

E. C. SCRUGGS.  
 GUARD RAIL CLAMP.  
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979,343.

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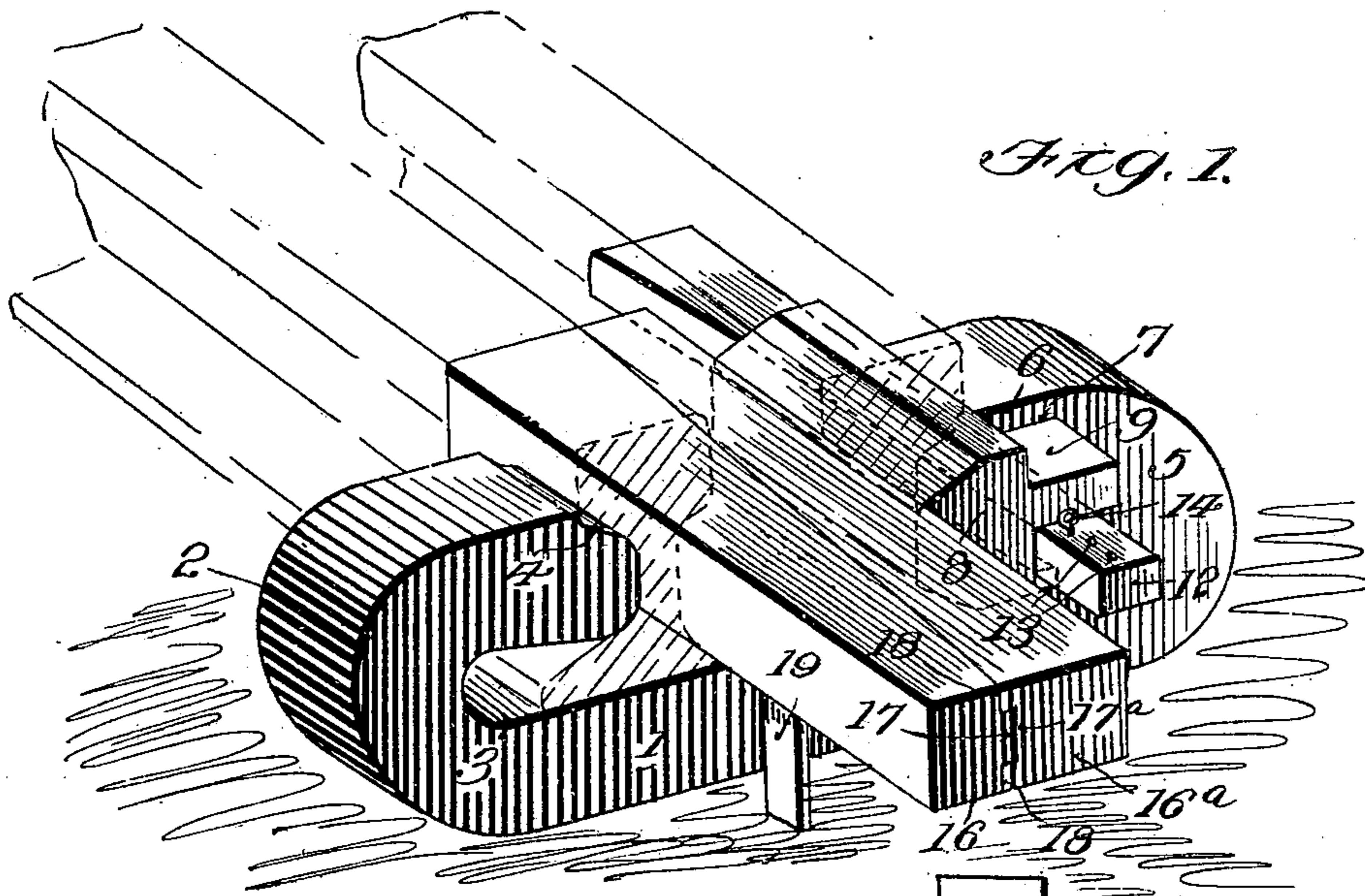


Fig. 2.

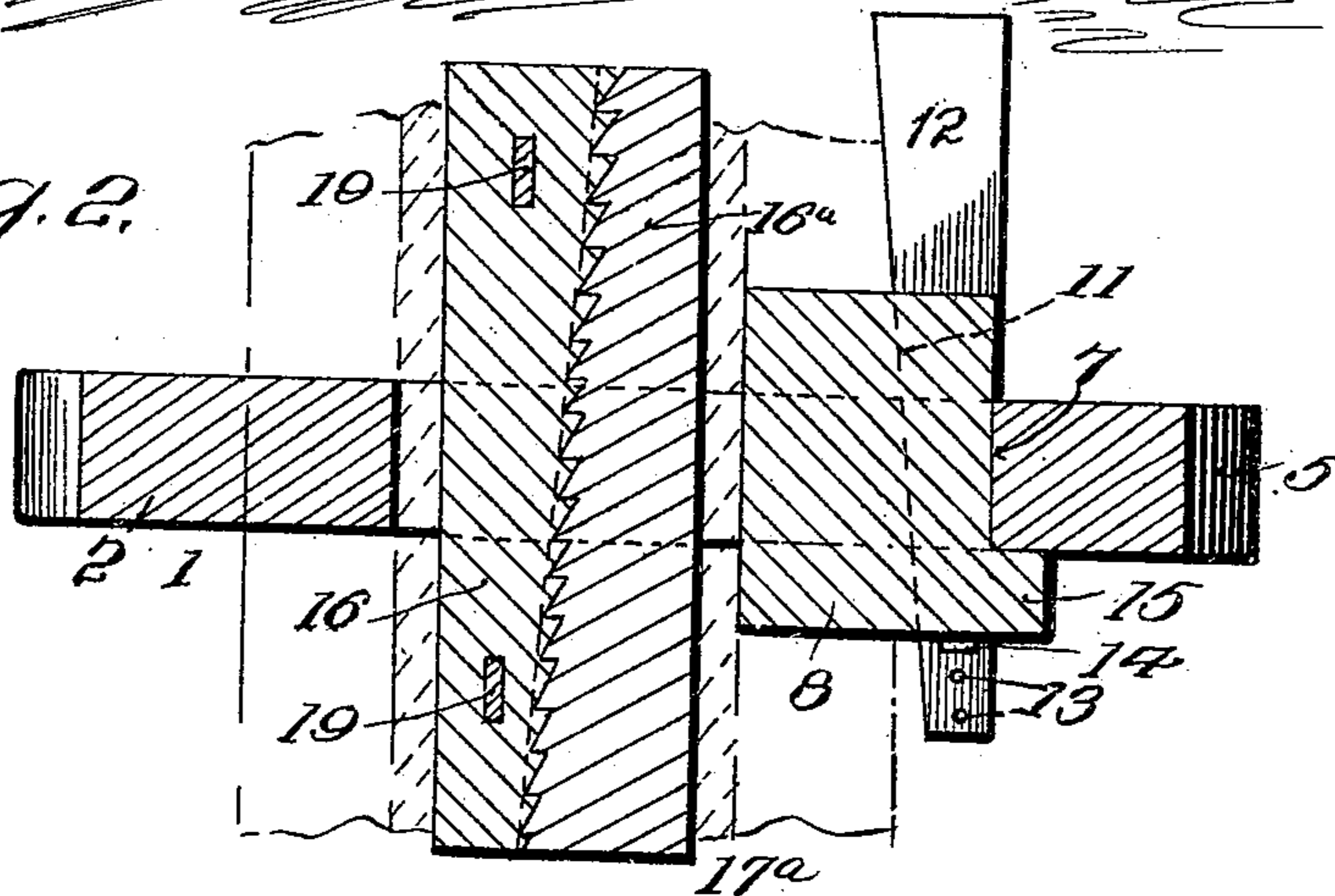
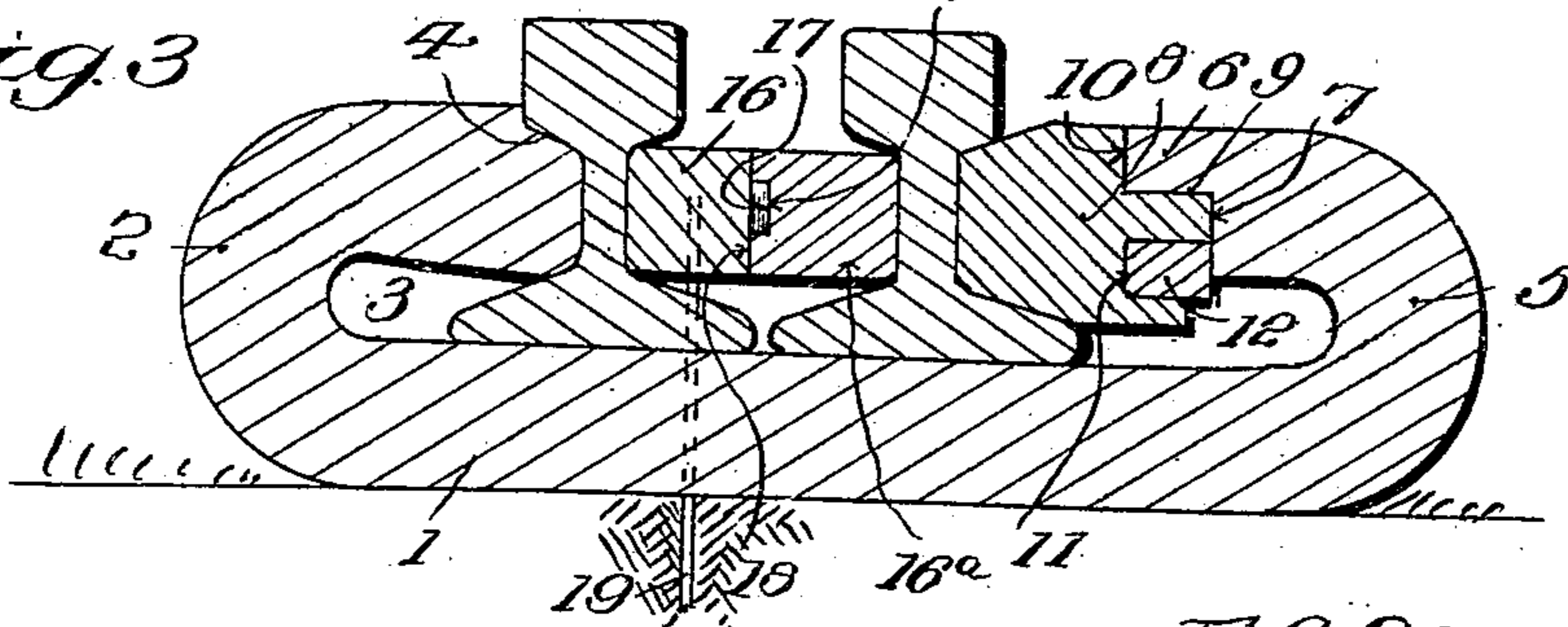


Fig. 3



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## GUARD-RAIL CLAMP.

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Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, EDWARD C. SCRUGGS, citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Guard-Rail Clamps, of which the following is a specification.

The present invention comprehends certain new and useful improvements in clamps for guard rails, and the invention has for its object an improved device of this character which possesses to a marked degree the characteristics of simplicity, durability and strength, which consists of comparatively few parts and is capable of being easily and quickly applied to the rails, and which holds the guard rail securely in proper relation to the main rail.

A further object of the invention is a rail clamp which may be conveniently adjusted to support the guard rail at different distances from the main rail, according as desired.

With these and other objects in view that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe and then point out the novel features of in the appended claim.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a perspective view illustrating the application of my improved guard-rail clamp; Fig. 2 is a horizontal sectional view thereof; and, Fig. 3 is a transverse section.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

My improved clamp consists essentially of a yoke bar 1 that extends transversely beneath the bases of the main rail and the guard rail. At one end the yoke bar is formed with an upstanding jaw 2 which bears against the outer face of the web portion of the guard rail, the jaw being formed with a recess 3 for the reception of the base flange of the guard rail and being recessed in its upper surface, as indicated at 4, to accommodate the head of said rail. The

yoke bar is formed at its other end with a jaw 5 which is provided at its inner face with a ledge or overhanging portion 6 that produces a recess 7 underneath the same or between it and the base portion of the yoke bar 1.

A filling block 8 is fitted against the outer side of the main rail and is interposed between the same and the jaw 5, the filling block being rabbeted in its upper surface, as indicated at 9, so as to receive the ledge 6 and to be accommodated in the recess 7. The rabbet provides an outwardly facing shoulder 10 against which the inner end of the ledge is adapted to abut. The filling block is formed in its outer face below the rabbet 9 with a substantially horizontal longitudinal groove 11 which opens outwardly at both ends of the block. A wedge-shaped key 12 is inserted longitudinally in the groove and is interposed between the filling block and the inner face of the jaw 5, the wedge serving to press the filling block laterally inwardly into firm engagement with the main rail. The groove 11 has substantially parallel side walls between which the key is confined so as to be held against vertical displacement. The groove gradually increases in depth from one end to the other in order to conform to the contour of the key and thus cause the same to exert a wedging action throughout the length of the filling block.

The smaller end of the key projects beyond one end of the block and is formed with a series of longitudinally spaced apertures 13 through any selected one of which a cotter pin 14 or the like is inserted to lock the wedge against retractile movement. For convenience, a lug 15 projects laterally outwardly from the filling block below the rabbet 9 and at the end of the block adjacent to the smaller end of the wedge-shaped key, and bears against the proximate side of the jaw 5 to limit the relative longitudinal movement of the filling block to insure against the accidental displacement thereof.

A pair of mating separating-blocks 16 and 16<sup>a</sup> are interposed between the inner or opposing faces of the main rail and guard rail to maintain the proper distance therebetween. These blocks are wedge-shaped, and for this purpose are similarly tapered at their inner or contiguous faces. The wedge-shaped blocks are oppositely arranged with the point of each wedge located at the side

of the butt of the other wedge, whereby to maintain the outer faces of the blocks at all times parallel so as to bear evenly against the rails. The separating blocks are formed at their contiguous faces with longitudinal rows or series of teeth, designated 17 and 17<sup>a</sup> respectively. These teeth intermesh, the teeth 17 projecting laterally from the inner face of the block 16, and the teeth 17<sup>a</sup> being inset for the reception of the projecting teeth, whereby to prevent any relative vertical movement of the separating-blocks. Each series of teeth faces away from the smaller end of the wedge-shaped separating-block, and hence the engagement of the series of teeth locks the separating-blocks against any retractile movement, that is, any relative longitudinal movement of the blocks which would decrease their combined width. The rows of teeth are relatively narrow and are located substantially midway between the upper and lower edges of the separating-blocks so as to provide pairs of spaced longitudinal bearing surfaces 18 at the contiguous faces of the blocks. The corresponding faces 18 contact with each other to form a broad bearing between the blocks and to relieve the teeth of excessive strain.

One of the separating-blocks, say the block 16, is formed with a pair of depending arms or stops 19 which are spaced apart longitudinally and embrace the yoke bar 1 to hold the separating-blocks against longitudinal movement relative thereto. It will thus be apparent that the separating-blocks are effectually held against accidental displacement and thus serve to maintain the rails positively at the desired distance apart.

In practice, by withdrawing the cotter pin 14 the wedge-shaped key 12 may be retracted so as to relieve the filling block of pressure and thus permit the rails to be moved apart laterally to a new adjusted

position. The separating-block 16<sup>a</sup> is then driven up to increase the width of the combined blocks, it being noted that the series of teeth ride over each other so as not to interfere with the relative movement of the blocks in this direction. After the separating-blocks have been adjusted to fit snugly between the rails, the key 12 and cotter pin 14 are replaced to lock the clamp in position.

From the foregoing description in connection with the accompanying drawing, it is believed that the use of the clamp will be obvious. Attention is particularly directed to the fact that the clamp may be easily and quickly applied to or detached from the rails, when desired. Furthermore, the clamp consists of comparatively few parts and is susceptible of being easily and cheaply manufactured.

Having thus described the invention, what is claimed as new is:

A guard rail clamp including a yoke bar provided at its ends with jaws, one of said jaws being formed at its inner face with an overhanging ledge, a filling block adapted to bear against the side of one of the rails and fitting under the overhanging ledge, the filling block being provided in its outer face below the ledge with a longitudinal groove extending in the direction of the length of the rails, and a wedge-shaped key inserted in the groove and interposed between the filling block and the inner face of the adjacent jaw to press the filling block firmly against the rail.

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

EDWARD C. SCRUGGS. [L. S.]

Witnesses:

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