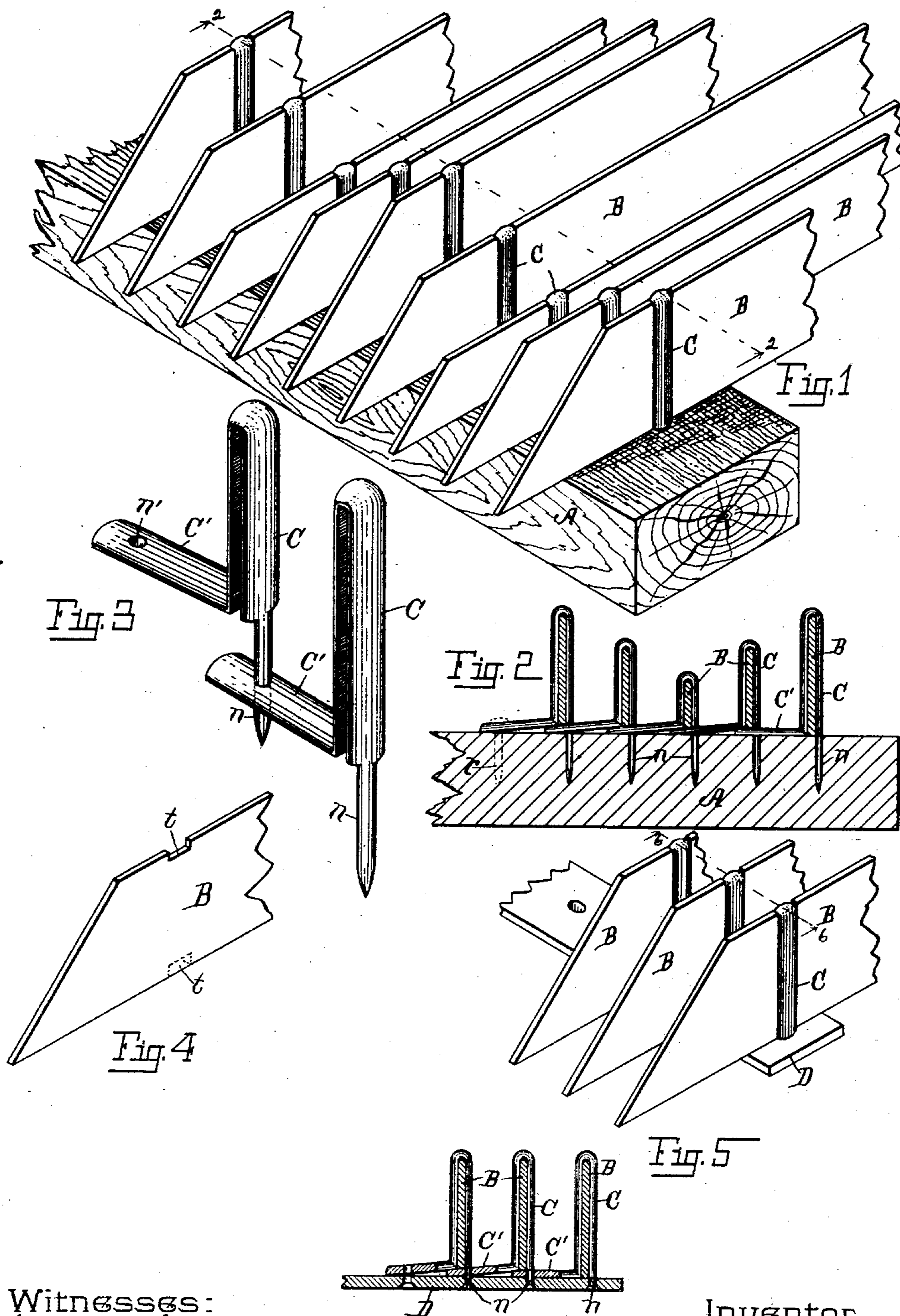


(No Model.)

E. COOK.  
RAILWAY CATTLE GUARD.

No. 520,178.

Patented May 22, 1894.



Witnesses:

Walter S. Stord  
Don E. Wood.

Inventor.

Eugene Cook  
By Fred L. Chappell  
Att'y

# UNITED STATES PATENT OFFICE.

EUGENE COOK, OF KALAMAZOO, MICHIGAN.

## RAILWAY CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 520,178, dated May 22, 1894.

Application filed July 26, 1893. Serial No. 481,538. (No model.)

*To all whom it may concern:*

Be it known that I, EUGENE COOK, a citizen of the United States, residing at the city of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Railway Cattle-Guards, of which the following is a specification.

My invention relates to improvements in railway cattle guards and more particularly to that class of guards which are composed of parallel bars or slats called guard rails between the railway rails.

The objects of my invention are to provide improved means of fastening the guard rails in place which will enable the manufacturer, if he choose, to dispense with cross pieces for supporting the guard rails or slats and to simplify the construction generally. I accomplish these objects by the devices shown in the accompanying drawings, in which—

Figure 1 shows the ends of a number of guard rails attached to a railway tie. Fig. 2 is a view on line 2—2 the guards and tie being in section. Fig. 3 is a detail view of two of the fasteners showing method of applying them. Fig. 4 is a detail view of the end of one of the guard rails. Fig. 5 is a view of a modification. Fig 6 is a view on line 6—6 of Fig. 5 partly in section.

Similar letters of reference refer to similar parts throughout the several views.

A is a portion of a railway tie.

B, B, are the guard rails here composed of thin parallel strips of steel on edge of which the guard is composed.

C, C, are my improved fasteners to secure the guard rails B in position. They are bent up and over the thin steel guard rails B, similar to staples. One end is adapted to be driven into the tie A. The lower end *n* is reduced in size and made round and sharp for the purpose. The other end *C'* of each fastener is bent off to the side at right angles or nearly at right angles. A hole *n'* is drilled through this portion *C'*.

In using my invention one of the guard rails B is stood upon edge and the fastener C is placed over it and driven into the tie. Another strip B is placed on edge toward the end of *C'* and another fastener is placed over

it and driven down, the point *n* passing through the hole *n'* thus securing it firmly to the tie, and so on till as many guard rails B are in place as are required the last fastener being nailed to the tie by spike *r*. Each end of the guard rails B is secured in this way. I prefer also to secure the guard rails B to each tie which they cross in like manner. A notch *t* cut in the top of guard rails B to engage the fasteners C prevents any endwise displacement of the bars. The notch *t* might be cut in the under side as shown by dotted lines in Fig. 4 and answer the same purpose by engaging the portion *C'*. The device will be effective without the notches *t*, but I prefer to use them as it makes the parts more secure. The fasteners having the holes *n'* in the part *C'* serve to space the bars evenly without the trouble of measurement. The point *n* through this part also secures it firmly to the tie, and holds the fastener tight to the guard rail.

It will be noted that each guard strip B is separate from every other guard rail till it is placed in the track and as many or as few guard rails can be put in as are necessary. This style of guard as heretofore constructed has usually been made in sections of several guard rails together. Where the railroad on which they are to be used is of narrow gage a special size of section is required and also where the guard is required for a double track another special size of section is needed. My device as I use it obviates this difficulty because few or many guard rails B can be put in as required to cover the space.

Another advantage of having the guard rails separate is that in case a brake rod or beam hanging from a passing train, becomes entangled in the guard it will only remove one guard rail or possibly two with very little danger where in case an entire section of guard is displaced the train may be derailed. Another advantage of my means of fastening the guard rails over the means in common use is that there is nothing between the rails except the ties to engage any hanging brake beam or rods on passing trains.

Should it be preferred to have the guard made in sections of two or more guard rails B, my fastener can still be used by attaching

the guard rails to a cross piece D by riveting the points  $n$  on the under side instead of driving them into the tie. The width of the section will be controlled by the length of cross piece D. The sections of course being

secured in place by spikes in the usual way. I have shown the guard rails B of different heights, but that is not material to my invention. The guard rails can be of even heights as shown in Figs. 5 and 6.

I am also aware that cattle guards have been constructed in which guard rails composed of thin strips of steel upon edge have been used so I claim neither of such features as my invention, but

What I do claim, and desire to secure by Letters Patent, is—

1. In a railway cattle guard, the combination with the thin guard rails B of the fasteners C which engage the upper edges of the guard rails like staples, one end of the fasteners being sharp to drive into the tie and the other end being bent at right angles and adapted to rest on the tie to brace and support the guard rail, substantially as described.

2. In a railway cattle guard, the combination with thin guard rails B of the fasteners C which engage the upper edges of the guard rails like staples, one end of each fastener being sharp to drive into the tie, and the other end  $C'$  being bent off at right angles, and containing hole  $n'$  to receive the point  $n$

of the next fastener substantially as described for the purpose specified.

3. In a railway cattle guard the combination with guard rails, of fasteners for each rail looped over the upper edge of the guard rail, one end of said fastener being driven into the tie and the other end being bent to pass under the lower edge of an adjacent rail for the purpose specified.

4. In a railway cattle guard the combination with parallel guard rails, fasteners for each rail looped over the upper edge of the guard rail, one end being secured by suitable means to a transverse support, and the other end being bent to pass between an adjacent guard rail and transverse support, for the purpose specified.

5. In a cattle guard, thin vertical guard rails in combination with fasteners adapted to engage them, each fastener having a vertical portion to drive into the tie and a horizontal portion projecting out from the bottom of the guard rail to rest on the tie to brace the rail for the purpose specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

EUGENE COOK. [L. S.]

Witnesses:

C. E. WESTBROOK,

E. S. ROOS.