

E. G. Allen,
Railroad Frog,
No 58,196, *Patented Sept. 25, 1866.*

Fig. 1.

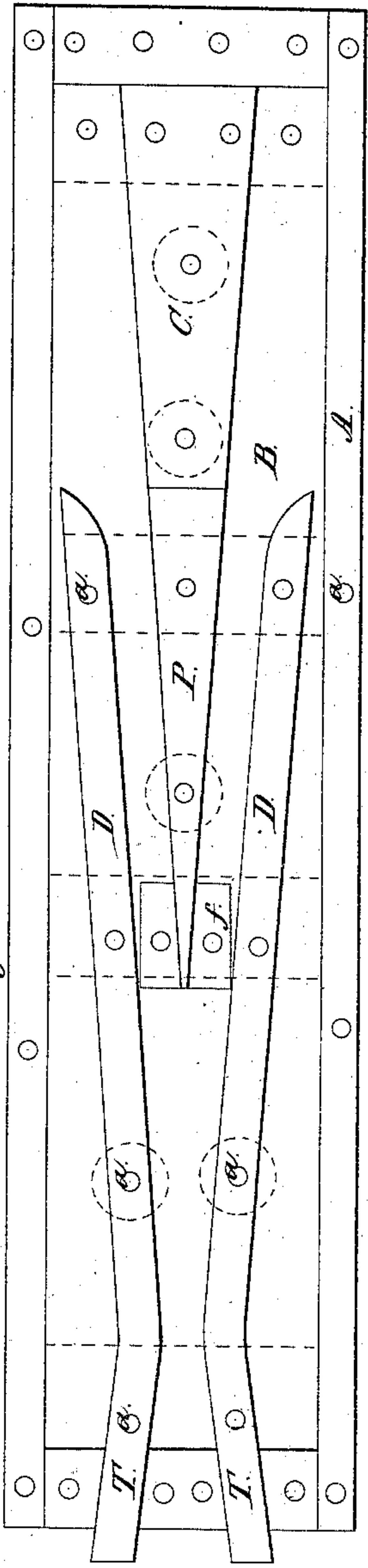


Fig. 2.

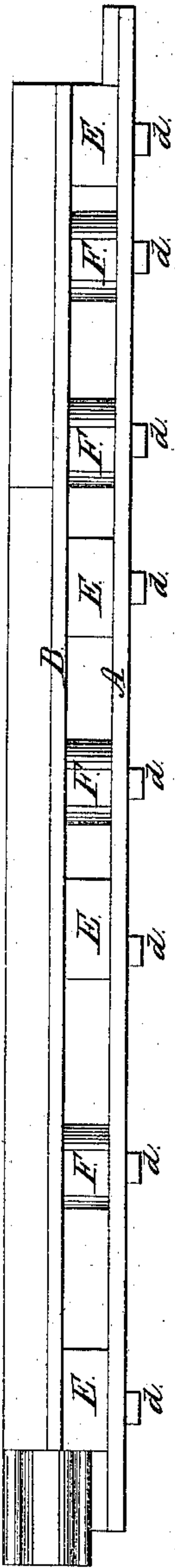


Fig. 3.

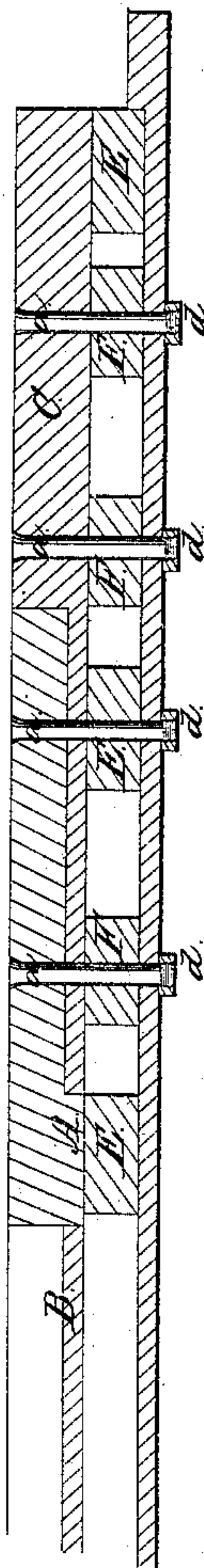


Fig. 4.



Fig. 6.



Fig. 5.



Fig. 7.



Witnesses.

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UNITED STATES PATENT OFFICE.

E. G. ALLEN, OF BOSTON, MASSACHUSETTS.

IMPROVED RAILWAY-FROG.

Specification forming part of Letters Patent No. 58,196, dated September 25, 1866.

To all whom it may concern:

Be it known that I, E. G. ALLEN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new Improvement in Railroad-Frogs; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a top view; Fig. 2, a side view; Fig. 3, a longitudinal central section; and Figs. 4, 5, 6, and 7 illustrate how the frog is made elastic.

My invention relates to an improvement in the construction of railroad-frogs, whereby the frog is made much lighter than heretofore, and, by the peculiar support of the point, is made much more durable; and that others may be enabled to construct my improved frog, I will proceed to describe the same as illustrated in the accompanying drawings.

A is a metal plate the length of the frog, its extreme ends formed to receive the rail, and without the necessary intervention of the chair now used. B is the frog-plate, upon which is formed the heel C and the wings D D. The plate B is placed above the plate A, resting upon transverse supports E and occasional supports F. (Denoted by broken lines, Fig. 1.) Through the frog and wings bolts *a*, having their heads flush with the upper surface, pass down through the supports E and F and the lower plate, A, and by the application of nuts *d* these several parts are firmly secured together. This arrangement forms what may be termed a "trussed" frog, and is as much lighter than the ordinary frog as it is strengthened by this trussing.

The main rail T is placed upon the lower plate, A, and by means of spikes through the plate A is secured to the tie in the usual manner, thus avoiding the necessary use of a chair.

The point P is of the usual form, and in addition to the usual security I form at its extreme point and upon its under side a plate, *f*, which fits into a corresponding recess in the plate B, as seen in Figs. 1 and 3, and bolted therein, or otherwise secured, this forms a security to the point by the broad surface of the plate *f* not heretofore attained.

To make this frog elastic, which it is desirable in many cases to do, I form a recess in the upper surface of the transverse and occasional supports, as seen in Figs. 4 and 6, into which I place a sheet of india-rubber or other equivalent material, *h*, and place the upper plate upon this elastic substance, and bolt the parts together, as before. The elastic substance should project a little above the supports. This elastic substance may, with the same result, be placed upon the under surface instead of the upper, or upon both upper and lower, as seen in Figs. 5 and 7.

I do not wish to be understood as broadly claiming an elastic frog; but,

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

The combination and arrangement of the plates A and B, with their supports E and F, whether made elastic or not, secured together substantially in the manner and for the purpose specified.

E. G. ALLEN.

Witnesses:

CHAS. B. F. ADAMS,
ALTSIE J. TIBBITS.