

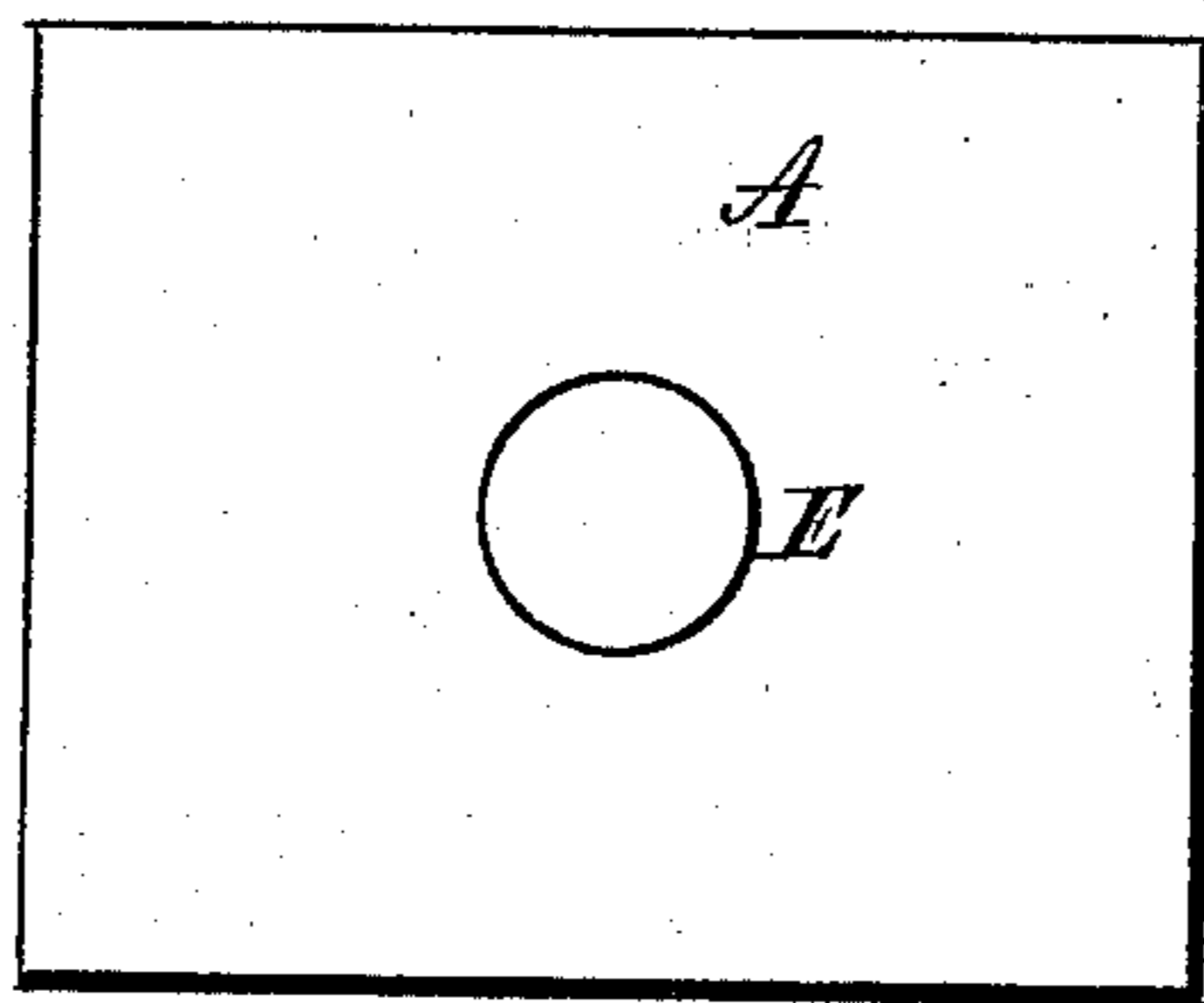
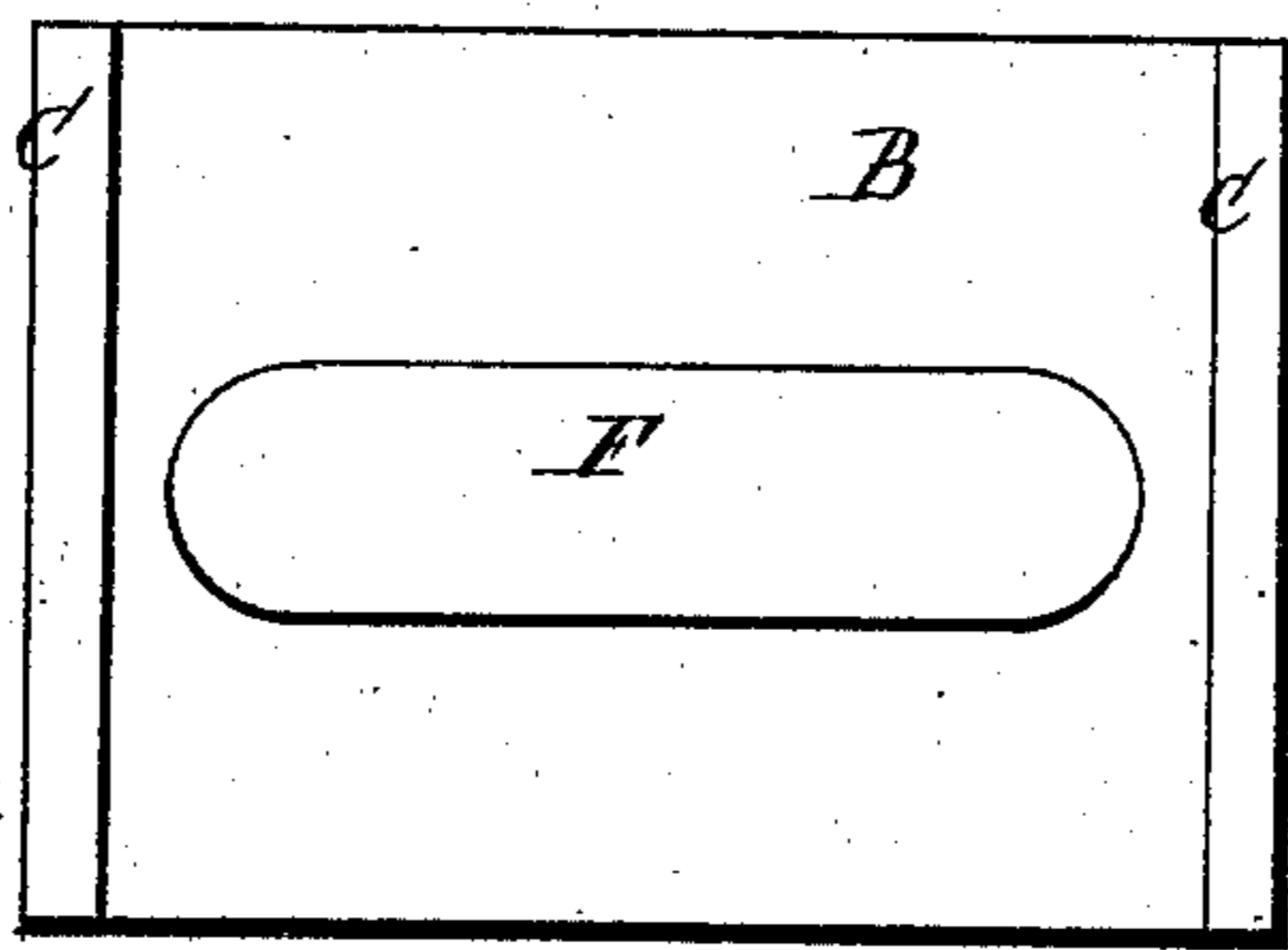
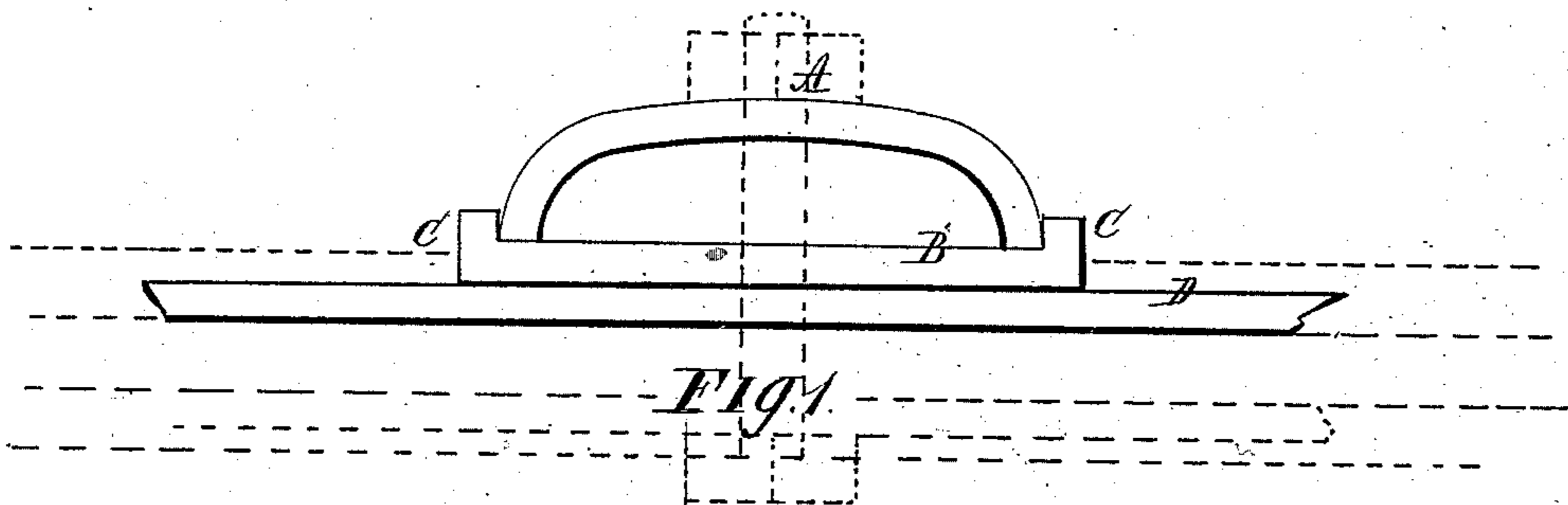
(No Model.)

2 Sheets—Sheet 1.

J. L. POPE.
RAILWAY RAIL JOINT.

No. 286,843.

Patented Oct. 16, 1883.



Witnesses.
J. H. Burridge
W. L. North

Inventor.
J. L. Pope
W. H. Burridge atty

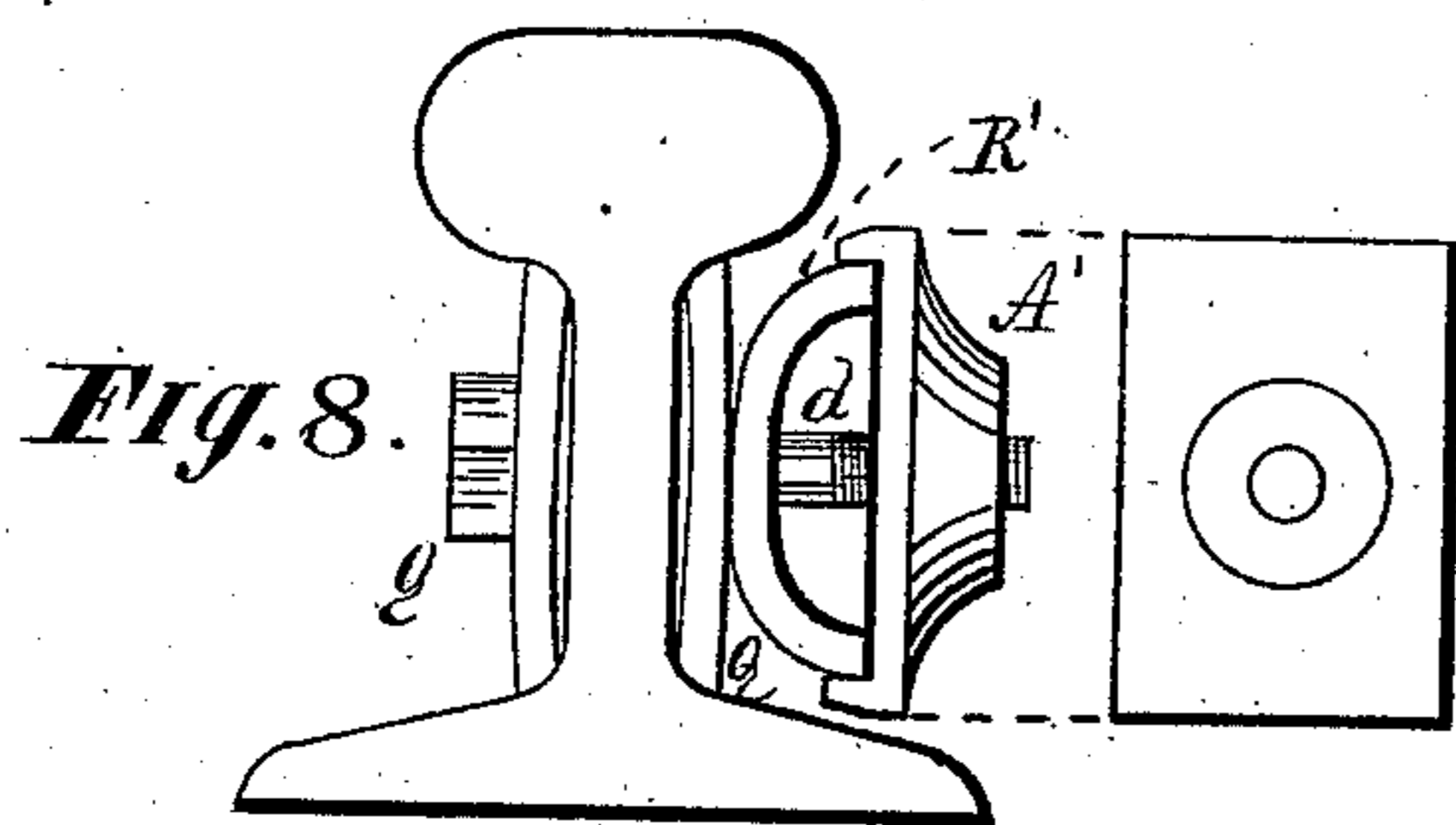
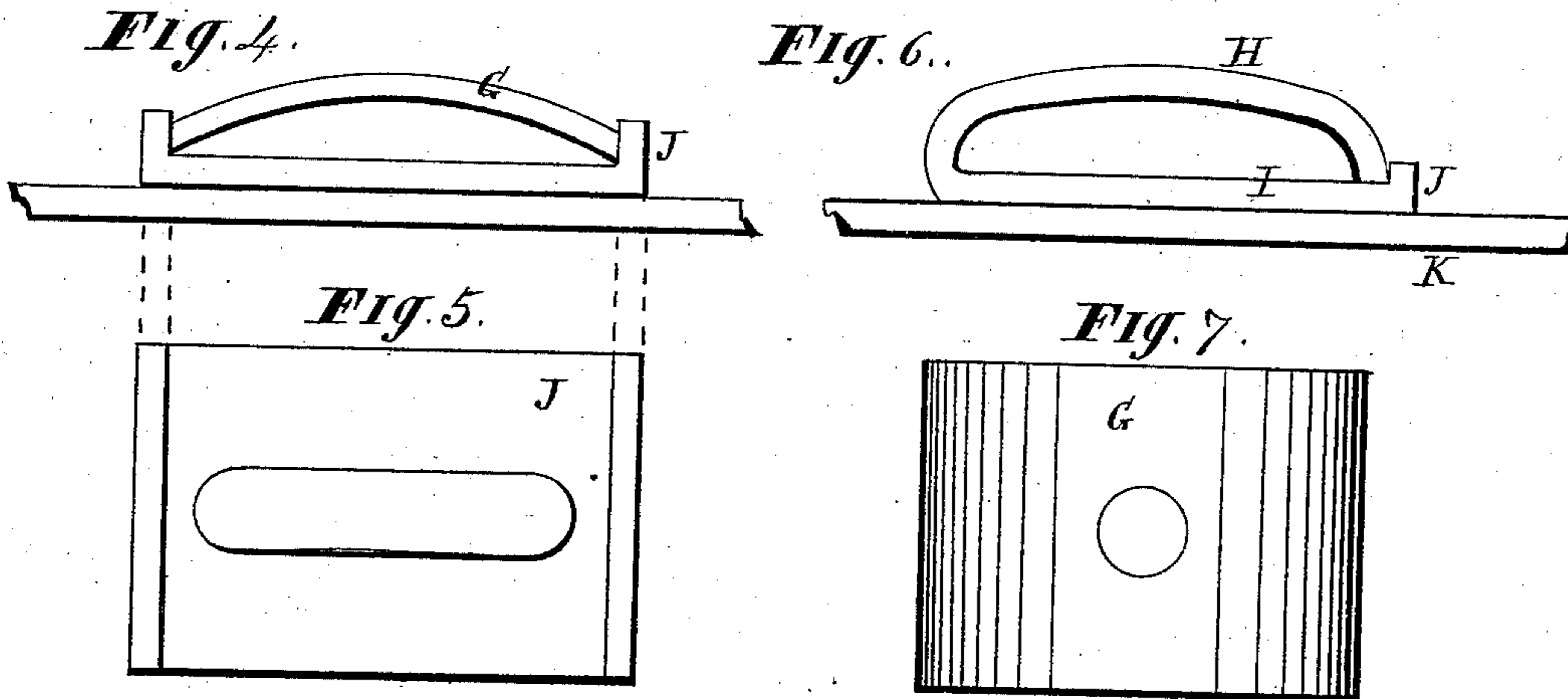
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

JOHN L. POPE, OF CLEVELAND, OHIO.

RAILWAY-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 286,843, dated October 16, 1883.

Application filed October 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. POPE, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Railway-Rail Joints, of which the following is a specification.

The purpose of this invention is for securing fish-plates to railway-rails.

I am aware that various contrivances have been patented for fastening nuts on fish-plate bolts; but notwithstanding the nuts may be firmly secured to such bolts the fish-plates soon wear sufficiently to loosen the joint and render it worthless.

This invention relates to improvements in railway-joints; and it consists in the employment of a longitudinal spring having the ends sustained by a plate with an abutment at each end, in combination with a separate fish-plate, all of which will be hereinafter more particularly described, and pointed out in the claim.

In order to accomplish the above-specified purpose, I use a spring made of steel plate, more or less curved in form, confined in such a manner that it cannot be elongated by pressure, said plate of which the spring is formed being sufficiently thin or elastic to be bent or sprung by the nut when thus rigidly confined at the ends by the flanges of the plate on which it abuts; hence there is a constant resilience of the spring, and by this effort at reaction a continued pressure is exerted upon the nut, thereby holding the several members forming the rail-joint in position. The preferable method of confining said springs, so that one-sized spring may be used on different-sized rails, is between flanges formed on each end of a metallic plate; but I do not confine myself to said plates for holding said springs, as it is obvious that abutments may be formed in various ways to accomplish said purpose, as hereinafter described, and shown in the drawings, making a part of this specification, in which—

Figure 1 represents an end view of the above-said spring-washer and flanged plate. Fig. 2 is a plan view of the flanged plate. Fig. 3 is a plan view of the spring. Figs. 4, 5, 6, 7, and 8 are modifications.

Like letters of reference refer to like parts in the several views.

In Fig. 1, A is a curved spring, above alluded to, and B the flanged plate, between the flanges C of which the ends of the spring are

placed, and thereby prevented from spreading when subjected to the power of the nut. The width of the plate is such as to permit it to fit in between the head and foot of the rail when placed against the fish-plate D, which is applied to the rail or joints of the rails in the ordinary way. In the center of the spring is a hole, E, Fig. 3, for the admission of the fish-plate bolt, and in the flange-plate is a slotted opening, F, that the flange-plate and spring may be adjusted laterally to the bolt-hole in the fish-plate and web of the rail.

Four bolts are usually employed for securing the fish-plates to the rails, two on each side of the joint; hence a spring and flange-plate are used for each of the bolts.

It will be obvious that on screwing up the nut upon the bolt and hard against the spring, the ends of said spring cannot spread apart by the pressure of the nut; nor can the spring turn upon the bolt, as it is held by the shoulders of the base-plate. More or less tension may be given to the spring by the nut, and the resilience of the spring will continue a strain upon the bolt and prevent it from becoming loose and the nut from working therefrom.

I desire it to be understood that I do not confine myself to the exact shape of the spring as shown in Fig. 1, as the same may be modified to the shape of the spring-washer G, (seen in Fig. 4,) and to that shown in Fig. 6, in which latter figure it will be observed that the spring H and the base-plate I are in one piece, and that the free end of the spring is held by the shoulder J of the base-plate. In said figure K is the fish-plate.

In Fig. 8, Q are fish-plates, and R a spring, and A' a nut, into which the bolt d is screwed. Said nut is provided with flanges corresponding to the flanges C in Fig. 1, and for the same purpose.

What I claim as my invention, and desire to secure by Letters Patent, is—

For securing fish-plates to railway-rails, the combination, with the two rails and the fish-plates, of the spring A and flanged plate B, substantially as and for the purpose described.

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

Witnesses: JOHN L. POPE.
W. H. BURRIDGE,
GUSTAV A. LAUBSCHER.