

(No Model.)

G. W. PARSONS.
RAIL CLAMP.

No. 534,172.

Patented Feb. 12, 1895.

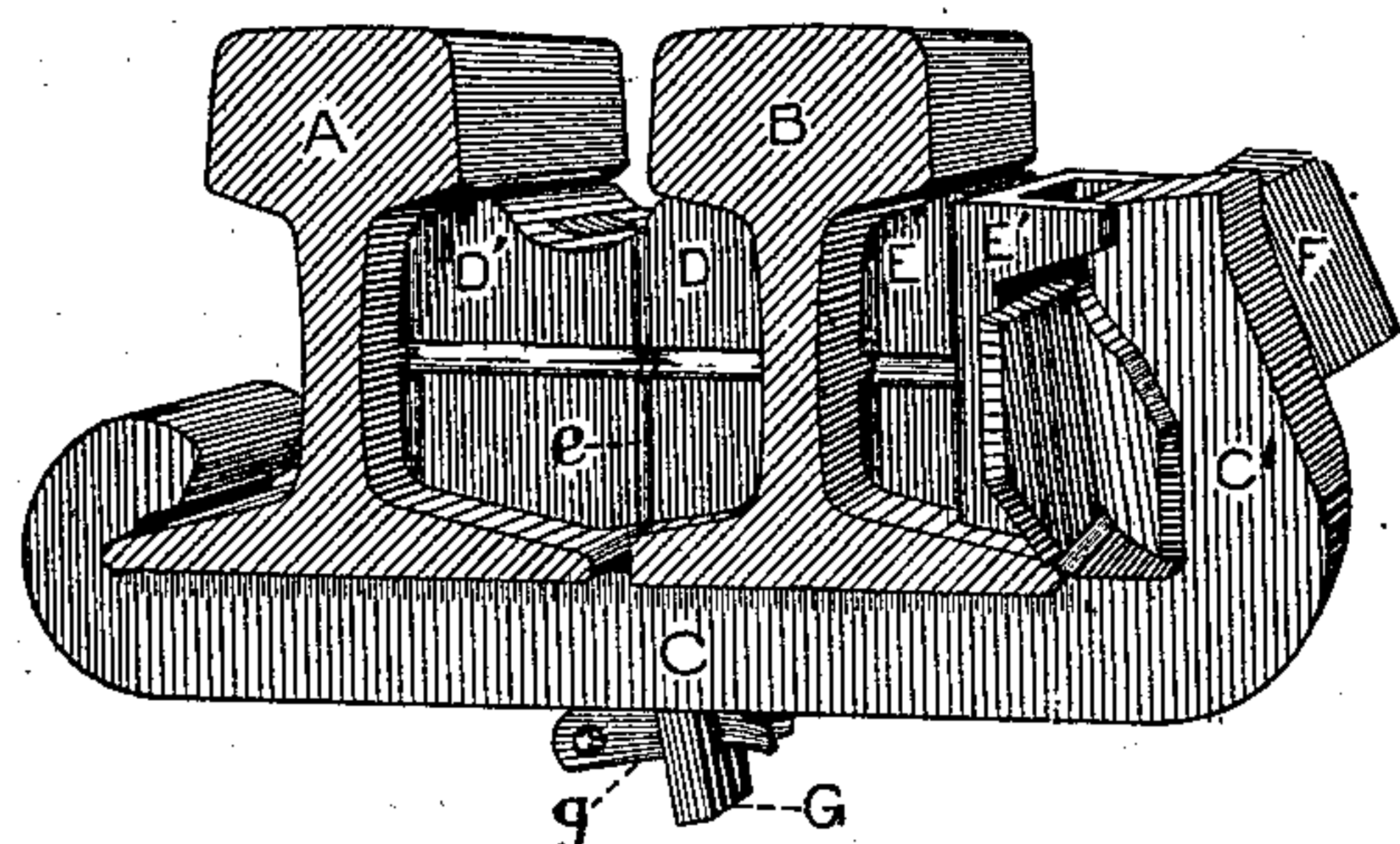


Fig. 1

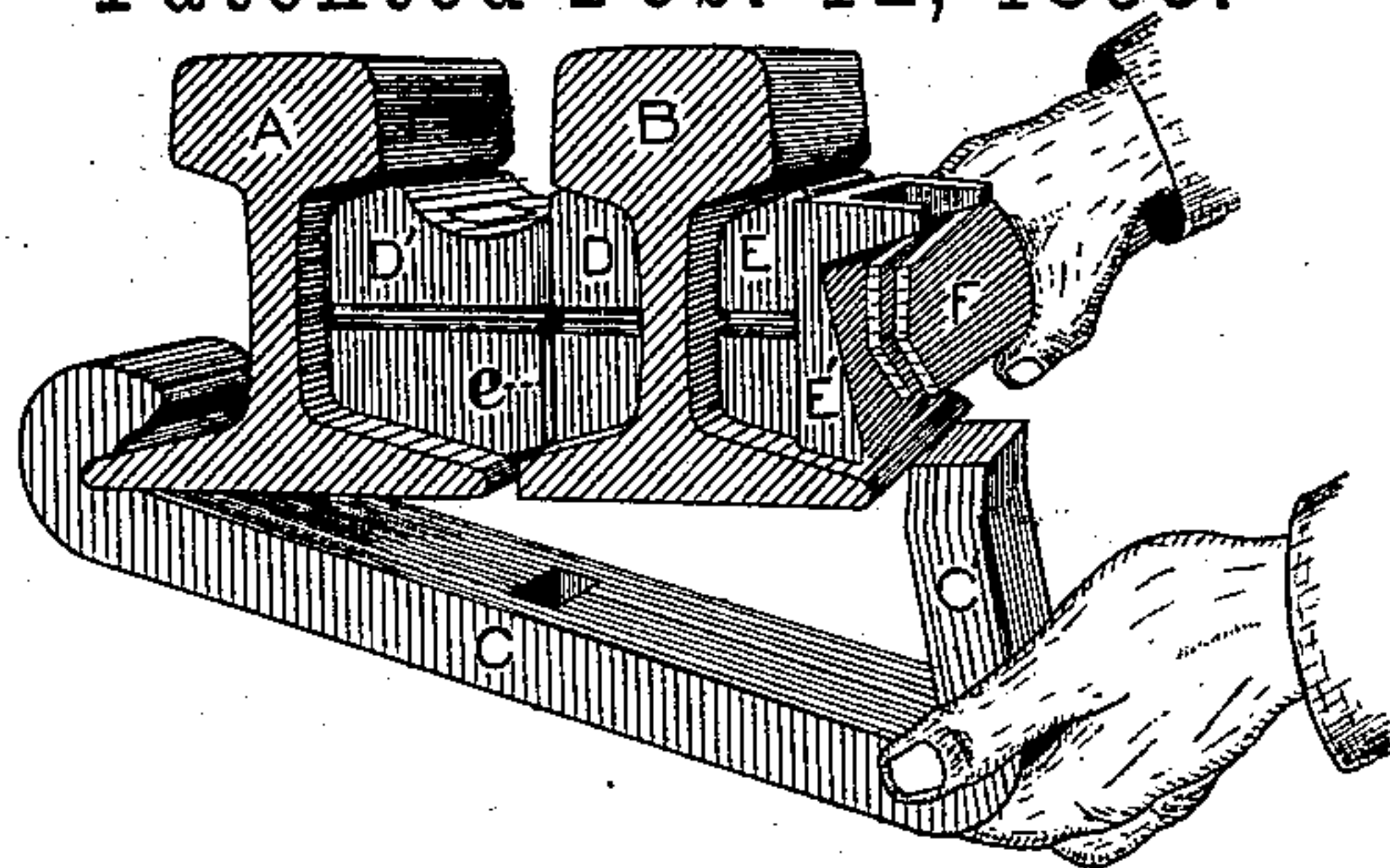


Fig. 2

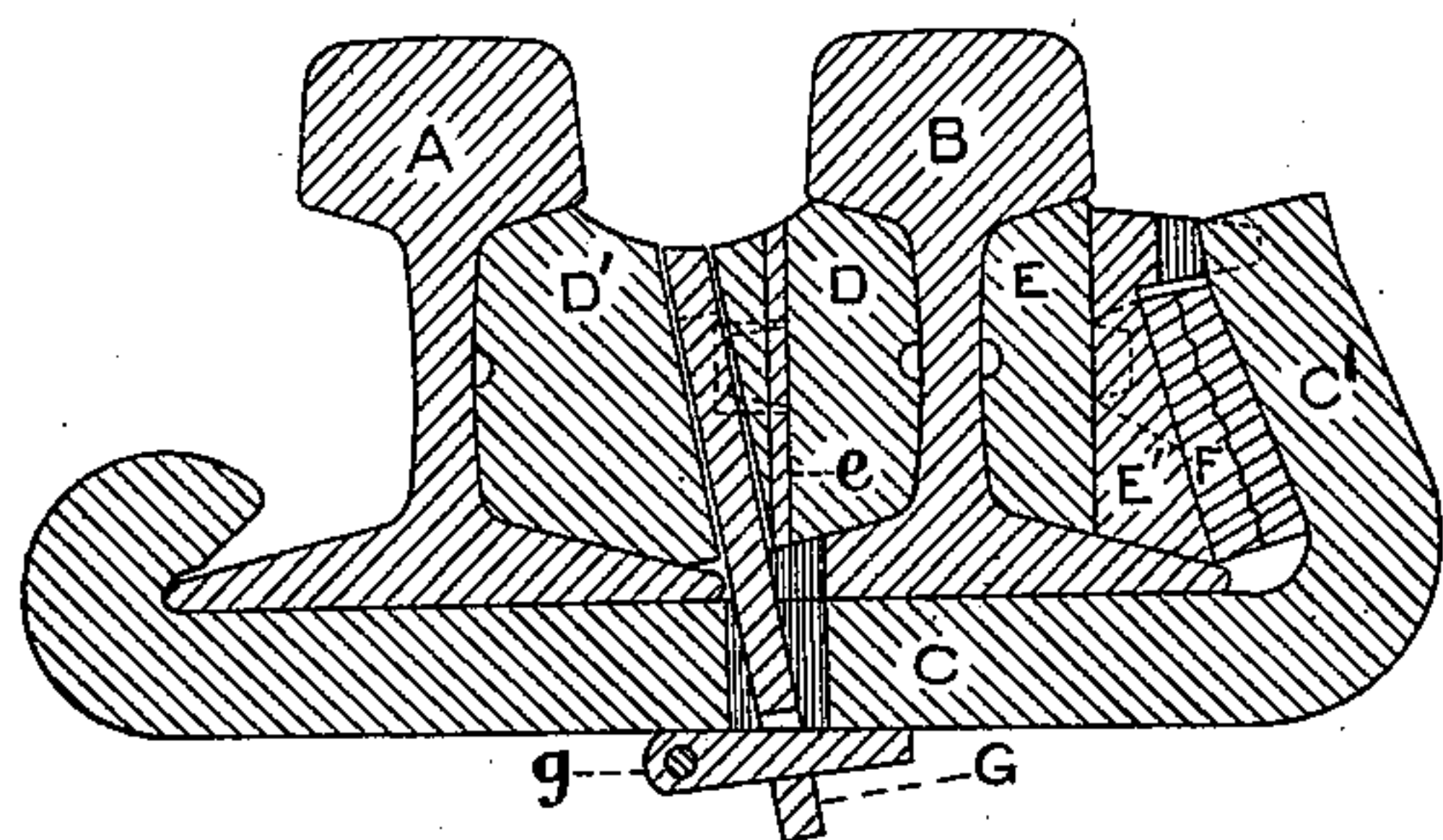


Fig. 3

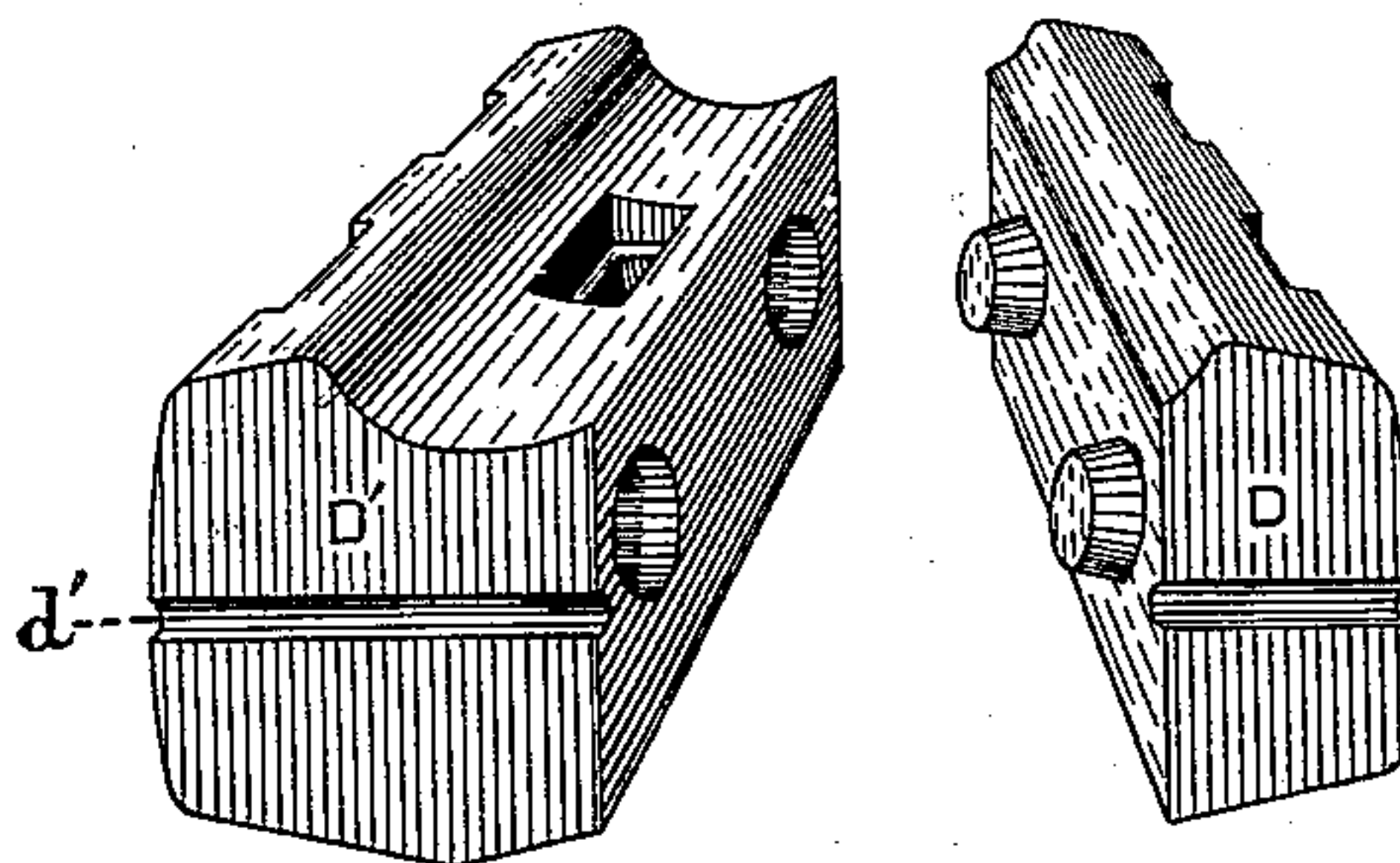


Fig. 4

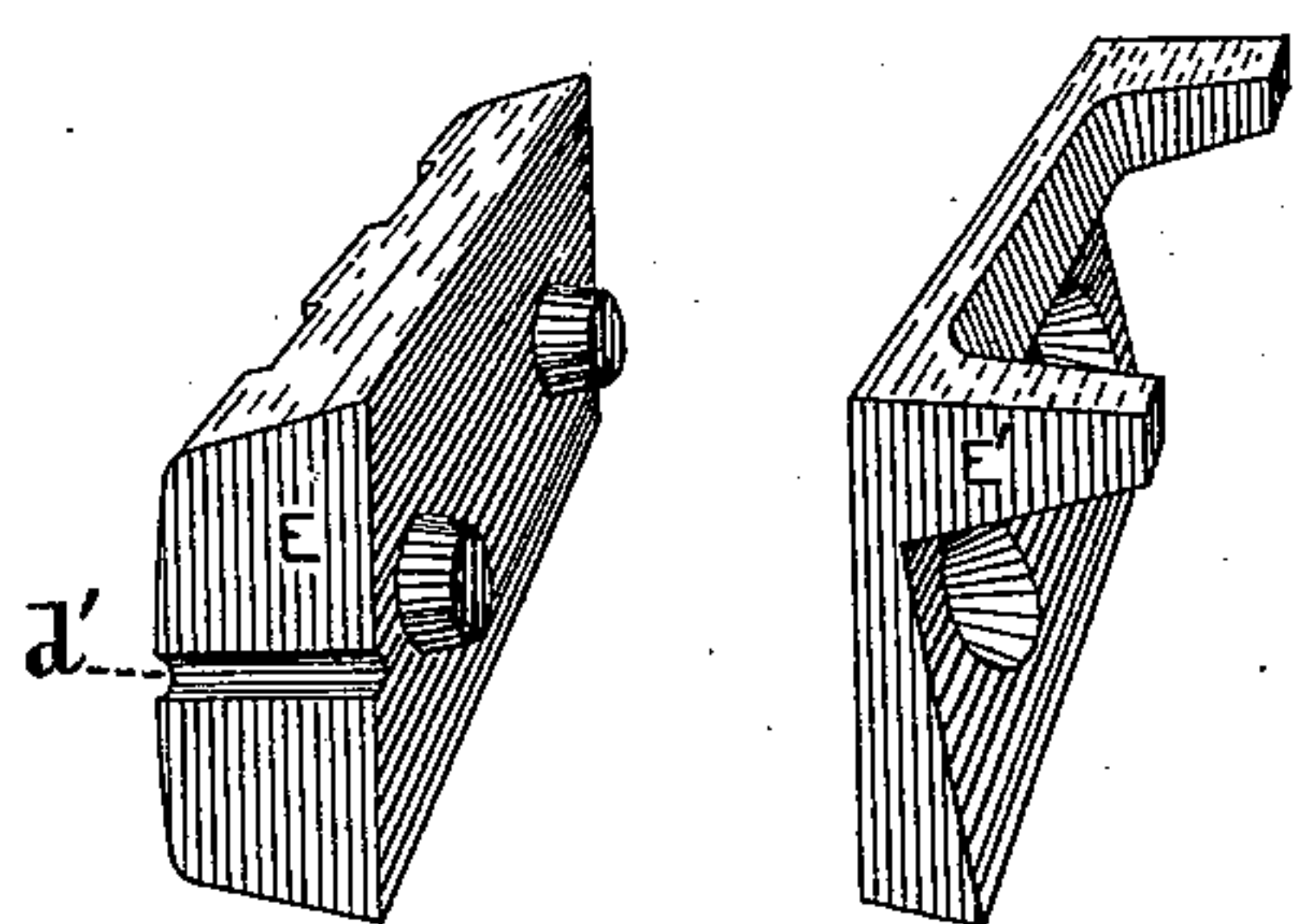


Fig. 5

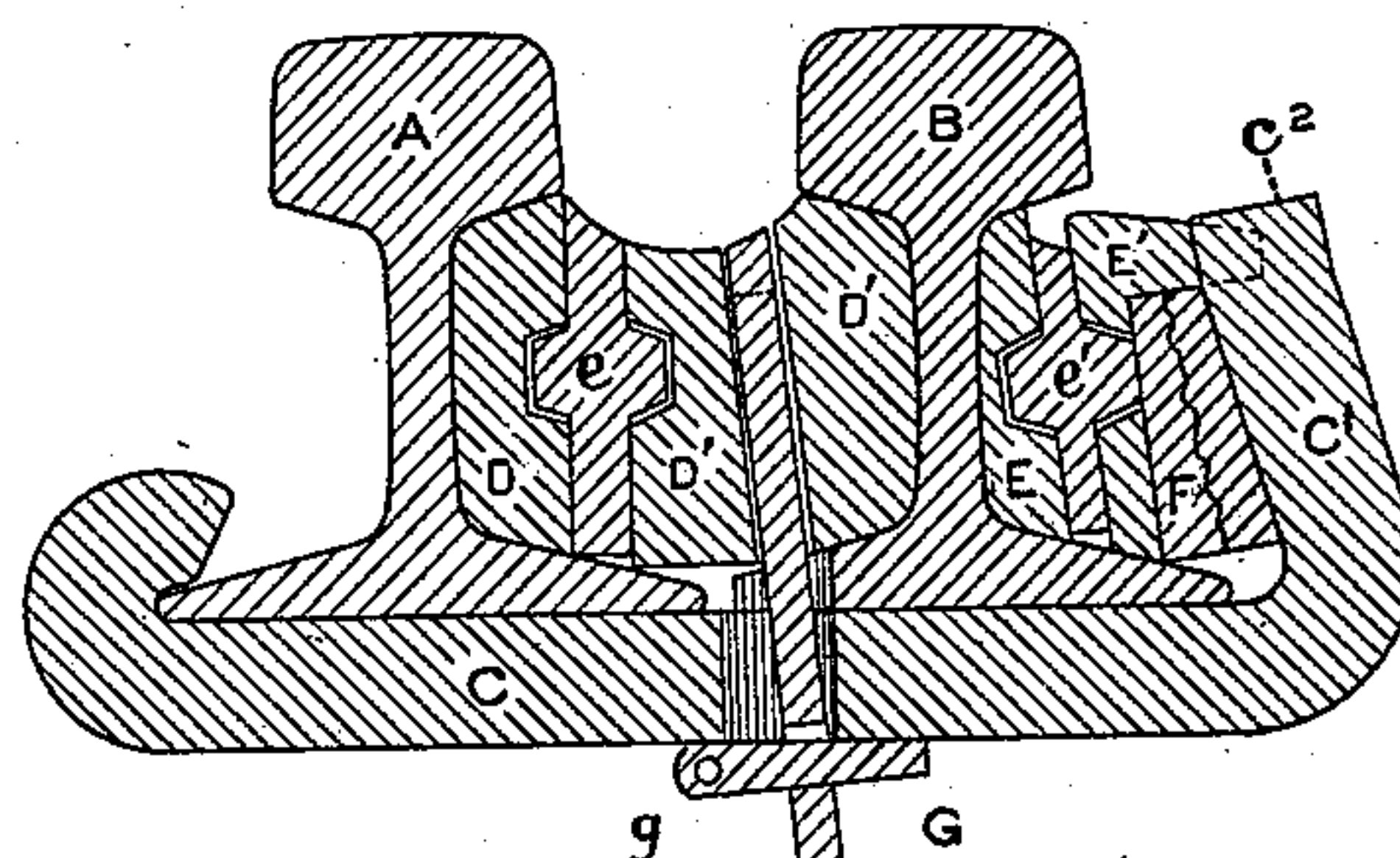


Fig. 6

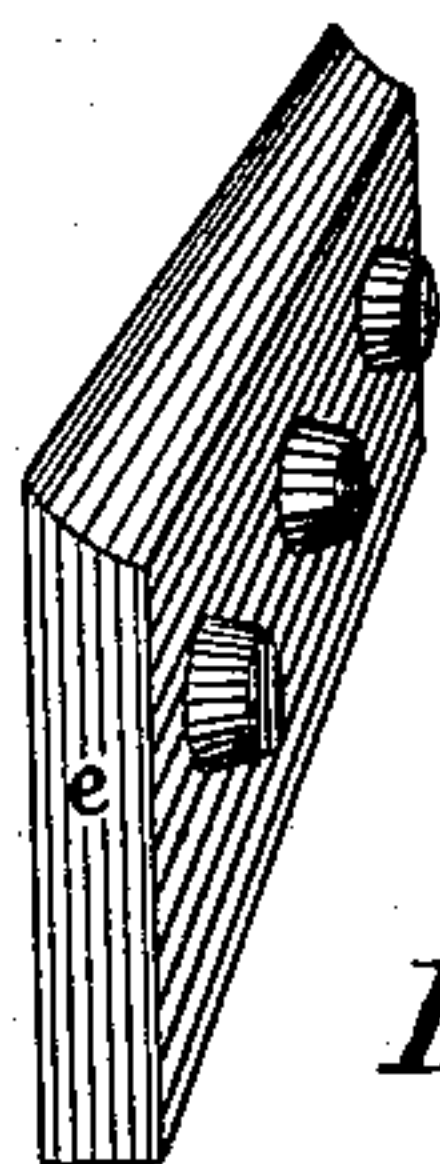


Fig. 7

Witnesses

C. E. Fink

M. W. Munn

Inventor

Geo. W. Parsons

UNITED STATES PATENT OFFICE.

GEORGE W. PARSONS, OF STEELTON, PENNSYLVANIA.

RAIL-CLAMP.

SPECIFICATION forming part of Letters Patent No. 534,172, dated February 12, 1895.

Application filed December 21, 1894. Serial No. 532,533. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. PARSONS, a citizen of the United States, residing at Steelton, in the county of Dauphin and State of Pennsylvania, have invented a new and useful Improvement in Rail-Clamps, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to secure rails, such as guard rails, to other rails, such as main track rails, by adjustable fastenings, applicable to any portion of a main track rail without subjecting same to drilling or any other mechanical operation, by clamps embracing the rails, with means for maintaining variable distances between said rails, by parts designed to be used interchangeably without altering the fitting of the clamp to the parts secured therein.

The tracks of a railroad having been at first four feet nine inches gage requiring guard rails with flangeway two inches wide, and later a change to four feet eight and one-half inches gage (which requires guard rails with flangeway one and three-fourths inches wide) is contemplated, to be effected when it may become practicable, it is obviously advantageous, in providing guard rail clamps, to be able to use them with either width of flangeway, without changing the clamps. It is also advantageous to make slight changes in the position of guard rails to obviate the wearing away of the side thereof, by the rubbing of the wheels. In my invention these advantages are secured by the means hereinafter described.

Figure 1 is a perspective view of devices embodying my invention, applied to rails represented as cut off close to the devices. Fig. 2 is a perspective view of the application of the devices with the clamp approaching its position. Fig. 3 is a vertical section on a line drawn through the center. Fig. 4 is a perspective view of the separator parts. Fig. 5 is a perspective view of the packing parts. Fig. 6 is a vertical section showing a modification of the separator parts and the packing parts. Fig. 7 is a perspective view of interchangeable part in a modification.

A designates a main track rail, and B designates a guard rail such as is used to guide wheels while passing frogs.

C designates the clamp, the body of which is beneath and preferably in close proximity to the base of the rails A and B. One end of the clamp is preferably formed into a hook which engages with one of the rail flanges, but it is obvious that this end of the clamp may be variously formed and made to engage with the rail. The other end of the clamp is turned up and inclined vertically toward the adjacent rail.

To maintain suitable distances between the rails A and B, I provide between them a compound separator, composed of a plurality of parts, mutually conformed in adjacent surfaces, and adapted to engage and interlock with each other to prevent respective parts from working vertically or longitudinally out of position. A preferred form of separator, shown in Figs. 3 and 4, consists of a part D, with certain surfaces fitting its adjacent rail, of proportions suitable for its use on the other side of said rail, as hereinafter explained; and, a part D' with certain surfaces fitting its adjacent rail, and other surfaces fitting the part D, the latter being provided in this case with projections to enter recesses in the part D' and interlock therewith as clearly shown in Fig. 4.

To prevent the parts D and D' from displacement by moving along the rail I provide a bolt G which passes downward through an opening in the clamp and is secured there. With parts designed as shown in Figs. 1, 2, 3, and 4, I prefer a bolt of flat section, having a T shaped head, and a transverse slot for a split key by which the bolt is secured in place. With guard rails as usually made, with numerous notches for spikes, the bolt will occupy one of the notches.

When my device is applied to rails of maximum width of base flanges, and the guard rails will be placed for the minimum flangeway, the bolt may be placed in a vertical slot on the side of the separator B instead of the hole shown in Fig. 4.

Between the rail D and the upturned end C' of the clamp c' I provide a compound packing, consisting of parts E and E', of shapes conforming to each other, also adapted to interlock with each other, by means of suitable projections and recesses. The surface of E, adjacent to the rail B, is preferably closely con-

formed to the shape of the adjacent surfaces of the rail. The side of the part E' adjacent to the clamp is provided with projections to engage with the edges of the clamp, by which the clamp prevents it from working out of position. Beneath said projections, the surface of part E' inclines vertically, suitably to fit the wedge. The proportions of part E' will preferably be such that the outer surface, on which the wedge bears, will always be inside of the edge of the flanges of the rail, so that the rail flange may serve as a shelf or supporting bearing for the wedge F, by which to prevent it from working down and loosening; or, if left loose, to prevent it from falling out.

The wedge F is preferably of a bevel shaped section, thickest at the lower edge, as that shape serves best to draw the clamp upward, and the rail B and parts E and E' downward. It is also preferable to have the wedge split at the smallest end so that by spreading that end open the key may be prevented from working back. The wedge F having been inserted between the end of the clamp and the packing part E' and forcibly driven, all the parts within the clamp are crowded tightly together, the elasticity of the clamp holding them securely.

For the purpose of altering the distance between the rails A and B, the packing piece E will be substituted for separator part D, and vice versa. Therefore D and E will have similar conformation so as to fit parts D' and E' respectively, but, will differ in thickness by so much as it may be contemplated to change the distance between the rails. Thus by use of a compound packing, and a compound separator, each embracing interchangeable parts of similar shapes, but of different thickness, the distance between the rails can be varied according to the manner in which the parts are assembled, using always the same clamp and wedge, by which the rails will be clamped with equal security, at respective distances. To provide means of effecting small variations, I also employ liners e, e, made of thin metal, of forms adapted to be used between the separating parts D and D' or between the packing pieces E and E', and secured from working out. Thus when the parts D and D' are interlocked by projections and recesses as shown in Figs. 3 and 4, the liners will be provided with openings through which the projections will pass.

By transferring liners from the separator to the packing, the rails are brought nearer together, as may be necessary after the guard rail has been worn away by the action of the wheels guided by it. By this device the working face of the guard rail can be kept at the proper distance from the frog point which is guarded.

That the changes and adjustments above mentioned can be made without affecting the

total bulk of the material inside the clamp, and thus permit the same wedge to be used, it is obviously an important advantage, and insures a long period of usefulness for the device when properly applied.

To facilitate the handling and first placing of the parts employed as separators, I bind them together by a wire band, occupying grooves d' in which the wire does not interfere with the fitting of the parts.

As shown in Figs. 3 and 4 the projection on the separator parts and the packing parts are all in the form of round pins, on parts D' and E', adapted to enter recesses in parts D and E respectively, but it is obvious that various modifications of these details may be made without departing from the scope of my invention, such, say, as shown in Fig. 6, in which the separator is made up of three parts, likewise the packing, the middle part in each being formed with projections on opposite surfaces, adapted to enter recesses in the adjacent parts, and prevent the parts from working out of engagement, and it is also obvious that the separating and packing parts could be kept in engagement by loose pins, acting as dowels, inside of recesses in adjacent surfaces, but I prefer the forms shown in Figs. 1, 2, 3, 4 and 5.

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

1. In a rail clamping device the combination of rails A and B, a compound separator consisting of a plurality of parts with interior surfaces adapted to interlock against vertical or longitudinal displacement and exterior surfaces conformed to said rails, a clamp embracing the rails, and a tapering wedge, substantially as described.

2. In a rail clamping device, with rails A and B, the combination of a compound separator and a compound packing, each with plurality of parts and embracing an interchangeable part, a wedge and a clamp substantially as described.

3. In a rail clamping device with rails A and B, and clamp C, the combination of a compound separator and a compound packing, both adapted to receive and retain in place liners for varying the total space occupied by separator, or packing, substantially as described.

4. In a rail clamping device, with rails A and B the combination of clamp C, wedge F and packing piece E' the latter being adapted to engage and retain packing piece E, and also to engage with the sides of the clamp, and by the clamp be retained in position, all substantially as described.

GEO. W. PARSONS.

Witnesses:

HARRY I. NEWLIN,
REUBEN A. STOLL.