

G. E. LYNCH.
RACK RAIL.
APPLICATION FILED JUNE 19, 1907.

959,565.

Patented May 31, 1910.

Fig. 1.

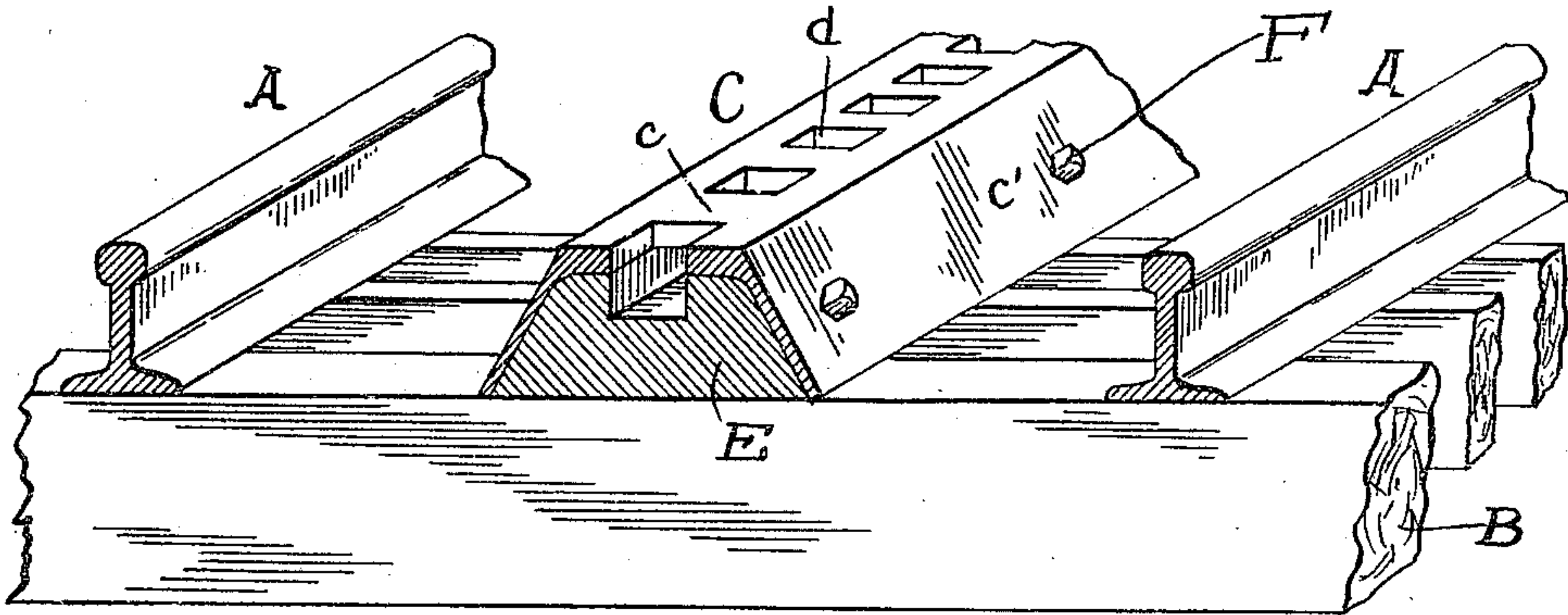


Fig. 2.

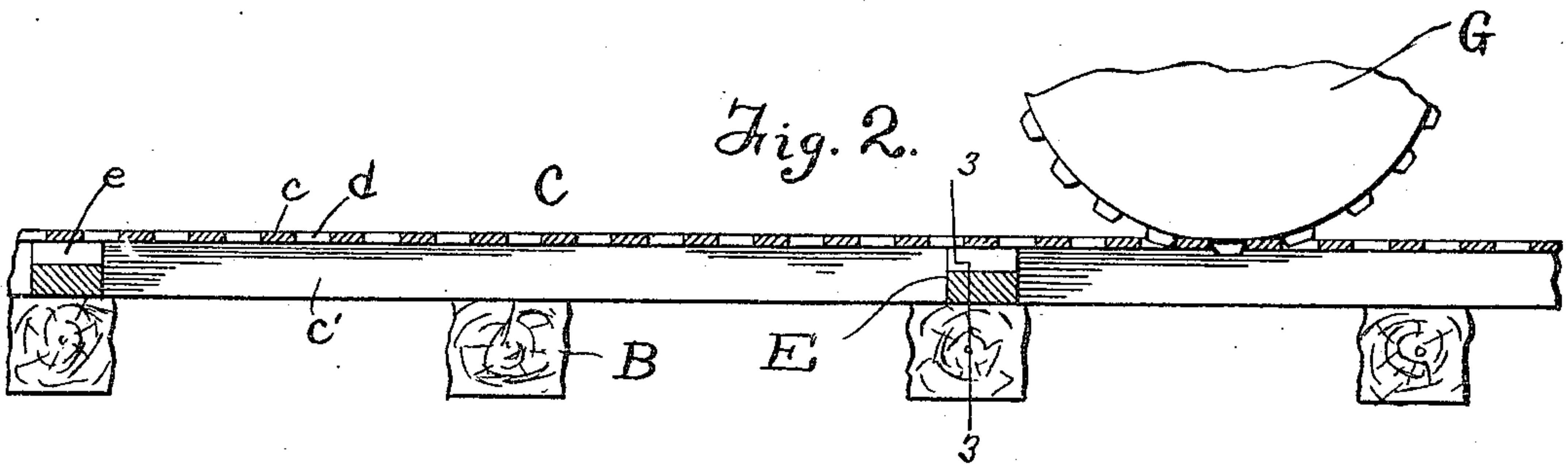
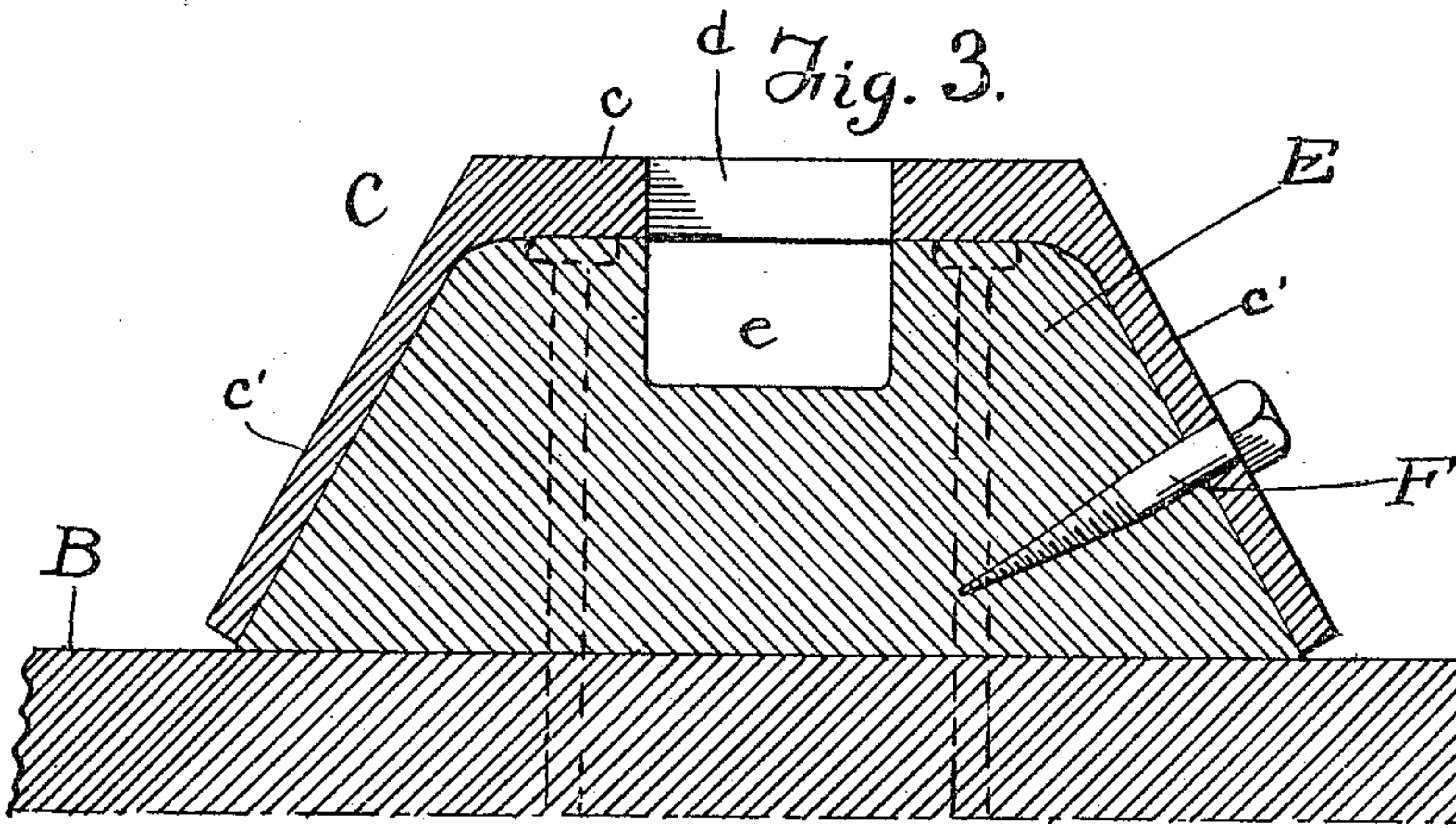


Fig. 3.



Inventor

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Witnesses

Stuart Hilder.
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UNITED STATES PATENT OFFICE.

GEORGE E. LYNCH, OF COLUMBUS, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE
JEFFREY MANUFACTURING COMPANY, A CORPORATION OF OHIO.

RACK-RAIL.

959,565.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE E. LYNCH, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Rack-Rails, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to an improved construction of rack rails and to the supporting means therefor.

In the accompanying drawings—Figure 1 is a perspective view of a short portion of a railway track comprising a rack rail embodying my invention, the rack rail being shown in cross-section. Fig. 2 is a vertical longitudinal sectional view of a portion of the track, the section being taken centrally through the rack rail. Fig. 3 is a cross-sectional view on the line 3—3 of Fig. 2.

In the drawings, A, A, represent the track rails and B cross-ties upon which they are supported and to which they are secured by any suitable means.

C represents a rack rail which is of trough shape, it being inverted when in use; that is to say, the horizontal plate *c* lies uppermost and from it extend downward and outward the side plates or skirting *c'*. The horizontal plate is perforated at *d*, *d*, to provide the apertures with which engage the teeth of a rack or sprocket wheel G, such as rack locomotives are usually provided with, and which are of such well known construction that its parts need not be herein illustrated or further described.

In order to support the rack rail, which is usually placed centrally between the track rails A, I prefer to employ blocks E, E, supported upon and secured to the cross-ties B. These blocks may be of any desired length. I have, however, found that they afford sufficient support for the rack rail if they are about four inches long and placed four feet apart between centers. Each block is shaped on its upper surface to fit the inner surface of the rail C, and the latter is secured to the blocks by means of long screws F, or

by other suitable securing means. The blocks E are channeled in their upper surfaces, as indicated at *e*, to provide recesses into which may enter the teeth of the rack wheels carried by the locomotives, it being understood that such teeth are long enough to entirely pass through and beyond the lower face of the rack plate *c* of the rail C. I prefer to groove the blocks throughout their entire length, although it would be sufficient to provide them with recesses only, coincident in area with the apertures *d*.

It will be understood that my invention is not to be limited to the size of the blocks upon which the rack rails are supported, as they may be practically coincident in length with the rails themselves.

A rail such as I have described is of simple construction and may be easily supported as indicated, the supports shown serving to hold the rail securely against movement either laterally or longitudinally. The interfitting of the rail and blocks E, by reason of the trough or channel shape of the rail and the blocks being shaped to fit quite accurately the channel of the rail, affords strong support against tendencies to move the rail laterally, while the screws F that pass through the side plates of the rail effectively prevent longitudinal or creeping movements of the rail.

What I claim is:—

1. A rack rail for railways consisting of a rail of inverted trough shape, having the top plate *c* and the inclined side plates *c'*, the former plate being perforated to receive the teeth of the rack wheel of a locomotive, in combination with supporting blocks upon which the rail rests, the upper surfaces of the blocks being shaped to fit the under surfaces of the rail, and the blocks having formed in their upper parts recesses arranged to register with the apertures in the top plate of the rail, substantially as set forth.

2. A rack rail for railways of inverted trough shape, having a substantially horizontal perforated upper plate *c* and side plates *c'*, *c'*, extending downward therefrom,

supporting blocks fitting into the trough or
channel of the said rail, having recesses in
their upper parts arranged to register with
the apertures in the rack rail, and screws
5 passing through the side plate *c'* of the rail
and into the blocks for securing the rails in
place, substantially as set forth.

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

GEORGE E. LYNCH.

Witnesses:

H. C. FREEMAN,
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