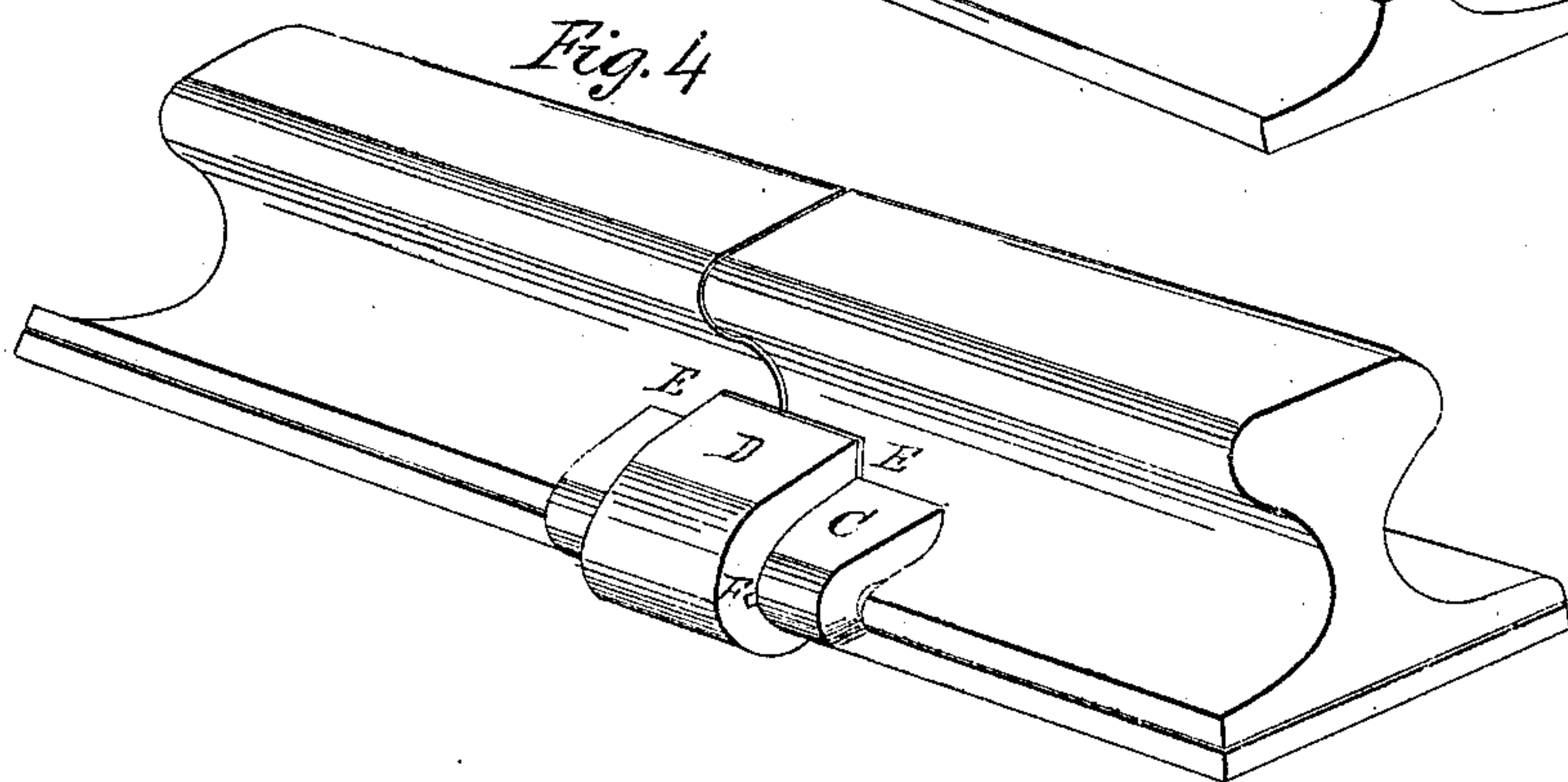
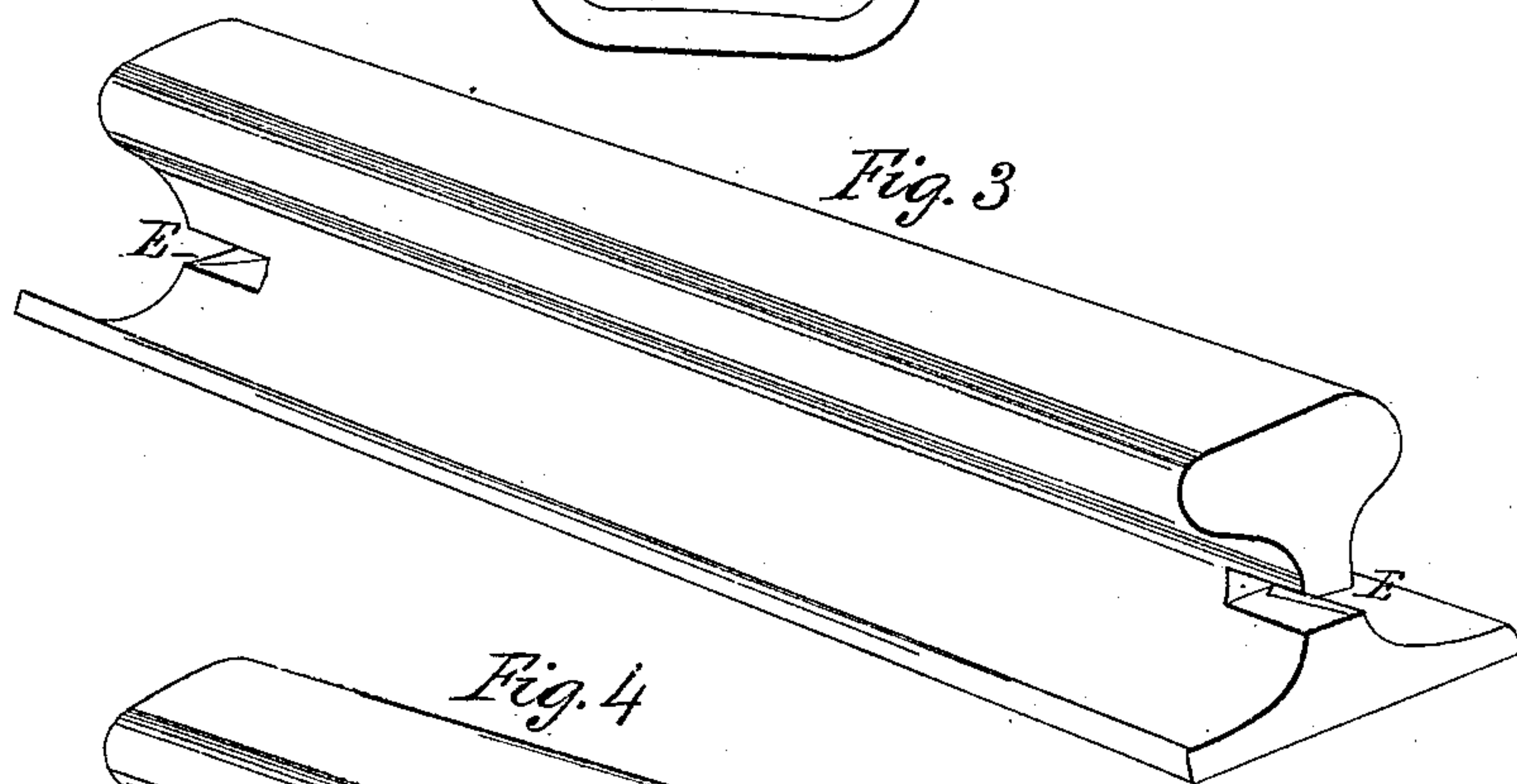
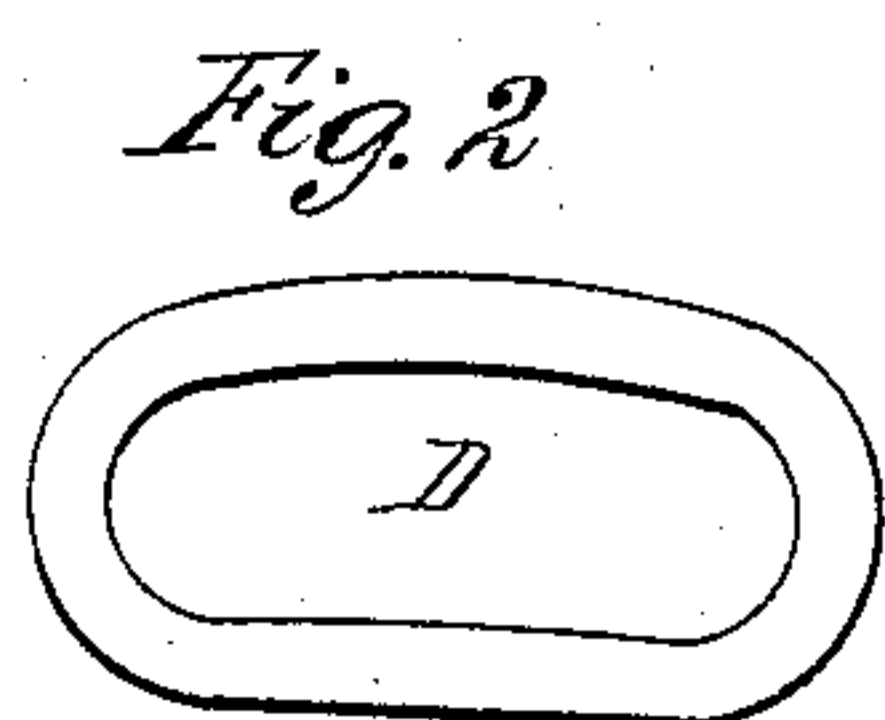
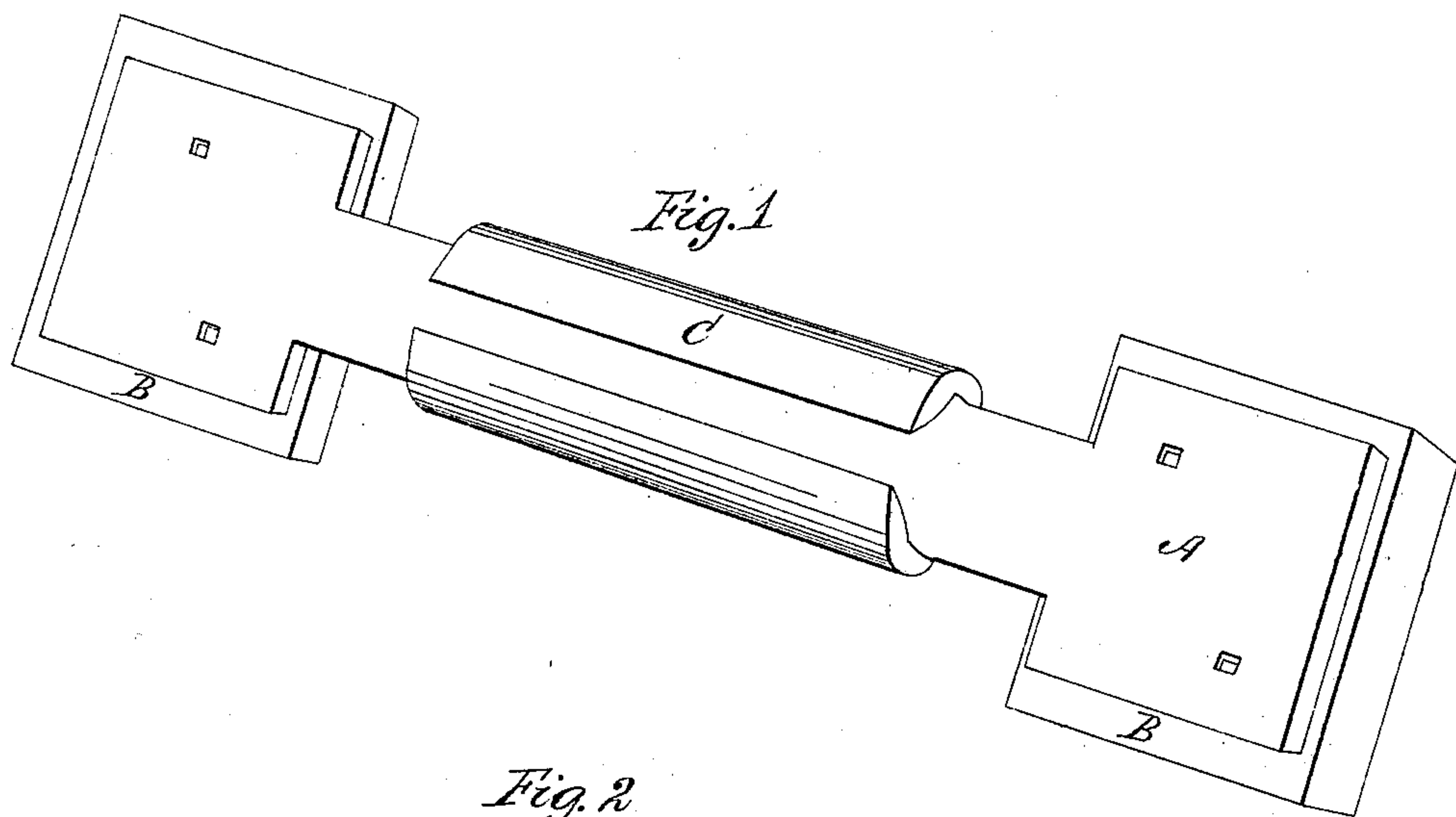


K. H. ALLEN.
CONNECTING THE ENDS OF RAILROAD RAILS.
No. 20,928. Patented July 20, 1858.



UNITED STATES PATENT OFFICE.

K. H. ALLEN, OF WORCESTER, MASSACHUSETTS.

CONNECTING THE ENDS OF RAILROAD-RAILS.

Specification of Letters Patent No. 20,928, dated July 20, 1858.

To all whom it may concern:

Be it known that I, K. H. ALLEN, of the city and county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Locking and Supporting the Joints of Railroad-Rails; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1, is a perspective view of the chair. Fig. 2, is a view of the ring which couples the rail and chair together. Fig. 3, is a perspective view of a section of rail adapted for the use of my improvement. Fig. 4, is a perspective view of two sections of a rail, with the joint between the same locked and supported by my invention.

Similar letters of reference, in each of the several figures indicate corresponding parts.

The object of my invention is, 1st, to so secure the joints of rails that the weight of the engine and train over the same will not depress or deflect the point of junction to a greater degree than other portions of the rail are depressed; and, 2nd, to present a safeguard against displacement of the rails either by thrust or lateral motion.

The nature of my invention consists in the use of that character of chair which extends from one tie to another, in combination with rails which have open horizontal slots in their meeting ends, and with an elliptical or spheroidal band which passes through the slots in the ends of the rails and underneath the chair and is fastened firmly in place by an adjustable wedge in the particular manner hereinafter specified.

I am aware that chairs extending from tie to tie have been used. Also that the coupling band has been employed for locking the joint of rails, but I am not aware that the coupling ring and chair combined and arranged as I show have been before used.

In my combination the plate fits the rail from base to web and the coupling device that passes around the chair and through the rail is not a ring but a band that fits the chair closely all the way around so that when the weight of the train bears on the joint it tightens or hugs closely to the plate instead of freeing itself from the same, owing to the rail plate and band being all combined and held together by keying, the whole gives or

springs together with the weight or in other words if the rails and chair move or are deflected the band must move with them, and still retain as firm hold upon the plate as when they are not affected by the weight.

In those devices which use a ring and not the extended chair combined as I show, the joint very soon becomes imperfect and gives out owing to the rails by the motion of the trains and the effect of heat and cold crowding ahead at a few joints in a manner to leave partly open one of the joints. And in those rails where only the extended chair is used, very little advantage is gained over the short chair, for when the joint is midway between the ties, it will of course spring when the train is passing over it, and if they spring, it will of course straighten the lips of the chair and the joint will in a short time work itself loose, and become useless as there is no means of tightening it.

To enable others, skilled in the art, to make and use my invention, I will proceed to describe its construction and operation.

A, Fig. 1, is the chair, its length equals the distance between the ties B, B. This shoe has a bearing area on the ties equal to that of the ordinary rail chair, and midway between the ties, two lips C, C, are turned up so as to accurately reach the web and fit the base of the rail, over these lips and fitting them closely, is a wrought iron band D, Fig. 2.

E, E, Fig. 3, are slots formed on each end of the rails, these slots are of such size and so situated that when the rails are slid under the lips C, C, the band D, will closely fit them as shown in Fig. 4. In order to secure a permanent fit of the several parts and compensate for wear, a key F, is inserted between the band D, and lips C, the occasional setting of which, secures a tight fit of the parts and freedom from what is termed a noisy rail.

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

The combination of the rails E, E, elliptical or spheroidal band D, chair A, and adjustable wedge F, all arranged and constructed substantially as and for the purposes set forth.

KYES H. ALLEN.

Witnesses:

A. L. ACKLEY,
CHARLES HERSEY.