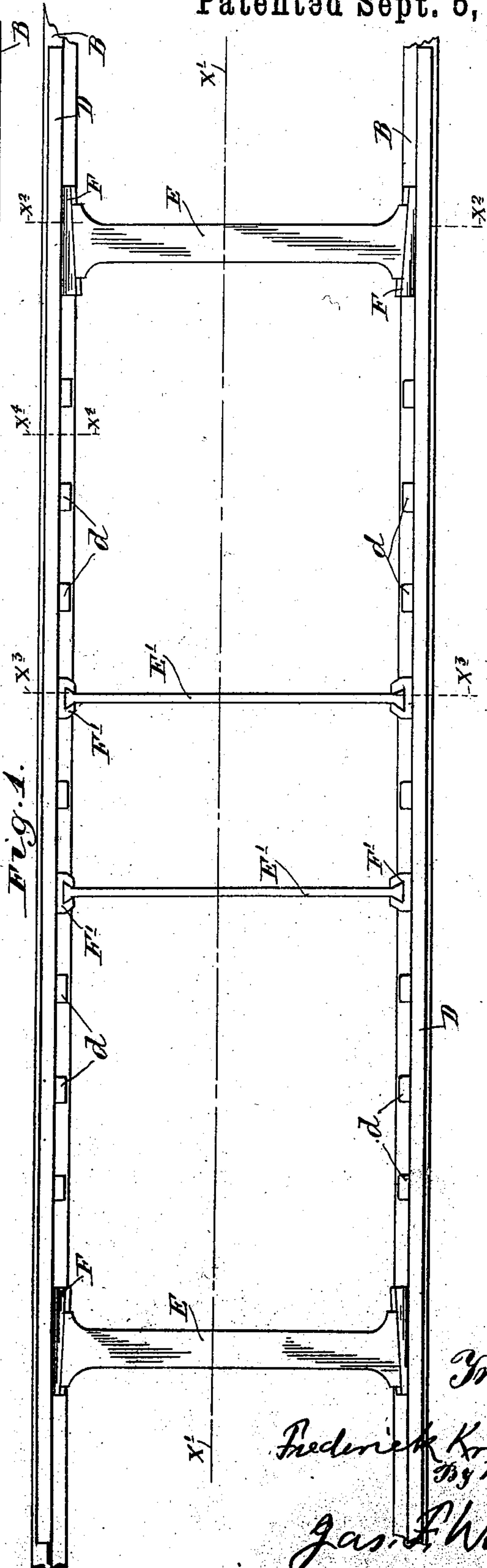


Fig. 1.



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Fig. 6.

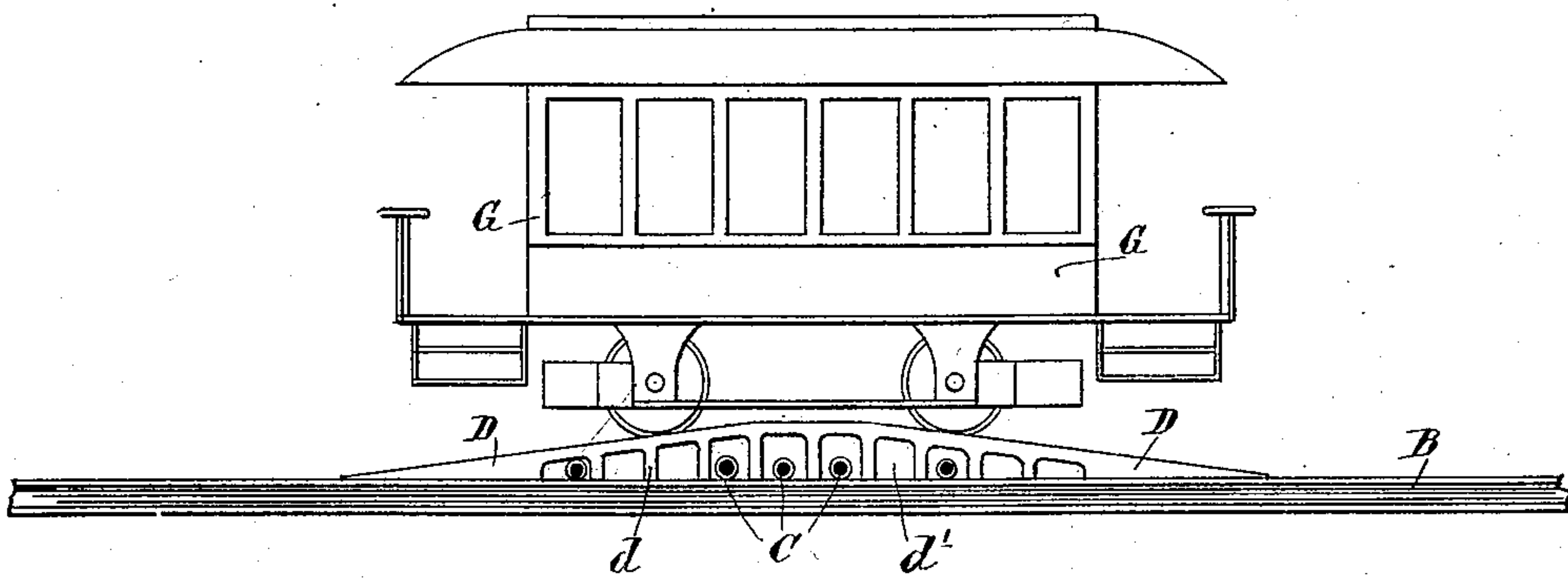


Fig. 3.

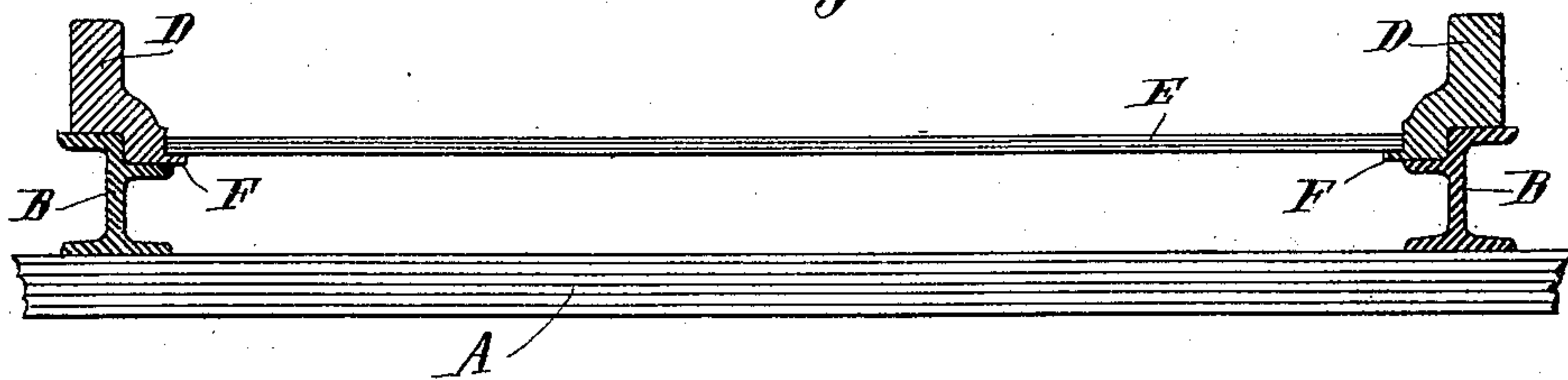
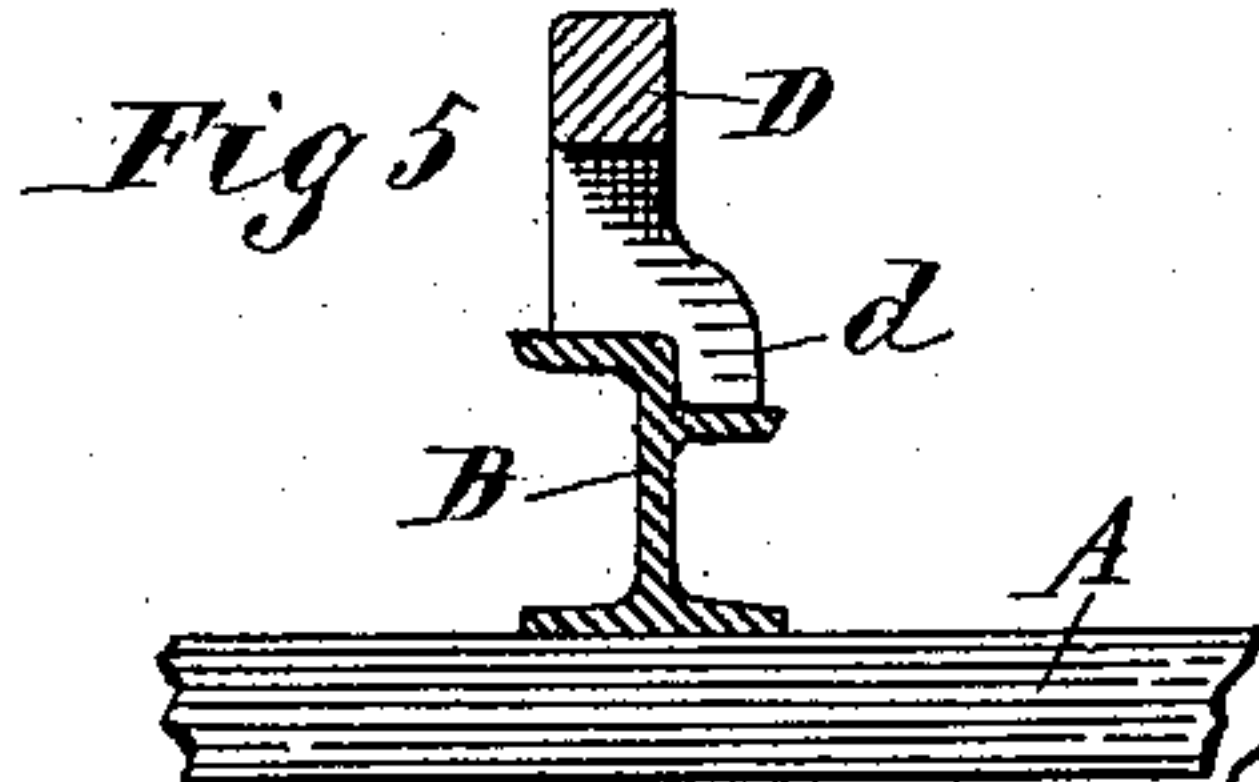
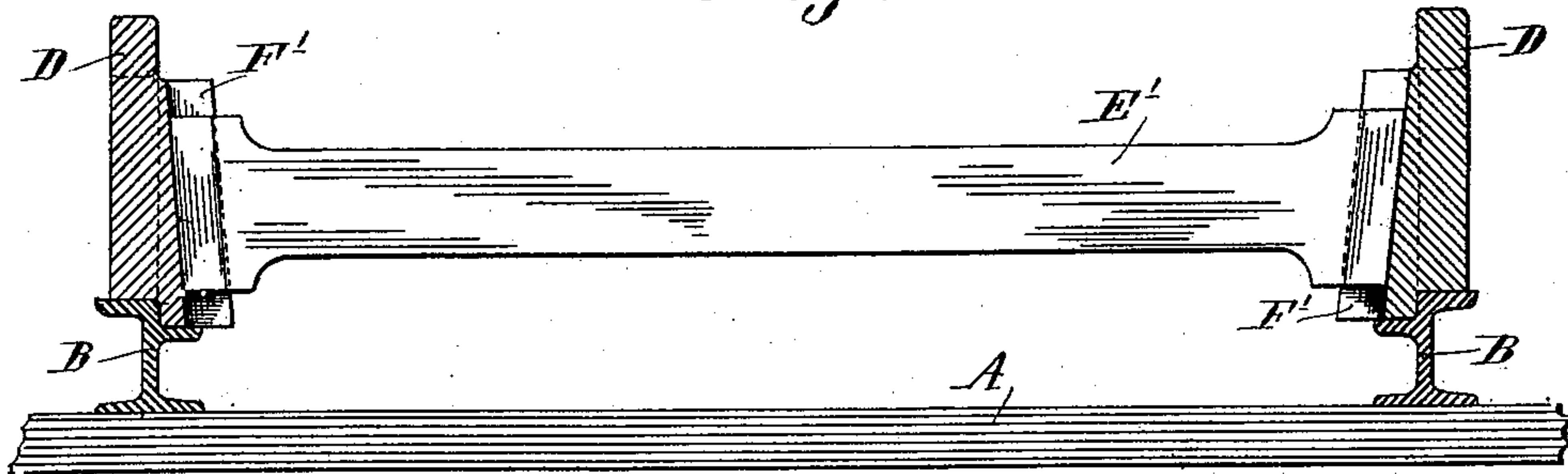


Fig. 4.



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UNITED STATES PATENT OFFICE.

FREDERICK KRUCKEBERG, OF MINNEAPOLIS, MINNESOTA.

HOSE-BRIDGE.

SPECIFICATION forming part of Letters Patent No. 504,530, dated September 5, 1893.

Application filed May 15, 1893. Serial No. 474,175. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK KRUCKEBERG, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Hose-Bridges; 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.

My invention has for its object to provide a convenient and reliable hose-bridge or crossing, for use on street and other railways. It is well-known that, in times of fire, adjacent to the tracks of street and other railways, the movement of the cars is frequently intercepted, for considerable periods, on account of the water-hose lying across the tracks. This is a great inconvenience, an impediment to business, and involves a considerable loss in time and money.

My invention is designed to remove this class of obstructions to railway traffic, which I accomplish by supplying a device which may be readily attached to the ordinary track and will serve to lift or permit the passage of the cars over the water hose, without injury thereto.

To these ends, my invention consists of the novel devices and combinations of devices, which will be hereinafter fully described and be defined in the claims.

The accompanying drawings illustrate my invention.

Like letters refer to like parts throughout.

Figure 1 is a plan view of my hose-bridge or crossing, in working position, shown as applied to a street railway track. Fig. 2 is a section of the same, on the line $X' X'$ of Fig. 1. Fig. 3 is a cross section on the line $X^2 X^2$ of Fig. 1. Fig. 4 is a cross section, on the line $X^3 X^3$ of Fig. 1. Fig. 5 is a cross section, on the line $X^4 X^4$ of Fig. 1. In all the said sectional views, Figs. 3, 4 and 5, the observer is supposed to be looking toward the right. In Fig. 2, the observer is supposed to be looking outward. Fig. 6 is a view, partly in diagram, representing in side elevation a car as passing over a section of track equipped with my hose bridge or crossing.

A represents the ties; B the rails of an or-

dinary street railway track; and C, in Fig. 6, represents sections of water-hose lying across the track.

D represents my bridge-rails, which are constructed with inclined points, for forming the joints to the street-rails, and with raised central portions, having columns or feet sections d , spaced apart from each other, at their lower ends, to form passages d' , for the water-hose C. The under surfaces of the bridge-rails D, are of reversely like form to the upper or face surfaces of the track-rails B. Hence, when in position, one step of the bridge-rails will rest on the ball or bearing surface of the track-rail, and the other step of the bridge-rail will rest on the flange of the track-rail, and against the inner face of the ball portion of the track-rail. In other words, the bridge-rails D are so formed that they will rest on the top of the track-rails, and are provided with downwardly extending portions, for working against the inner faces of the track-rails, to permit the bridge-rails to be locked in position, by suitable braces $E E'$. Of these braces, the members E are end braces and are formed with wedge-shaped ends, co-operating with flanged wedge-shaped blocks F, formed integral with the bridge-rails D, to lock the ends of the bridge-rails against the track-rails, when the said braces E are driven into position horizontally. The other braces E' are center braces and have also wedge-shaped ends, formed with dove-tailed flanges, which co-operate with corresponding wedge-shaped vertical blocks F' , formed integral with the bridge-rails, to lock the said bridge-rails together at their central points, and to the track-rails, when the said braces E' are driven downward into position. From the construction described, it is obvious, that when the said braces E and E' are driven into position, the bridge-rails D, will be securely locked to the track-rails and be held from either outward or inward lateral movement. When the bridge-rails are being placed in position, the hose are brought to the proper locations, to permit the same to be straddled by the columns or spaced foot-pieces d of the bridge-rails. The central portions of the bridge-rails rise to a sufficient height, of course, to permit the wheel-flanges of the car G, to clear the largest sized hole, which may be ever

brought into use. Care must be taken, of course, to construct the points or inclined portions of the bridge-rails on the proper angles, to permit the car to rise from the track-rails
5 B, without interference from the pilot or other projecting parts carried on the car-truck, in advance of the wheels. The braces E E' would of course be made of metal and the bridge-rails D be also made of metal and of the requisite
10 strength for the work to which they are to be subjected. By observing these conditions, a bridge such as I have described, will answer not only for street-cars, but also for locomotives and steam cars. After the bridge has
15 been used, it may, as is obvious, be readily knocked down and removed to any desired point of storage.

By actual usage, I have demonstrated the efficiency of my hose-bridge or crossing, for
20 the purpose set forth. I have found by actual test, that such a hose bridge will support and transfer the heaviest class of double truck street-cars, without the slightest difficulty and with perfect security. It will be under-
25 stood, of course, that my hose-bridge is applicable to any track regardless of the particular form of the track-rail. On T-shaped, or other forms of track-rails than the one shown in the drawings, the under or engag-

ing portions of the bridge rails, would simply 30 be correspondingly changed, so as to interlock with the track-rails.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination with the pair of hose 35 bridge-rails, having their under surfaces formed to interlock with the track-rails, and provided with lateral wedge-blocks of the cross braces having wedge shaped ends co-operating with said wedge-blocks, to lock the 40 bridge-rails to the track-rails, substantially as described.

2. The combination with the track-rails, of the bridge rails interlocking therewith; and having the horizontal wedge blocks F and the 45 vertical wedge blocks F' with dove tailed grooves of the end cross braces E with wedge shaped ends working against the blocks F and the central braces E' with dove tailed and wedge shaped ends working in and 50 against said grooved blocks F', substantially as and for the purpose set forth.

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

FREDERICK KRUCKEBERG.

Witnesses:

JAS. F. WILLIAMSON,
EMMA F. ELMORE.