

No. 729,050.

PATENTED MAY 26, 1903.

G. M. ERVIN.  
RAILWAY TRACK STRUCTURE.  
APPLICATION FILED MAR. 18, 1903.

NO MODEL.

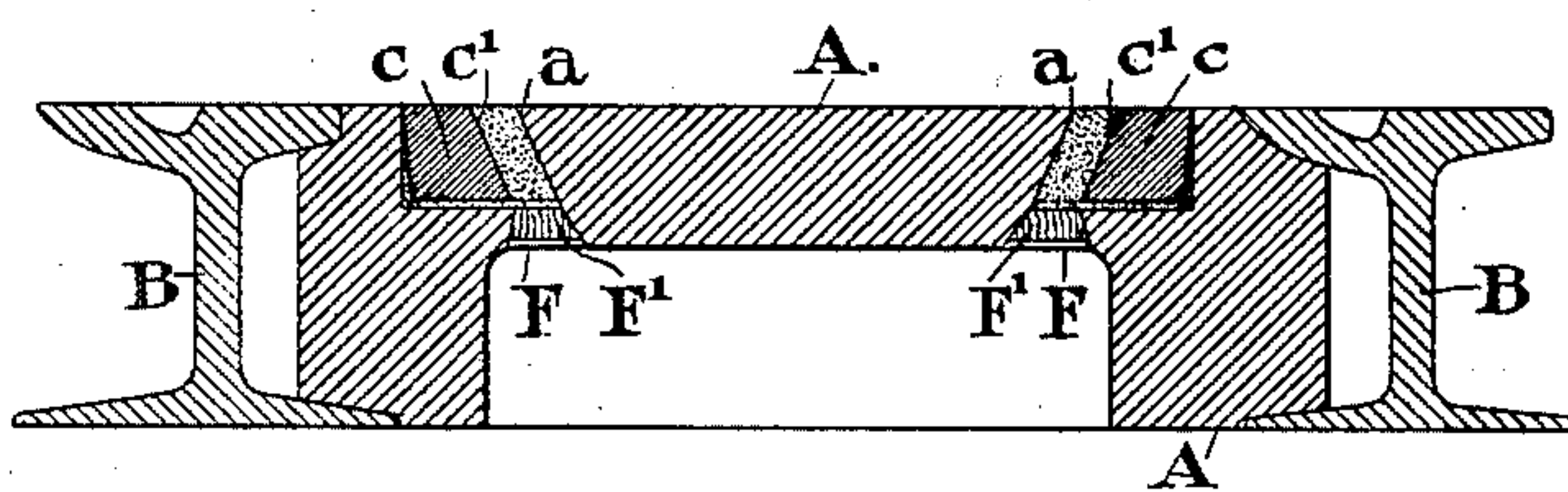
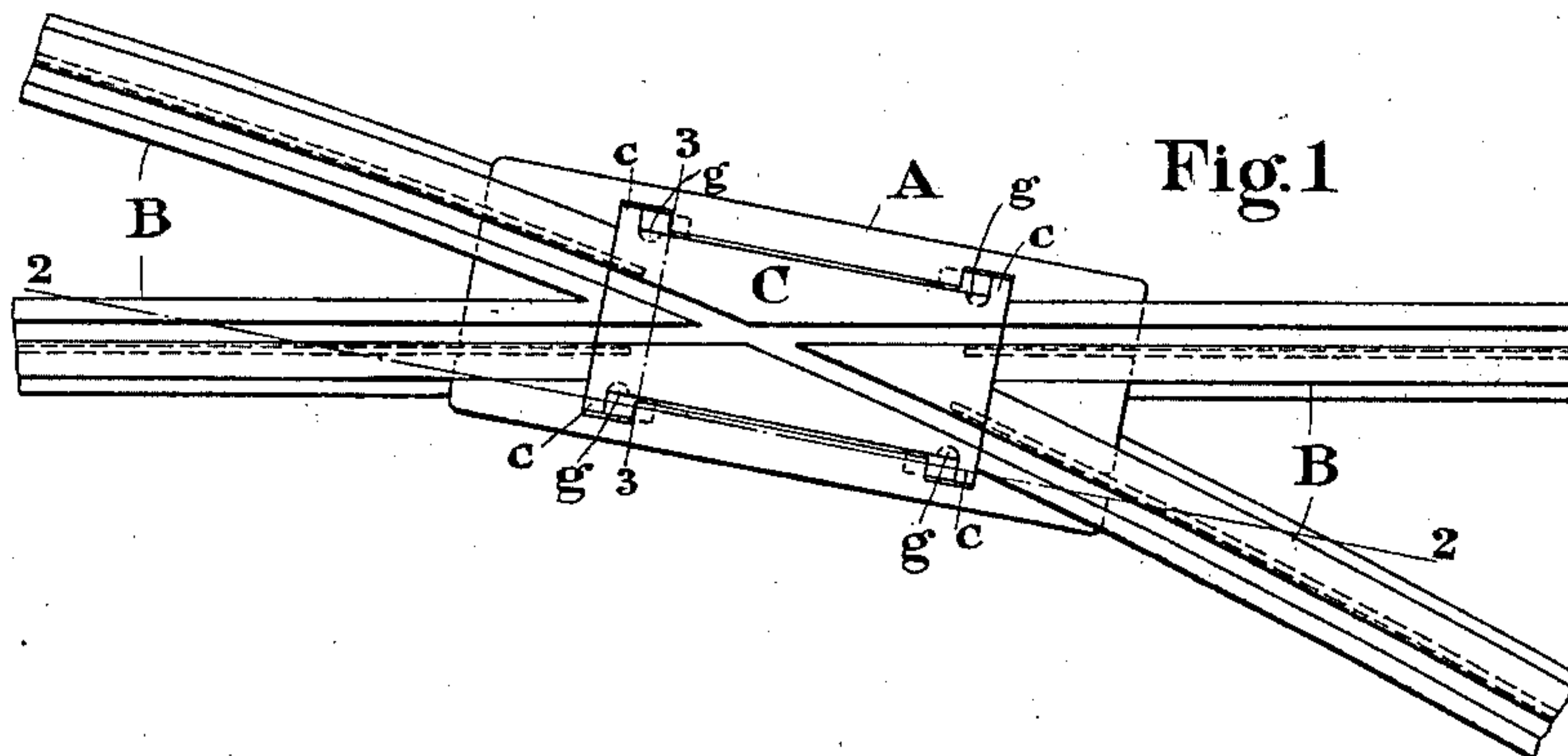


Fig. 2

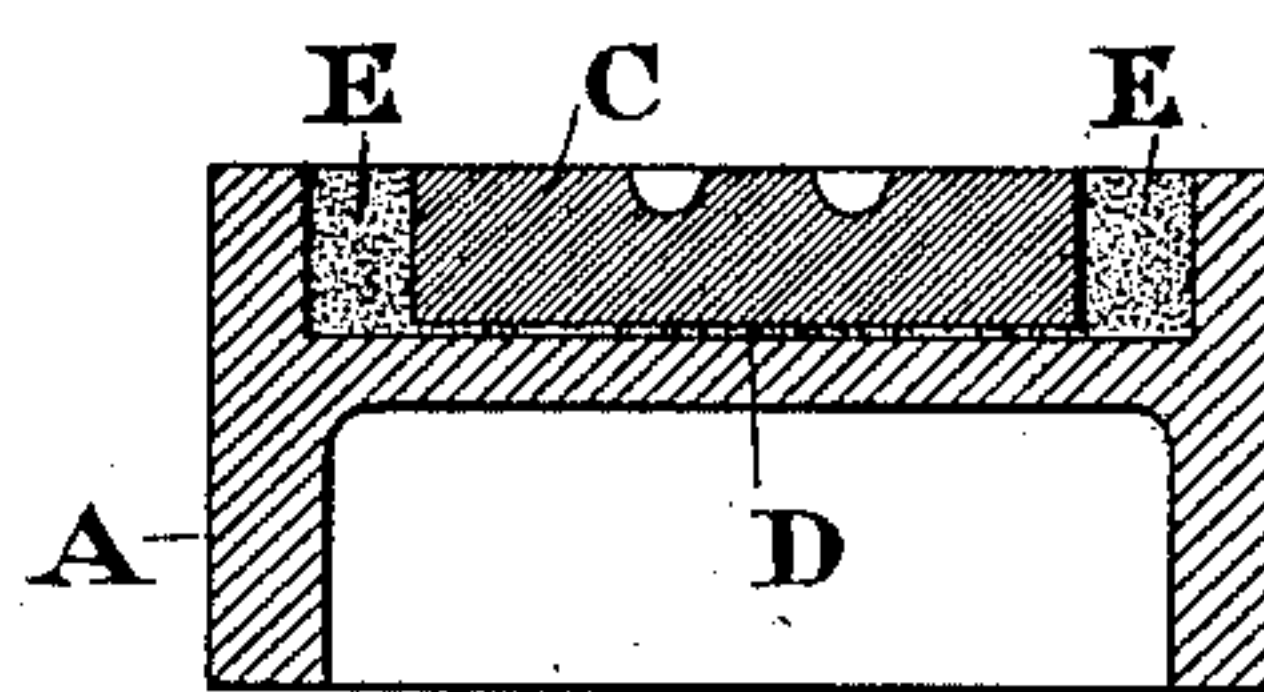


Fig. 3

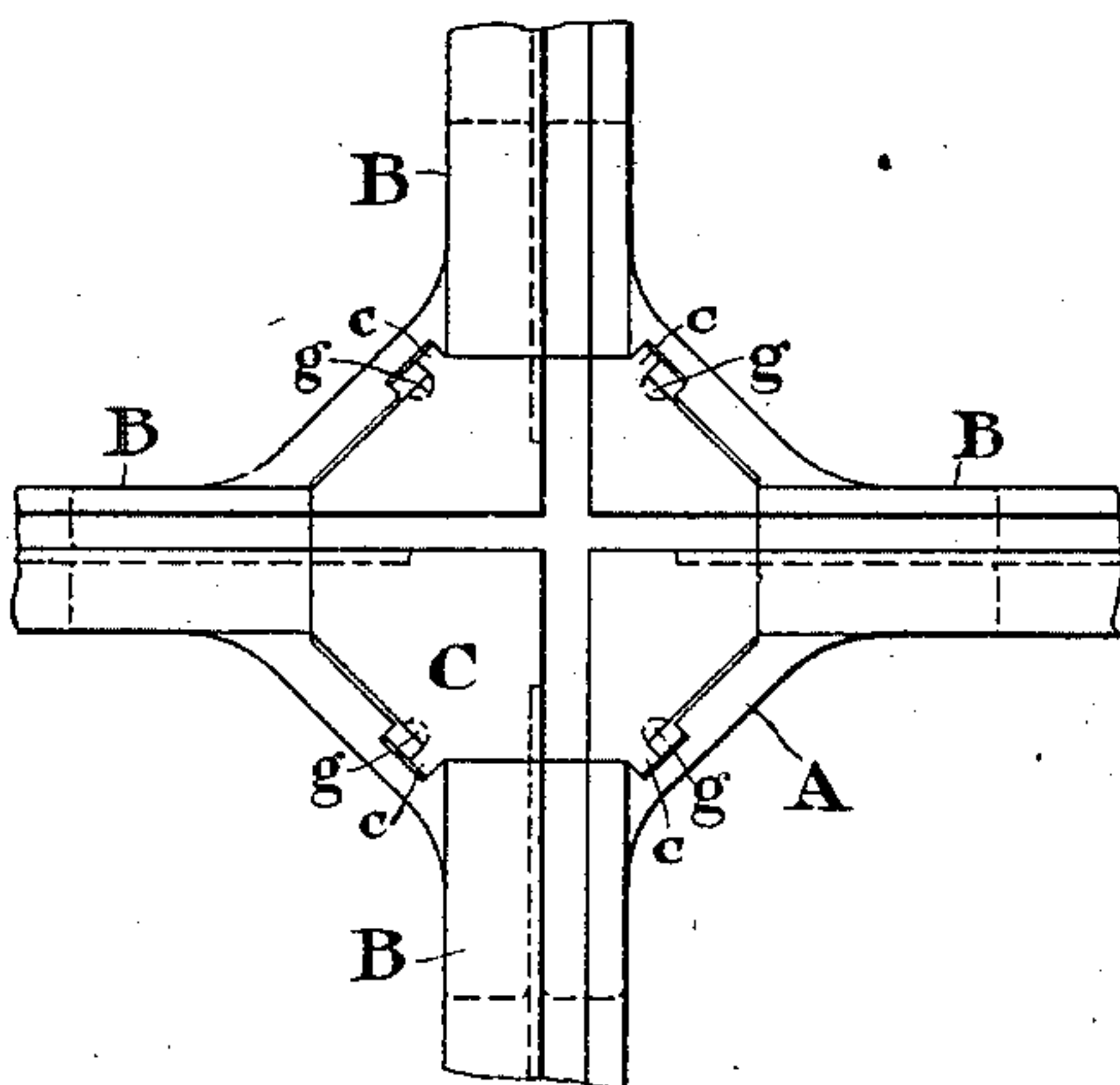


Fig. 4

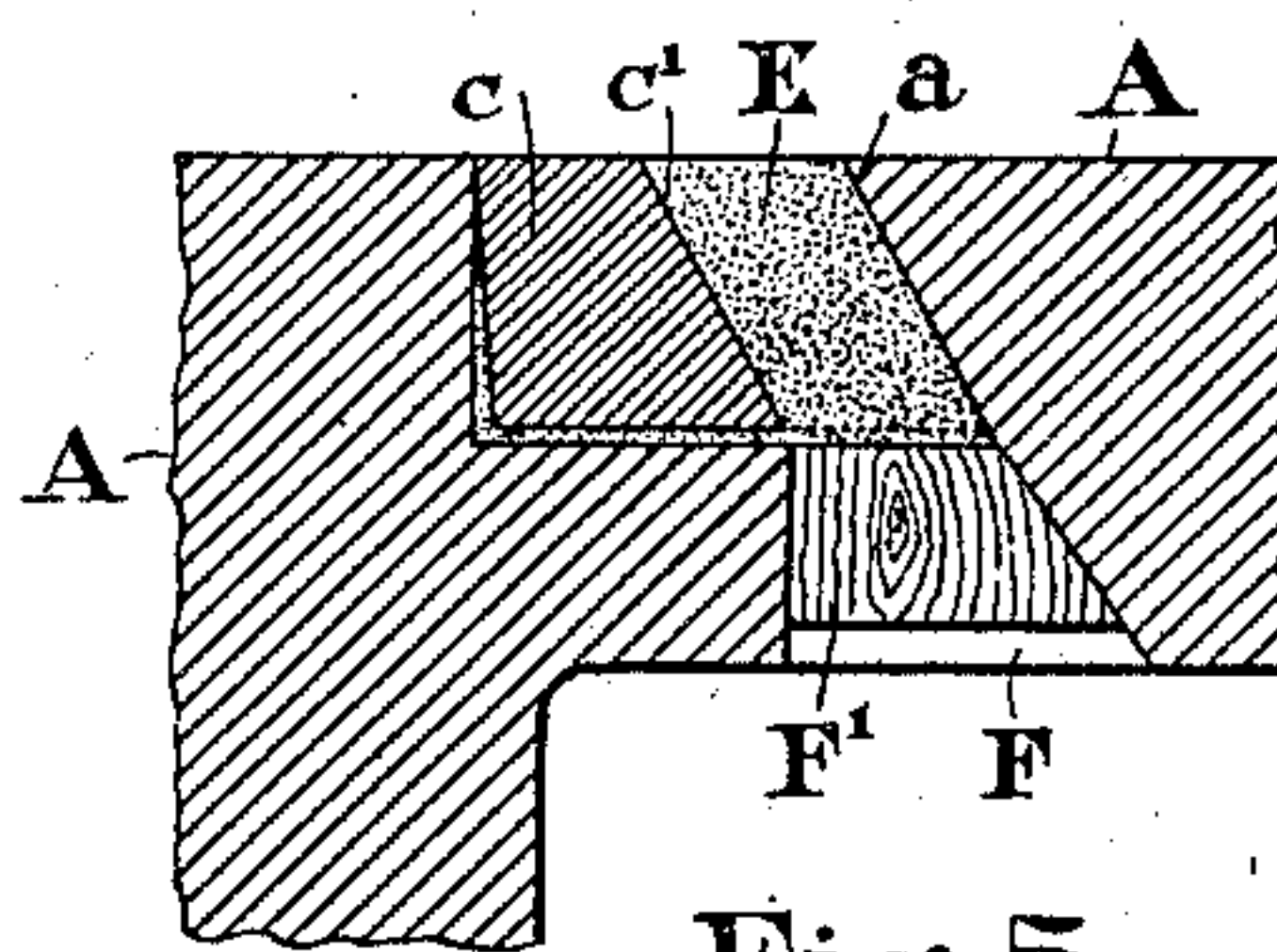


Fig. 5

WITNESSES:  
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BY  
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his ATTORNEY.



# UNITED STATES PATENT OFFICE.

GEORGE M. ERVIN, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE LORAIN STEEL COMPANY, A CORPORATION OF PENNSYLVANIA.

## RAILWAY-TRACK STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 729,050, dated May 26, 1903.

Application filed March 18, 1903. Serial No. 148,335. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE M. ERVIN, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Railway-Track Structures, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has relation to means for securing in place the renewable wear-plates of railway-track structures, and is more particularly an improvement upon the fastening described and claimed in the patent to H. B. Nichols, No. 713,790, of November 18, 1902. That fastening consists in a number of plugs or keys forming an interlocking connection between the plate and the body portion of the structure, which can be released by driving out separable core portions of said plugs or keys. The present invention is designed to simplify that fastening by forming said plugs or keys of solid homogeneous portions of the usual bedding material for the plates, so arranged that they may be readily driven out to release the plate without the use of the separable core portions. The present invention also simplifies the construction of the plate and its seat and reduces the labor of pattern-making and molding and also of fitting the parts.

The precise nature of my invention will be understood by reference to the accompanying drawings, in which—

Figure 1 is a plan view of a frog or curve-cross embodying my invention; Fig. 2, a section on the line 2 2 of Fig. 1; Fig. 3, a section on the line 3 3 of Fig. 1; Fig. 4, a plan view of a right-angled girder-crossing embodying the invention, and Fig. 5 a detail view on a larger scale.

The letter A designates the body portion of the structure, and B the diverging rail members.

C designates the hard-metal track-surfaced wear-plate, which is seated in a pocket in the said body portion. Said plate is formed with the projecting lugs *c*, having inclined surfaces *c'* and seating in the offset recesses of the body portion, said recesses having the undercut walls *a*. These undercut walls *a* face the

inclined surfaces *c'* and are separated therefrom by spaces to receive the retaining material D. This material, which may be spelter or any other suitable substance, is poured in after the plate has been properly seated and leveled and flows around and underneath the plate and fills the said spaces, and being thus confined between the inclined surfaces *c'* and the undercut walls *a* forms plugs or keys E, which hold the plate securely in place. Cored into or through the body portion *a* are openings F below the said plugs. By means of a suitable drift applied to the upper ends of the plugs and driven with a sledge they may be readily sheared from the connecting spelter around the plate and driven through into the said openings, thereby releasing the plate. The latter can then be readily prized and lifted from its seat. To facilitate the application of a pry-bar, recesses *g* may be cored in the plate. These, together with the openings F, are filled with clay or wooden plugs F' before the spelter or other retaining material is poured.

I consider it preferable to make the spaces which seat the said plugs, together with the openings F, of increasing size toward their lower ends, as shown in Fig. 5, to facilitate driving out the plugs.

It will be obvious that the projections *c* and the recesses *a* or their equivalents may be arranged in various ways without affecting my invention. My invention is also applicable to other track structures—such as mates, tongue-switches, and the like—as well as to the particular structures shown.

I do not claim, broadly, herein these features in combination with plugs or fastenings seated between them, as such a combination is described and claimed in my application filed September 23, 1902, Serial No. 124,572.

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

1. The herein-described means for removably securing wear-plates in railway-track structures, consisting in solid bodies or plugs of a retaining material filling oblique spaces between the plate and the body portion of the structure, the lower walls of said spaces being formed by the plate and their upper walls



by the said body portion, said body portion also having openings below said bodies or plugs into or through which they may be driven.

5 2. In a railway-track structure the combination with a body portion having a plate-seating pocket therein formed with undercut recesses in its walls, and a plate seated in  
10 said pocket or recess, and having upwardly-facing inclined surfaces thereon facing the undercut walls of said recesses, of a retaining material bedding the said plate and having  
15 portions filling the spaces between the said undercut walls and upwardly-facing surfaces, said body portion also having openings into or through which said portions may be driven.

3. In a railway-track structure, the combination with a body portion and a wear-plate  
20 seated therein, said body portion and plate having respectively, overhung walls, and inclined surfaces facing the said walls and separated therefrom by spaces of a retaining material filling the said spaces, said body portion having openings or recesses communicating with the said spaces.

4. In a railway-track structure, the combination with a body portion having a plate-seating pocket therein formed with laterally-  
30 offset recesses having each an undercut wall, and openings in line with said recesses, of a wear-plate seated in said pocket and having lateral projections formed with inclined surfaces facing the said undercut walls and separated therefrom by spaces, and a retaining  
35 material bedding the said plate and filling the said spaces.

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

GEO. M. ERVIN.

Witnesses:

LORETTO O'CONNELL,  
H. W. SMITH.