

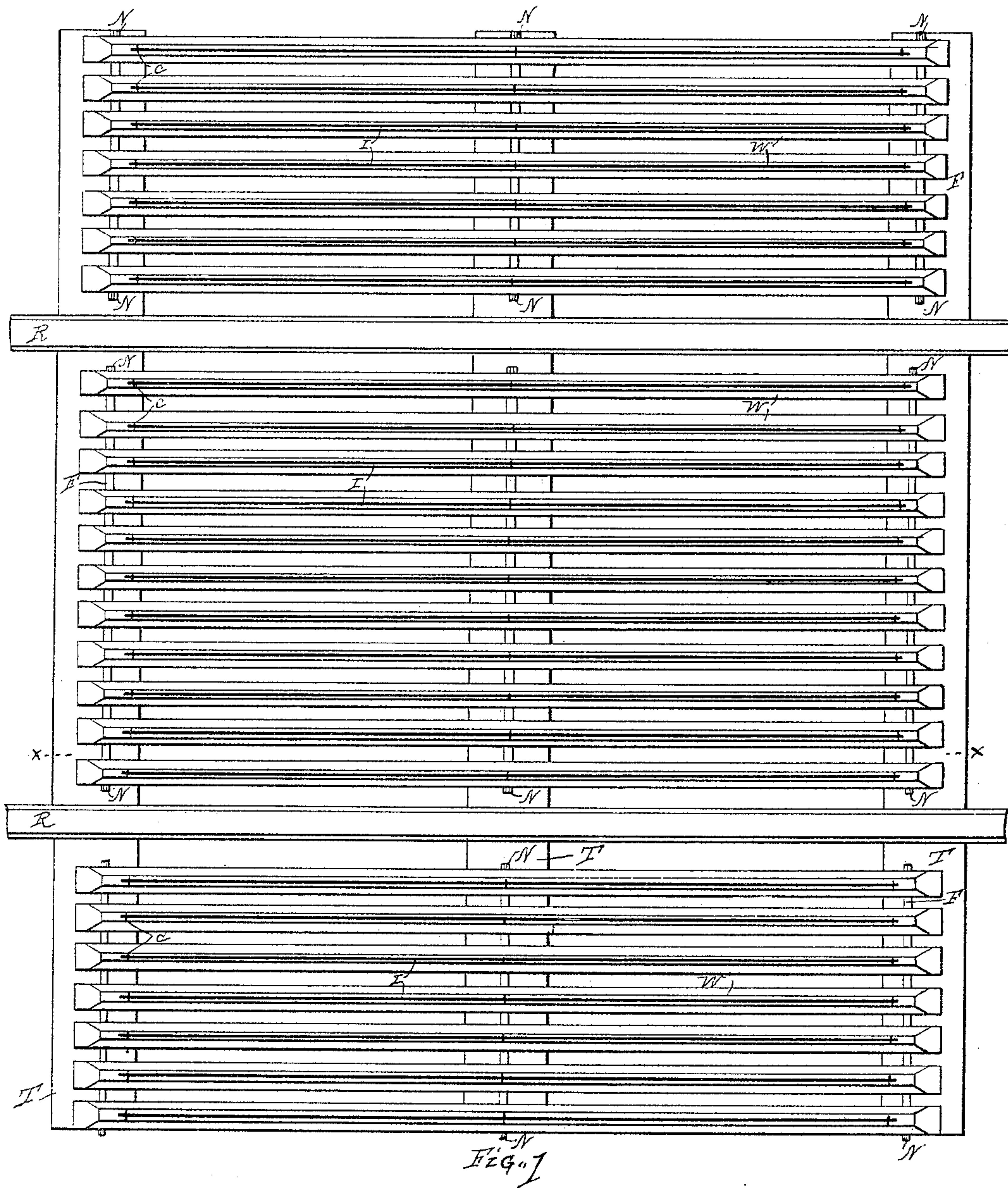
(No Model.)

2 Sheets—Sheet 1.

J. T. HALL.
RAILWAY CATTLE GUARD.

No. 437,757.

Patented Oct. 7, 1890.



Witnesses

H. B. Lothrop
Emma Hesselbacher

Inventor

James T. Hall

By his Attorney

Geo. H. Lothrop

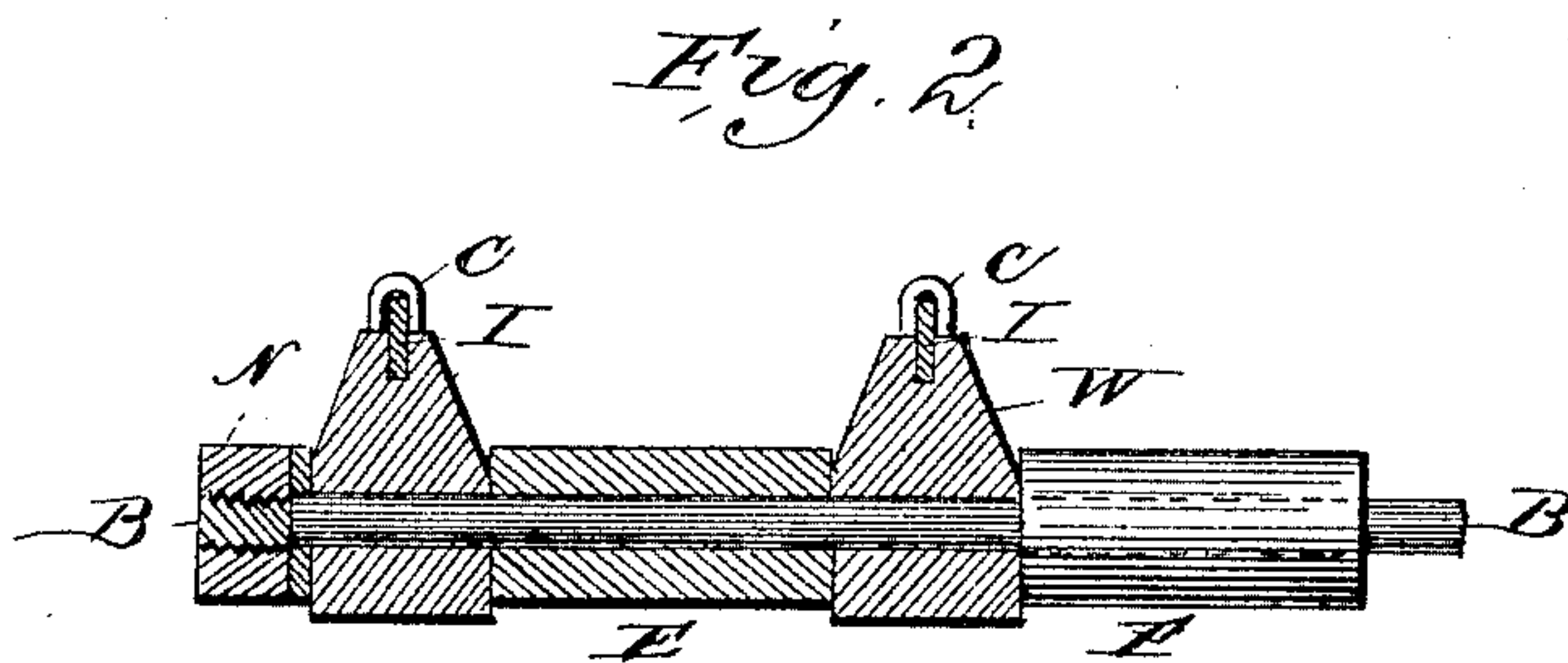
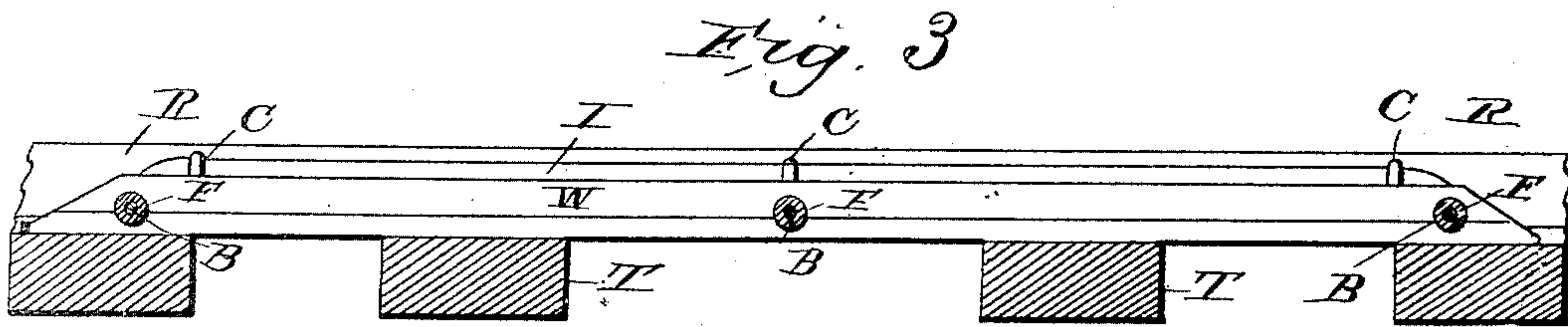
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Witnesses
D. Q. Cornwall
L. S. Bacon

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UNITED STATES PATENT OFFICE.

JAMES T. HALL, OF ST. LOUIS, MICHIGAN.

RAILWAY CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 437,757, dated October 7, 1890.

Application filed October 26, 1887. Serial No. 253,475. (No model.)

To all whom it may concern:

Be it known that I, JAMES T. HALL, of St. Louis, in the county of Gratiot and State of Michigan, have invented a new and useful
5 Improvement in Railway Cattle-Guards, of which the following is a specification.

My invention relates to new and useful improvements in cattle-guards for railways, all as more fully hereinafter described and
10 claimed.

Figure 1 is a plan view. Fig. 2 is a partial cross-section, and Fig. 3 is a section on line *xx* in Fig. 1.

My invention consists in a peculiar construction of a wood and iron cattle-guard especially adapted to be applied in replacing
15 guards already in use of a type which is ineffectual, thereby rendering the guards a perfect protection against the passage of cattle.

At the present time nearly all the older
20 railroads have cattle-guards consisting of sharp-edged wooden bars arranged over culverts. These guards are of short life, present the danger that the cattle slip through and become caught in the guard, often causing accidents to trains thereby, and if the bars are
25 not far enough apart to permit this such guards do not present any obstacle to the passage of the cattle. By the use of my improvement the culvert may be dispensed with, and the old-style guard may be changed or replaced with my construction, presenting perfect protection from the passage of cattle.

The drawings show my guard in sections
35 ready to be applied upon the track in the manner of the so-called "surface-guards."

W represents one of the wooden bars of which each section is formed, beveled on its upper sides, and provided in its upper edge
40 with a longitudinal groove. This groove may be made in any suitable manner, preferably as a saw-kerf, and in this groove I set a thin strip of metal I, secured therein in any suitable way, preferably by means of the staples
45 C, driven into the wooden strips, as shown in the drawings. These combined wood and iron bars thus constructed may be secured together in sections in any desired way—such as by means of the rod B, passing through
50 suitable apertures and provided with the heads and nuts in the well-known manner.

Between the wooden strips W a hollow sleeve F may be inserted, through which the rod passes, or blocks of wood E, as shown in

Fig. 2, suitably perforated for the rod B, may
55 be employed.

The sections may be framed into the ties or the frame of the culvert, or spiked or bolted upon the ties, or secured in any other manner.

T represents the sleepers or ties, to which
60 the guards may be spiked or secured in any desired manner. The wooden strips W may run parallel to the rails R or at an angle thereto.

In applying my improvement to the wooden
65 guards now in use it is evident that the saw-kerf may be simply cut in the upper edge of the wooden strips composing the guard and the metal strip secured therein, as shown in the drawings. The necessity of re-
70 pairs in such a guard is much less than in the all-wood guards, even if the wood should be weakened by decay to a large extent. If the staples C are kept driven tight they will have all necessary strength and security.

It has been found by experience that the
75 ordinary wooden guards over culverts are easily crossed by many kinds of animals, or present the danger of holding the animal should it slip through; but if these wooden
80 guards are provided on the upper edges with the metal strip I they present so insecure a footing to the animals as to prevent their crossing. They also permit of dispensing with the culvert and the danger attending
85 its use.

I do not herein broadly claim a cattle-guard composed of wooden rails and having a metallic top, as I have made that the subject-matter of my concurrently pending applica-
90 tion, Serial No. 353,660, filed May 29, 1890.

What I claim as my invention is—

1. A railway cattle-guard consisting of beveled wooden bars suitably secured together in sections, each having in its upper edge a
95 groove or saw-kerf and a thin strip of metal secured on edge within the groove, substantially as described.

2. A railway cattle-guard consisting of wooden strips bolted together in sections,
100 each having in its upper edge a saw-kerf or groove, and of strips of thin metal set up on edge in the kerfs and held therein by staples, substantially as described.

JAMES T. HALL.

Witnesses:

L. T. WRIGHT,
JESSIE W. HALL.