

No. 811,550.

PATENTED FEB. 6, 1906.

J. DONOVAN.  
RAILWAY RAIL STAY.  
APPLICATION FILED APR. 26, 1905.

Fig. 2.

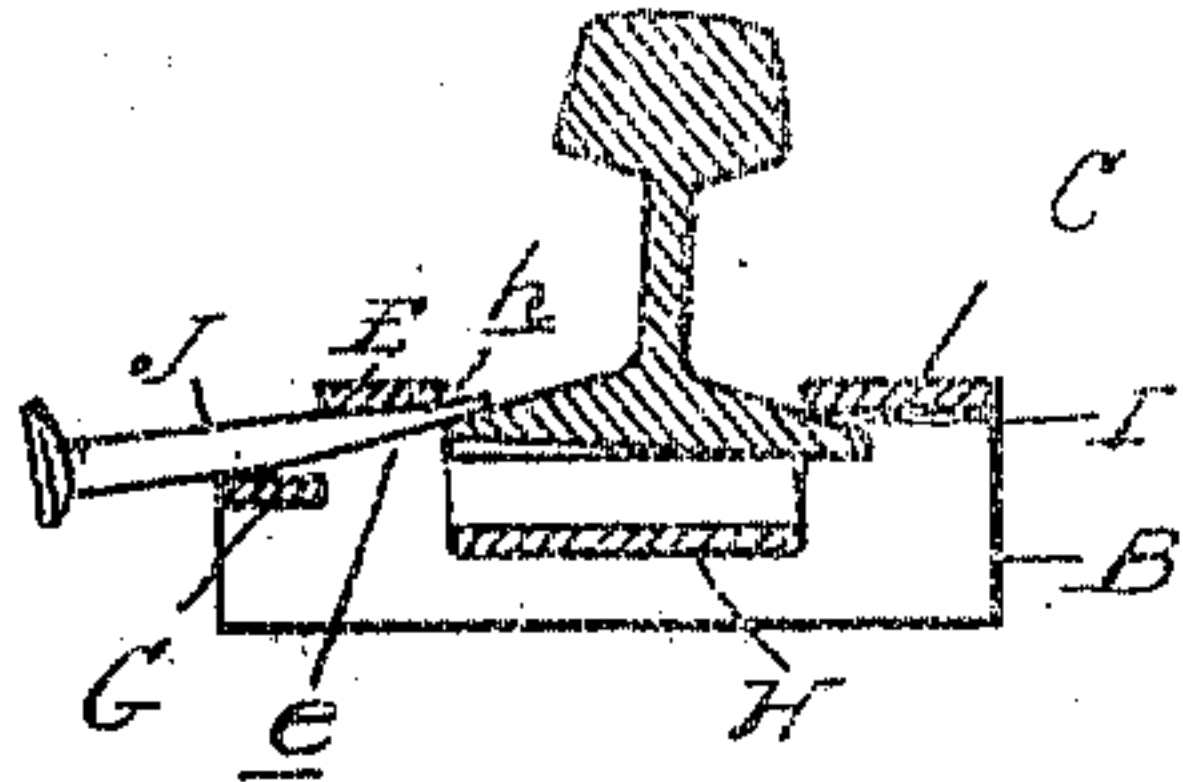


Fig. 1.

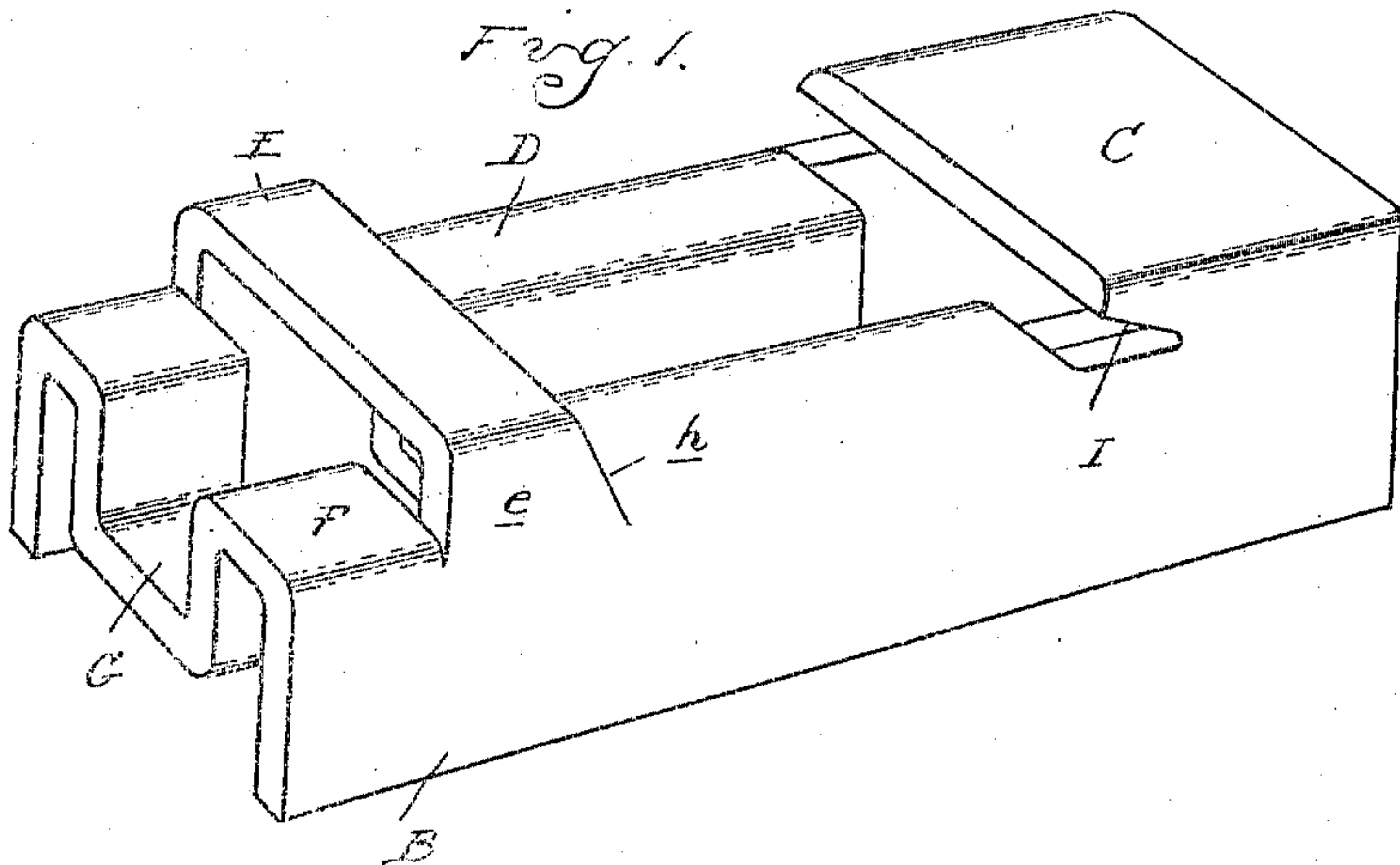


Fig. 4.

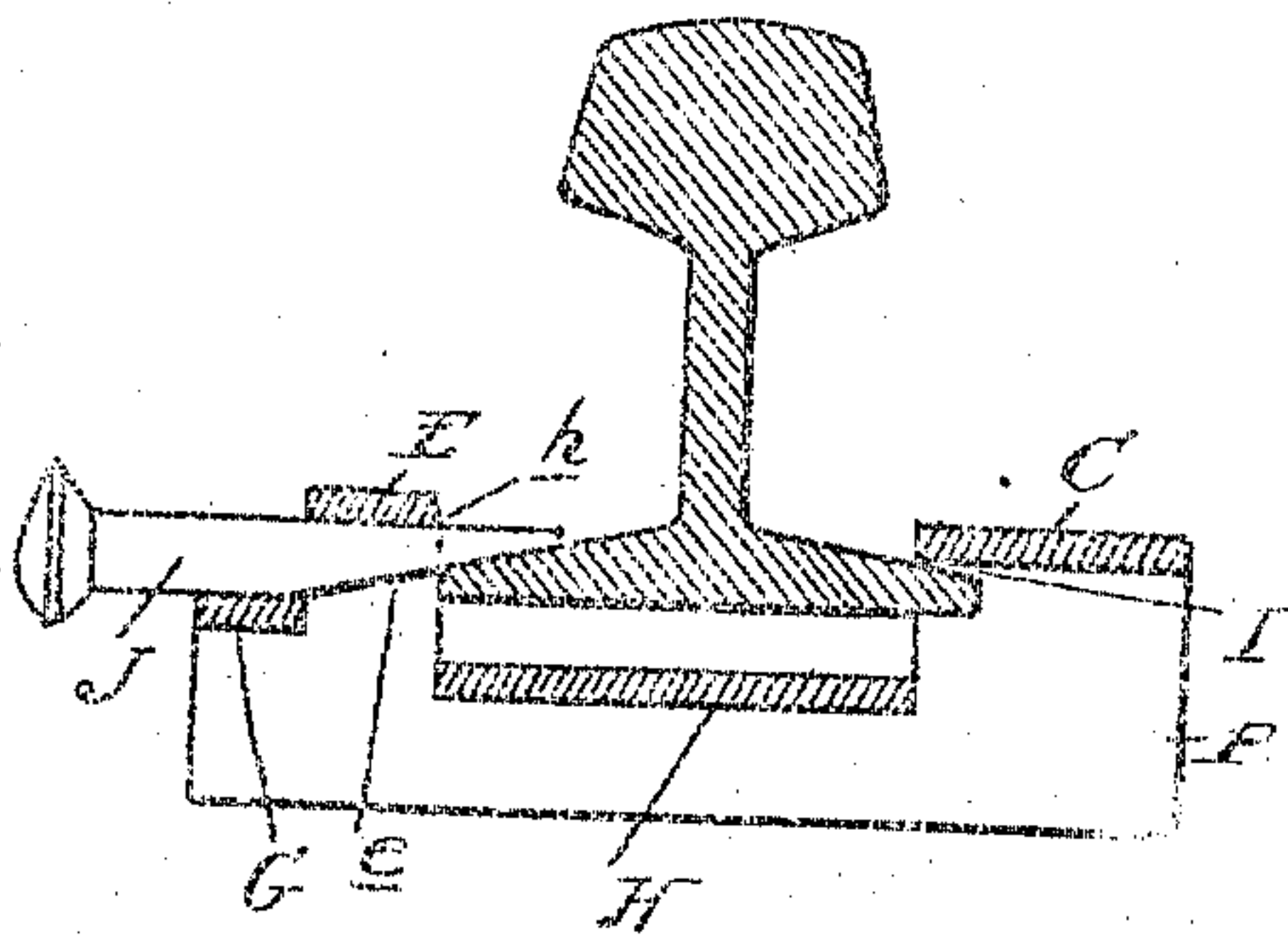
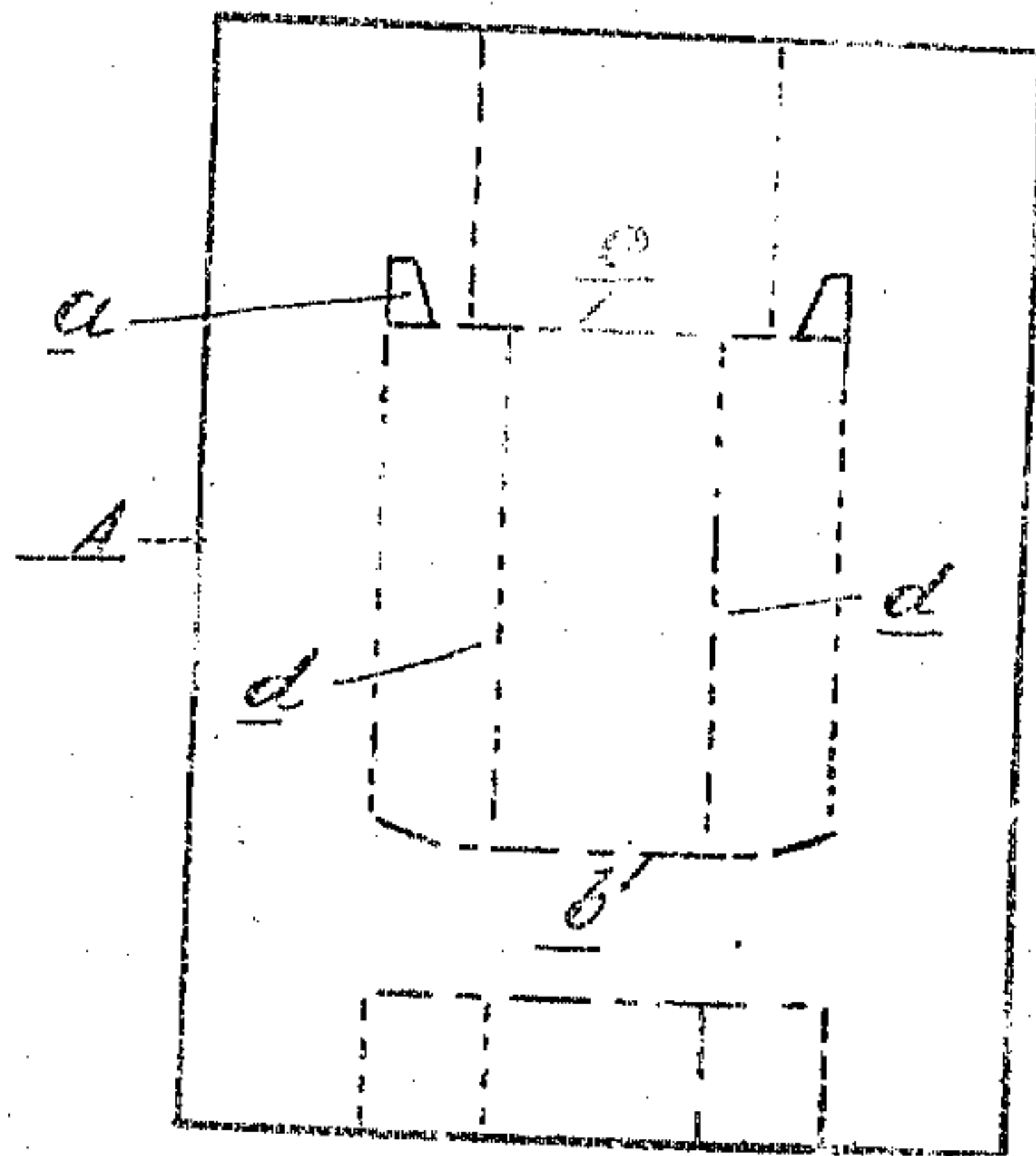


Fig. 3.



Witnesses

Geo. A. [Signature]  
Edmund [Signature]

Inventor  
James Donovan

By

James Whitham  
att'y.



# UNITED STATES PATENT OFFICE.

JAMES DONOVAN, OF THREE RIVERS, MICHIGAN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO SHEFFIELD CAR COMPANY, OF THREE RIVERS, MICHIGAN, A CORPORATION OF MICHIGAN.

## RAILWAY-RAIL STAY.

No. 811,550.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed April 20, 1905. Serial No. 256,831.

*To all whom it may concern:*

Be it known that I, JAMES DONOVAN, a citizen of the United States, residing at Three Rivers, in the county of St. Joseph and State of Michigan, have invented certain new and useful Improvements in Railway-Rail Stays, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The invention relates to new and useful improvements in railway-rail stays intended to prevent the creeping of rails in the road-bed; and it consists in the construction of a block or frame adapted to be clamped upon the base  
15 of a rail adjacent to the tie for the purpose described.

The invention further consists in the construction of the device of sheet metal and having a holding means for one side of the  
20 rail and a wedge adapted to be driven between separated bearings at the other side of the rail and to lock the body or block tightly upon the rail. This wedge is preferably an ordinary spike.

25 The invention further consists in the construction, arrangement, and combination of the various parts, as more fully hereinafter described, and particularly pointed out in the claims.

30 In the drawings, Figure 1 is a perspective view of my improved device, the wedge or spike being omitted. Fig. 2 is a vertical central longitudinal section through the device, showing the wedge as inserted and before it  
35 is driven home. Fig. 3 is a plan of the blank, showing the lines upon which it is bent and cut. Fig. 4 is an enlarged section similar to Fig. 2, showing the wedge driven in and the device in its final position.

40 I preferably manufacture the device of a single piece of sheet metal and when manufactured as in the manner herein described I prefer to proceed as follows: I take a sheet of metal A and punch therein the two holes *a*.  
45 I then with suitable dies shape the device into the form shown in Fig. 1. In thus shaping it it is cut along the lines *b* and *c* and bent upon the dotted lines *d*. The body or block thus formed has the vertical sides B and at  
50 one end has the hook portion C, the hook being above the plane of the top portion D.

Projecting above the top of the portion D and separated from the hook C substantially the width of the rail-base is the cross-bar E.

Beyond the cross-bar E and at the end is 55 formed a cross-bar F, having the depressed or U-shaped portion G. Centrally in the body portion is a similar depressed portion H. This centrally-depressed portion H has no particular function in the device, being simply a tie between the two sides and between  
60 the top portions D; but in making it of sheet metal, inasmuch as the depressed portion G is necessarily formed, it is easier to dispose of the metal by depressing it into the portion H  
65 at the same time the portion G is formed.

The inner face of the vertical portion *e* of the cross-bar E, as shown at *h*, is slightly beveled or inclined for a purpose to be hereinafter described. 70

When the device is to be used, it is engaged with a rail, as shown in Fig. 2—that is, the notches I under the hook portion C are engaged with one edge of the rail-base, and the other edge of the rail-base will strike the inclined portion *h* of the vertical portion *e* of the cross-bar E; but this point of striking will be at such a position that a wedge or the shank of a tapering spike, such as shown at J, may be inserted above the depressed portion  
80 G of the cross-bar F beneath the cross-bar E and have its point above the outer edge of the rail-base. The operator can then take his mallet or mawl and drive the wedge or spike J into position. This will force up the  
85 body portion of the stay and wedge the rail-base tightly between the inclined face *h* and the notches I beneath the hook C. The cross-bars E and F being made of sheet metal will yield or spring slightly as the  
90 wedge is driven in and will act to tightly hold the wedge or spike in position. Thus not only will the device be tightly gripped upon the rail, but the holding-wedge will be tightly gripped in position, so that the ordinary vi-  
95 brations of passing trains will not loosen it.

It will be observed that with this device I am enabled to dispense with all screws and screw-threads and that the ordinary rail-spike can be used as the wedge, which can be driven  
100 in and driven out and the device readily attached and detached. At the same time it will grip the rail so firmly when located closely beside the tie that it will hold the rail from creeping. 105

What I claim as my invention is—

1. In a railway-rail stay, the combination of a block having a seat for the rail-base, and



a wedge passing lengthwise of the block for clamping the block to the rail.

2. In a railway-rail stay, the combination of a block having a seat for the rail-base, an  
5 overhanging hook at one side of the seat, and a wedge-bearing at the other side thereof and a wedge adapted to engage the bearing transverse to the rail and to clamp the block to the rail.

10 3. In a railway-rail stay, the combination of a block having a seat for a rail-base, a hook at one side of the seat, a cross-bar at the other side, and a wedge adapted to engage under the cross-bar and over the rail-base  
15 transverse to the rail.

4. In a railway-rail stay, the combination of a block having a seat for a rail-base, a hook at one side of the seat, a cross-bar at the

other side having the inclined side *h*, and a wedge adapted to engage under the cross-bar 20 and over the rail-base.

5. A railway-rail stay made of sheet metal, shaped to form a rail-seat, the hook at one side thereof, the cross-bars E and F at the other side, and the depressed portion G in the 25 cross-bar F.

6. A railway-rail stay made of sheet metal comprising the sides B a rail-seat D, the hook C at one side thereof, and the cross-bars E and F at the other side thereof. 30

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

JAMES DONOVAN

Witnesses:

AMELIA WILLIAMS,  
EDWARD DHALT.