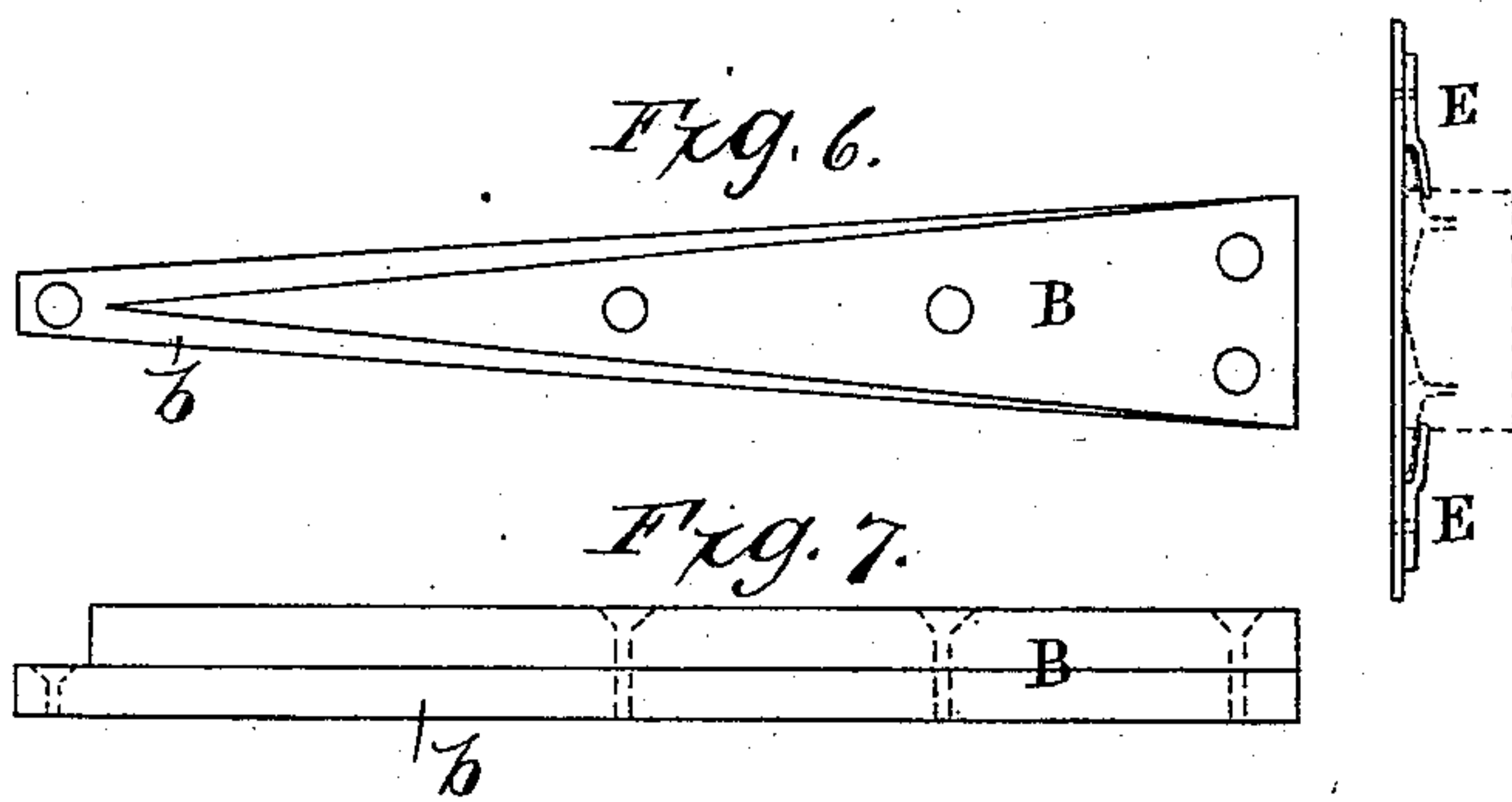
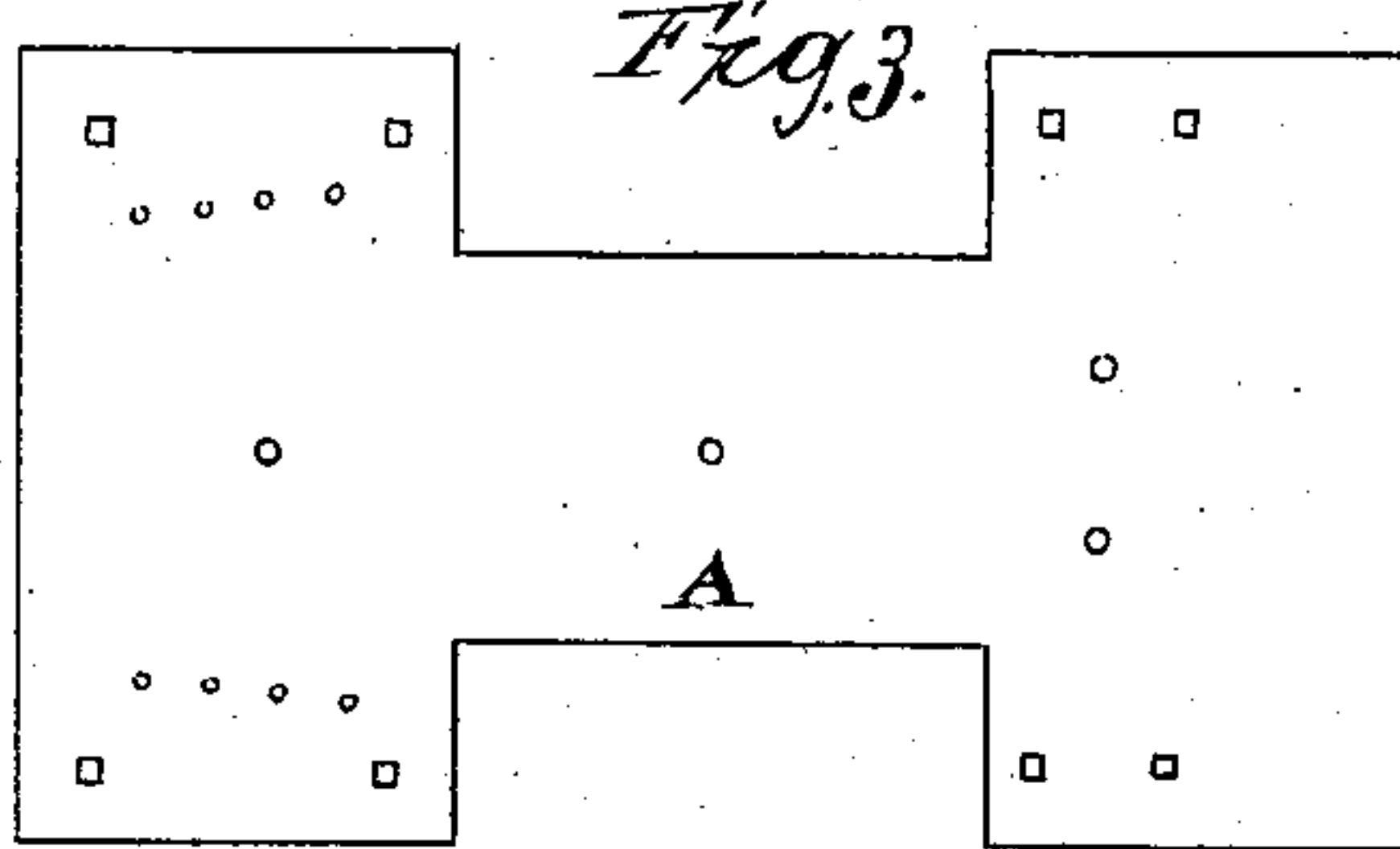
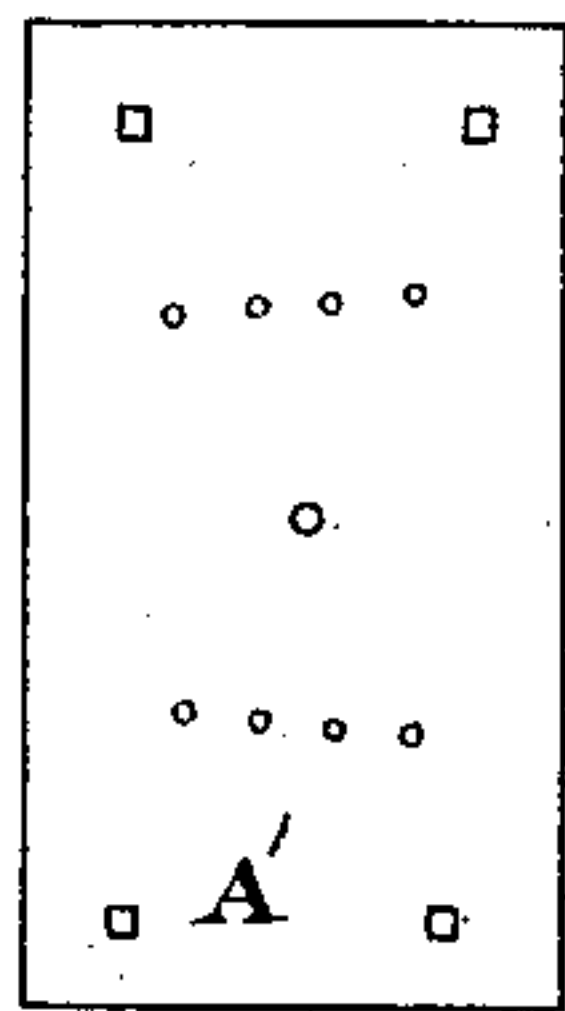
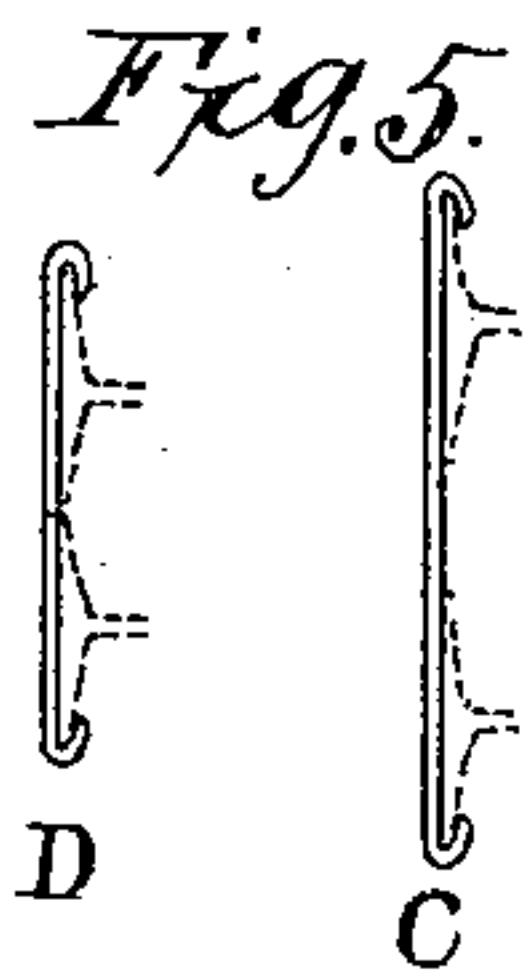
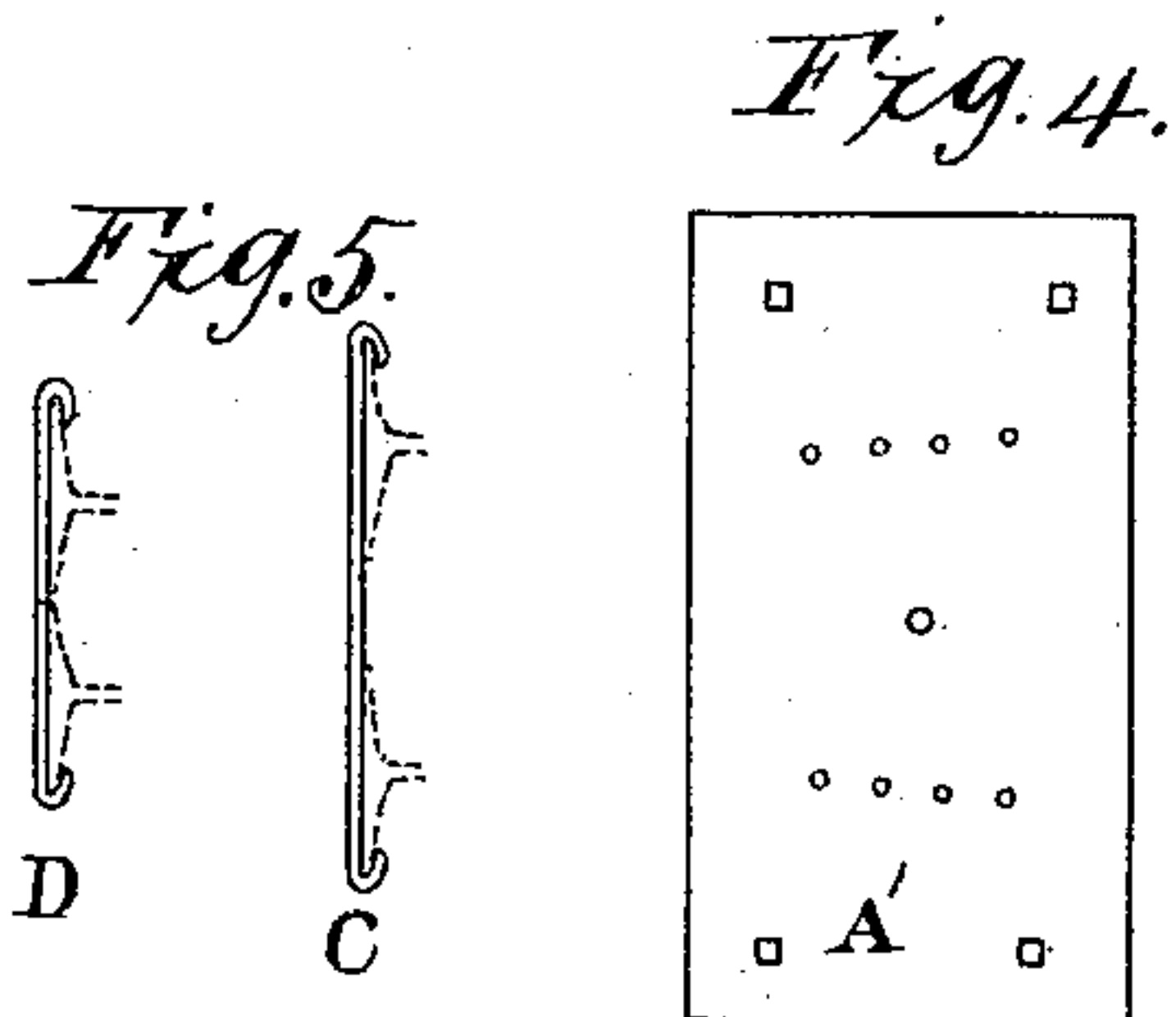
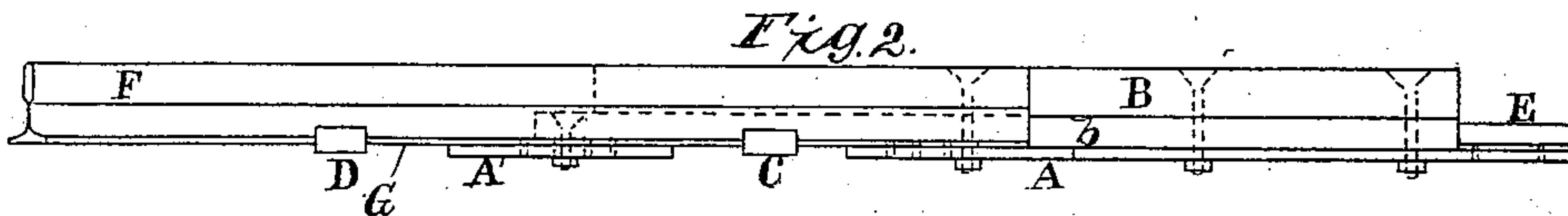
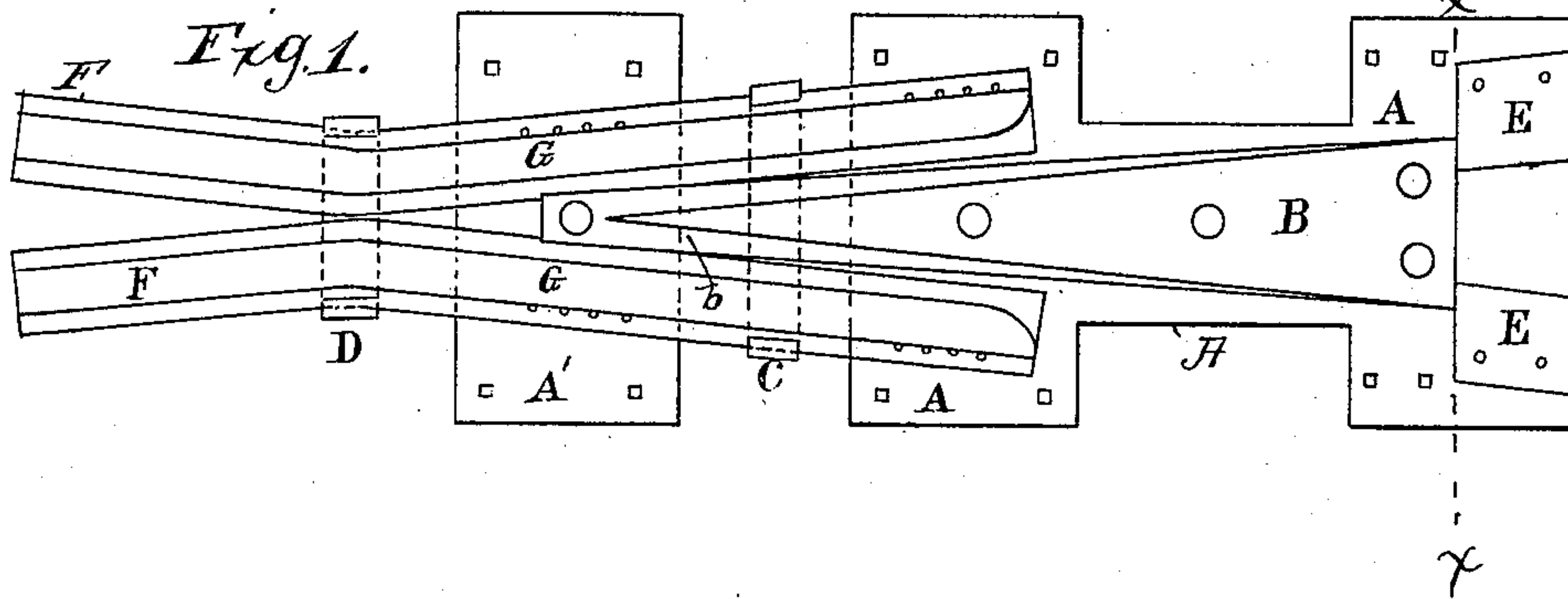


(No Model.)

J. GREEN.
RAILROAD FROG.

No. 364,102.

Patented May 31, 1887.



Witnesses

Thomas F. Gallagher
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UNITED STATES PATENT OFFICE

JOHN GREEN, OF FITCHBURG, MASSACHUSETTS.

RAILROAD-FROG.

SPECIFICATION forming part of Letters Patent No. 364,102, dated May 31, 1887.

Application filed December 15, 1886. Serial No. 221,673. (No model.)

To all whom it may concern:

Be it known that I, JOHN GREEN, a citizen of the United States, and a resident of Fitchburg, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Railroad-Frogs, of which the following is a specification.

My invention relates to railroad-frogs; and it has for its object to devise a structure that shall possess great strength and hence increased security, and also to essentially increase the wearing capacity of the frog as a whole.

My invention, accordingly, embraces a bed-plate of wrought-iron and a tongue or point of steel, the said bed-plate being of the form and construction hereinafter specified, and having the steel tongue and the rails secured thereto in the manner explained.

The invention further embraces certain other features by which security against breakage or disruption of the frog is insured, and whereby a high degree of strength is imparted to the structure, without complications of construction or unusual cost.

The novel features for which Letters Patent are desired are specified in the claims at the end of this specification.

In the accompanying drawings, forming a part of this description, and in which like features are indicated by like letters of reference in all the views, Figure 1 represents a plan view of a railroad-frog constructed according to my invention. Fig. 2 is a side elevation of Fig. 1. Fig. 3 is a plan view of the bed-plate upon which the major portion of the steel point or tongue rests, and to which the rails of the main track are secured. Fig. 4 is a plan view of the supplemental bed-plate to which the front of the tongue is secured. Fig. 5 shows, in sectional elevation, the clasps securing the rails against spreading. Fig. 6 shows a cross-section through the line *x x* of Fig. 1, and also top plan view of the tongue or point and its attached base-piece; and Fig. 7 is an end elevation of said point or tongue and base-piece.

Referring to the drawings, the letter A indicates the bed-plate, which is made of wrought-iron, for the purpose of securing in this feature of the structure toughness and strength. This bed-plate A is preferably of the form shown in Figs. 1 and 3, with widened ends, and it is sup-

plemented by the bed-plate A', to which the point of the tongue, with its attached base-plate, is secured. These bed-plates A and A' have bolted thereto the tongue B and its connected base-plate *b*. The tongue B and its base-plate *b* are made of steel, and are secured together by riveting or bolting, as shown in Fig. 7, and they are secured in position upon the bed-plates A and A' by bolts passing there-through and through the bed-plates.

The letter F represents the converging rails of the frog, and G the wing-rails thereof, the latter being practically a continuation of the former, and at the point where these rails most closely approach each other they are embraced by the clasp D. (Shown in cross-section, Fig. 5.) This clasp serves to prevent the rails from springing apart or spreading, and it extends transversely beneath the rails and has its turned-up ends welded or bolted to the flange of the rails.

The wing-rails G are bolted to the base-plates A and A', as shown in Fig. 1, and they are prevented from spreading or springing by the clasp C, extending transversely beneath said wing-rails and the front of the tongue and between the bed-plates A A'. This clasp C is similar in construction to clasp D, heretofore described, and it acts as a safeguard against the displacement of the wing-rails if the bolts or rivets used to secure said rails to the bed-plates A and A' should break or become displaced.

The letters E E designate ears secured to the bed-plate A, and serving to hold the rails H H of the main track in position in contact with the rear end of the steel tongue B. These ears E E are riveted or bolted rigidly to the bed-plate A and overlap the seating-flange of the rails, as shown in Fig. 6, by which arrangement the rails H H will not be liable to displacement.

By making the bed-plates of wrought-iron and the tongue and its attached base-piece of steel I produce a structure with the requisite elasticity and secure great strength and increased wearing qualities. By my construction of bed-plates the wing-rails and main rails may be readily and effectively secured thereto, and the safeguard embodied in the clasps D and C add largely to the security of the structure.

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

1. The bed-plate and the supplemental bed-plate combined with the tongue riveted or bolted to said bed-plates, and the wing-rails, as G, likewise riveted and bolted to said bed-plates, substantially as set forth.
2. The bed-plates and tongue, riveted or bolted to said bed-plates, combined with the wing-rails and the clasp C, the latter serving to prevent said wing-rails from spreading if their bolts or rivets should become broken or displaced, substantially as set forth.
3. The combination of bed-plate, supplemental bed-plate, and tongue with the wing-

rails, clasp C, converging rails, clasp D, and main rails, as H, and ears securing said main rails in place, substantially as shown and described.

4. The wrought-iron bed-plate A and supplemental bed-plate A', combined with the steel tongue B and its base-plate b, said tongue and base-plate being riveted together and to the bed-plates, substantially as set forth.

Signed at Fitchburg, in the county of Worcester and State of Massachusetts, this 26th day of March, A. D. 1887.

JOHN GREEN.

Witnesses:

CHARLES A. EMORY,
THOMAS F. GALLAGHER.