

No. 652,088.

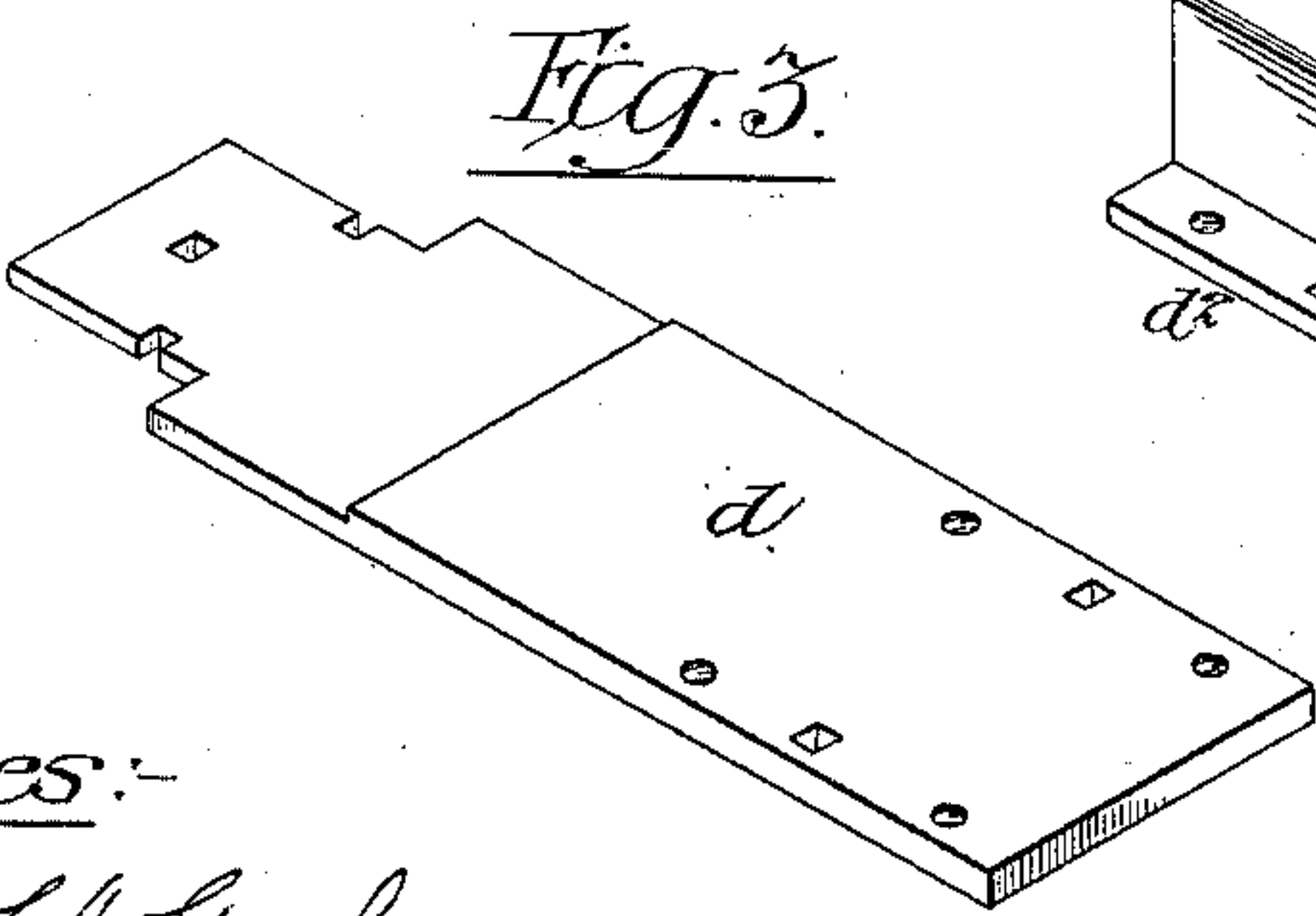
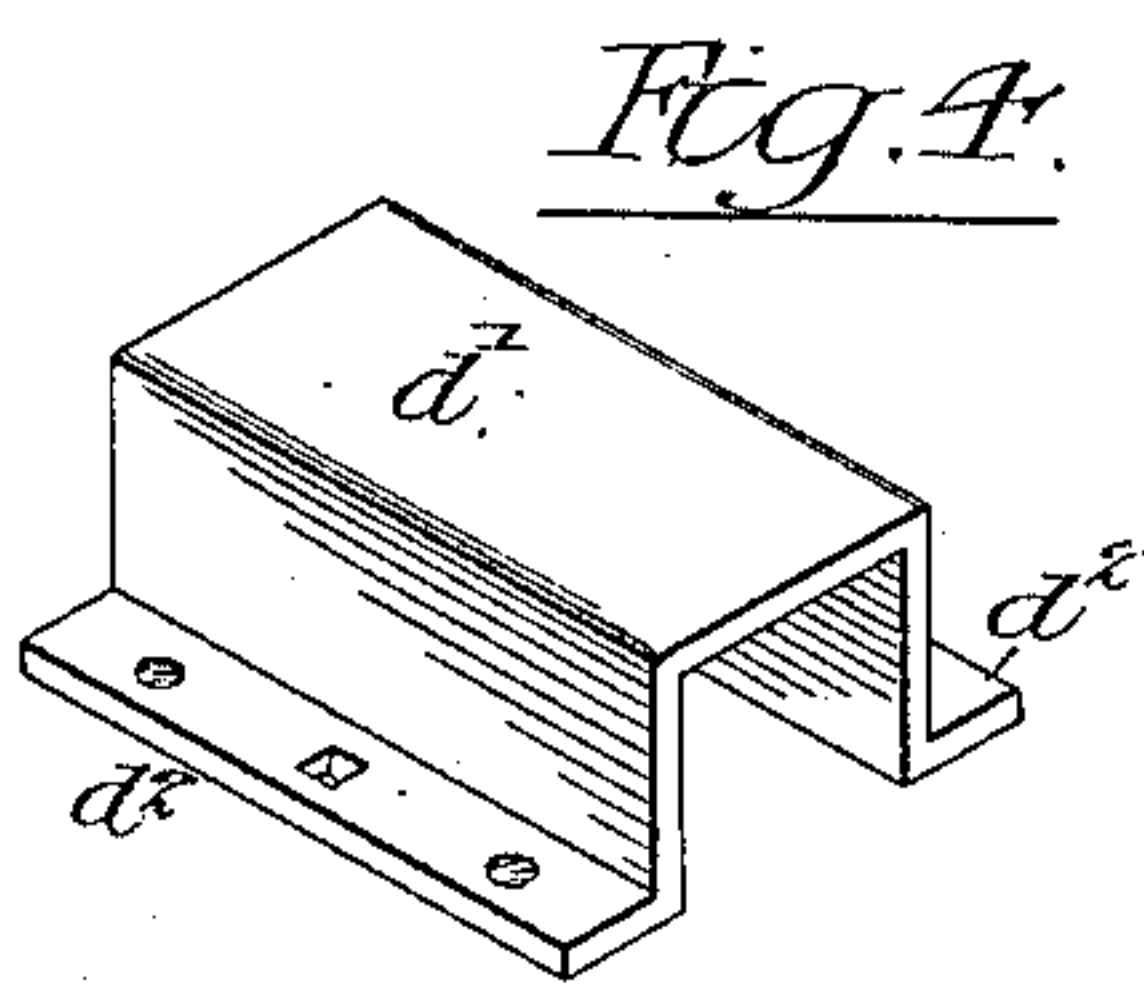
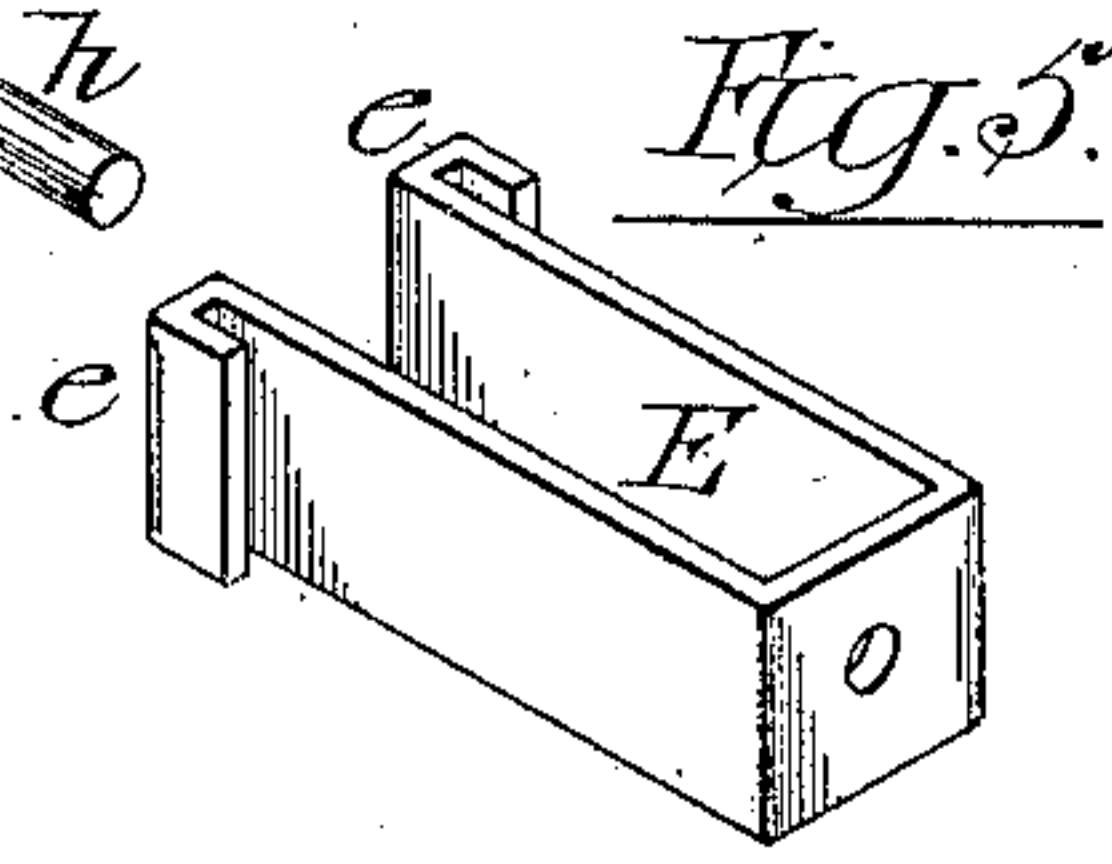
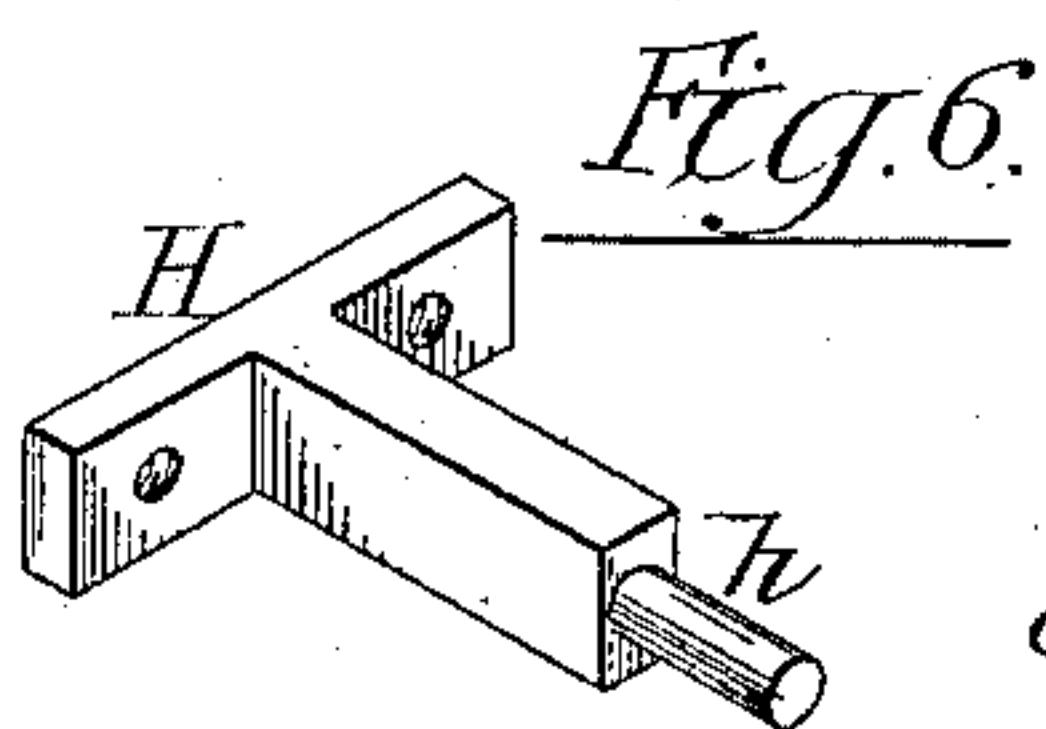
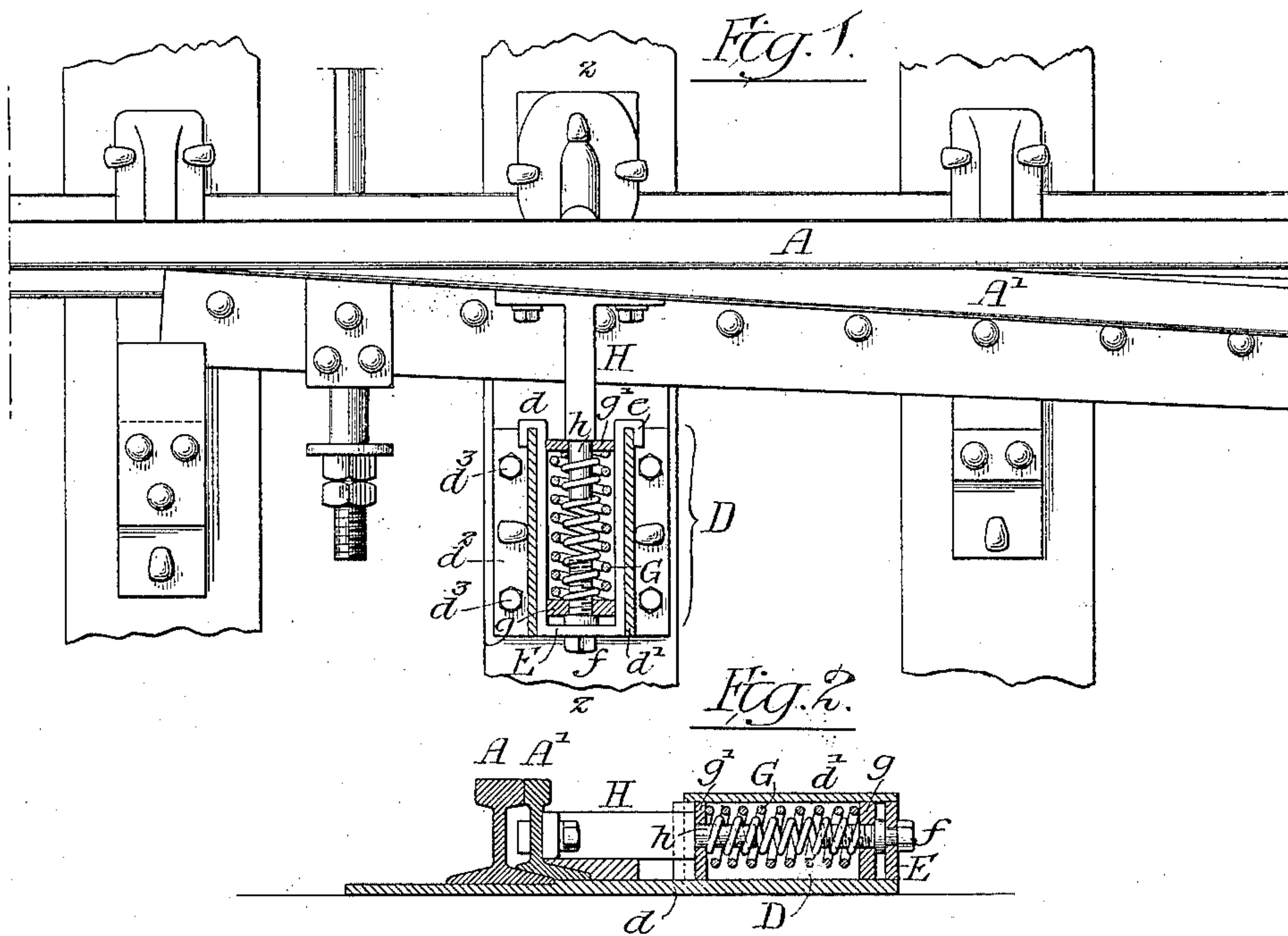
Patented June 19, 1900.

W. B. COOKE.

SPRING BOX FOR SWITCHES, FROGS, &c.

(Application filed Nov. 18, 1899.)

(No Model.)



Witnesses:-

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UNITED STATES PATENT OFFICE.

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SPRING-BOX FOR SWITCHES, FROGS, &c.

SPECIFICATION forming part of Letters Patent No. 652,088, dated June 19, 1900.

Application filed November 18, 1899. Serial No. 737,513. (No model.)

To all whom it may concern:

Be it known that I, WARNER B. COOKE, a citizen of the United States, and a resident of Jenkintown, Montgomery county, Pennsylvania, have invented certain Improvements in Spring-Boxes for Switches, Frogs, &c., of which the following is a specification.

My invention relates to certain improvements in spring-boxes for railway switches, frogs, &c.

The object of the spring-box is to keep the movable rail firmly against a fixed rail and yet allow the movable rail to yield when forced over by the flange of a car-wheel passing between the fixed rail and movable rail.

The object of my invention is to improve the construction of spring-boxes, and this object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view with the switch-box in section, illustrating my invention and showing the relation of the switch-box to the rails of the track. Fig. 2 is a transverse section on the line 22, Fig. 1; and Figs. 3, 4, 5, and 6 are perspective views illustrating details of my invention.

In Fig. 1 I have shown a portion of a railroad-switch. A is the fixed rail, and A' is the movable rail, which is held normally against the fixed rail by the pressure of the spring in the spring-box D. This spring-box is mounted upon a base-plate d, Fig. 3, which extends under the rails A A' and acts as a support for both rails. The base-plate is secured to the fixed rail and to the box and also to the tie, so that the relation of the box to the rail A is fixed.

The spring-box is made from a single plate d', bent, as clearly shown in Fig. 4, to form the top and sides of the box and also to form flanges d², which are secured to the base-plate d by bolts d³, four in the present instance. The central openings in the base-plate and in the flanges are for the spikes for retaining the spring-box to the ties, as shown in Fig. 1. The box is open at each end, and adapted to rest within the box is a U-shaped

support E for the spring. This support has lips e, which lap over the forward end of the spring-box, as shown in Fig. 1. To the rear end of this support E is attached an adjusting-screw f, having a head by which it is turned, the threaded portion of the screw being adapted to a square washer or plate g, against which the spring G rests. The forward ends of the spring rest against a square plate g'. This plate is perforated, and projecting through the plate is a stem h of a T-shaped projection H, which is secured to the movable rail A', as shown in Figs. 1 and 2.

I have shown in the drawings two springs within the spring-box; but it will be understood that one spring may be used without departing from my invention.

The spring-box, the base-plate d, and the spring-support E are all made from sheet metal, preferably steel, and are shaped to the proper form. Thus by this construction I make a very substantial box which will withstand the jars to which it is subjected.

The tension of the spring can be regulated simply by turning the screw f in either direction.

I claim as my invention—

1. The combination in a spring-box for switches, &c., of a base-plate extending under the rails of the structure, a plate bent to form the top and sides of a box, and having flanges by which it is secured to the base-plate, and containing the spring mechanism, substantially as described.

2. A spring-box for railway-switches, &c., of a base-plate, a box made of sheet metal bent to form and having flanges by which it is secured to the base-plate, a spring-support, and a spring adapted to bear against a projection on the rail, substantially as described.

3. The combination of the base-plate, a box open at each end, a U-shaped spring-support having lips which overlap the front end of the box, a spring within the box resting against the U-shaped support and confined between the spring-support and a projection on the rail, substantially as described.

4. The combination of a base-plate, a box
consisting of a sheet of metal bent to form
the top and sides and having flanges by
which the box is secured to a base, a spring
5 supported within the box, a plate or washer,
means for adjusting the plate or washer, a
spring resting against the plate or washer, a
plate at the forward end of the box against
which the spring rests, and a projection on
10 the rail having a portion extending through

the perforation in the plate, substantially as
described.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

WARNER B. COOKE.

Witnesses:

WILL. A. BARR,
JOS. H. KLEIN.