(No Model.)

P. MERRILL.

RAILWAY CATTLE GUARD.

No. 446,601. Patented Feb. 17, 1891.

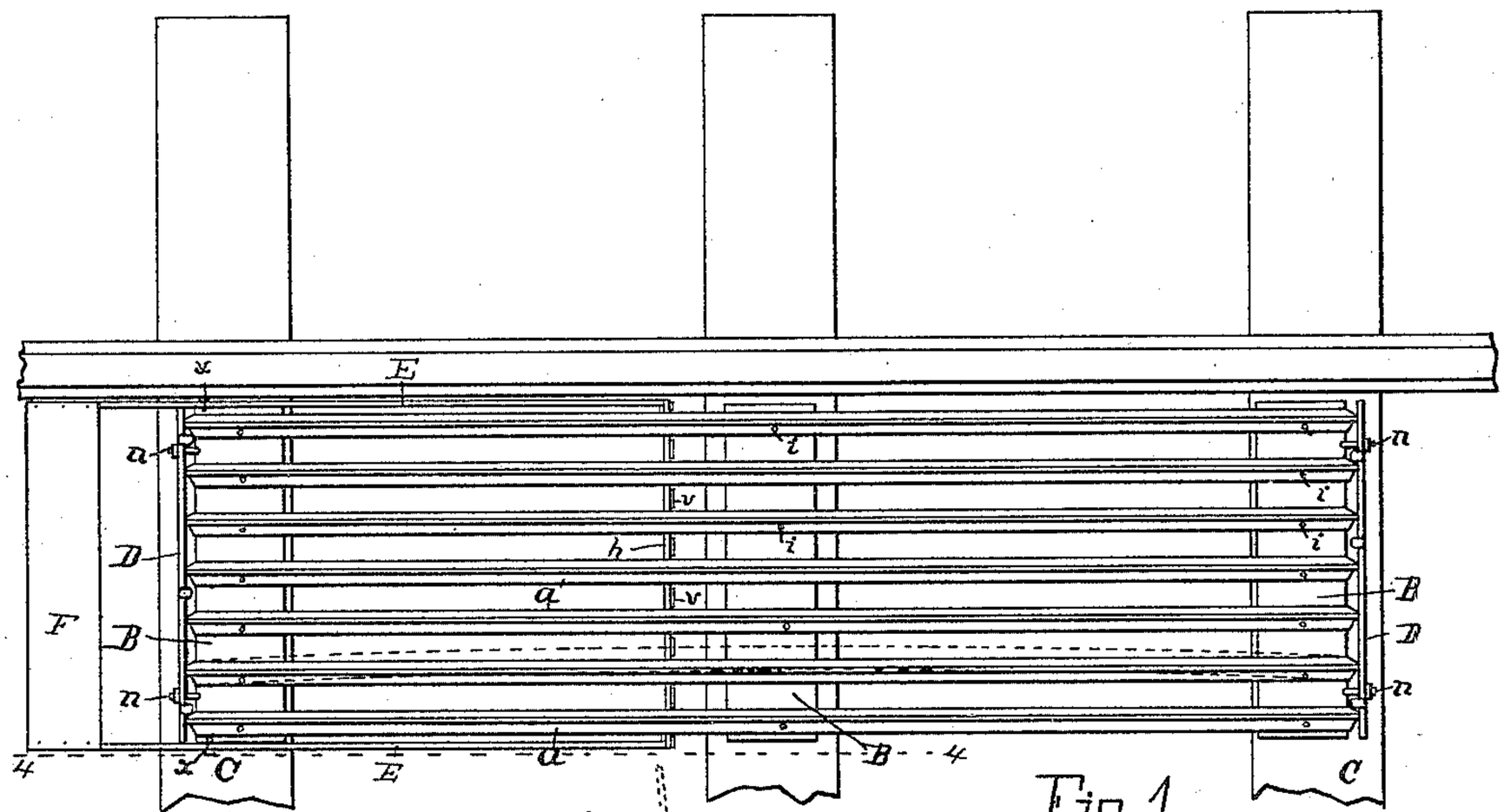

Fig. 1

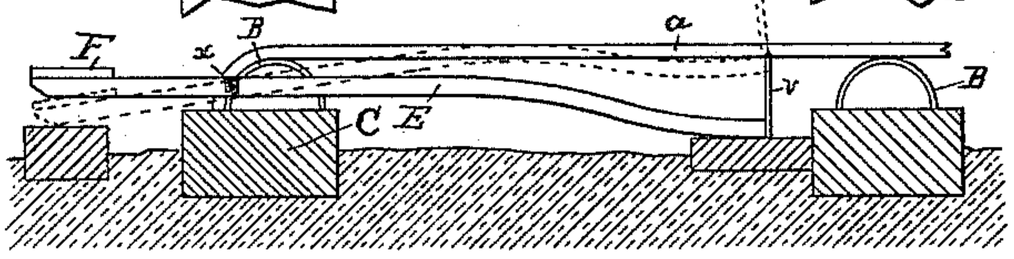

Fig. 2

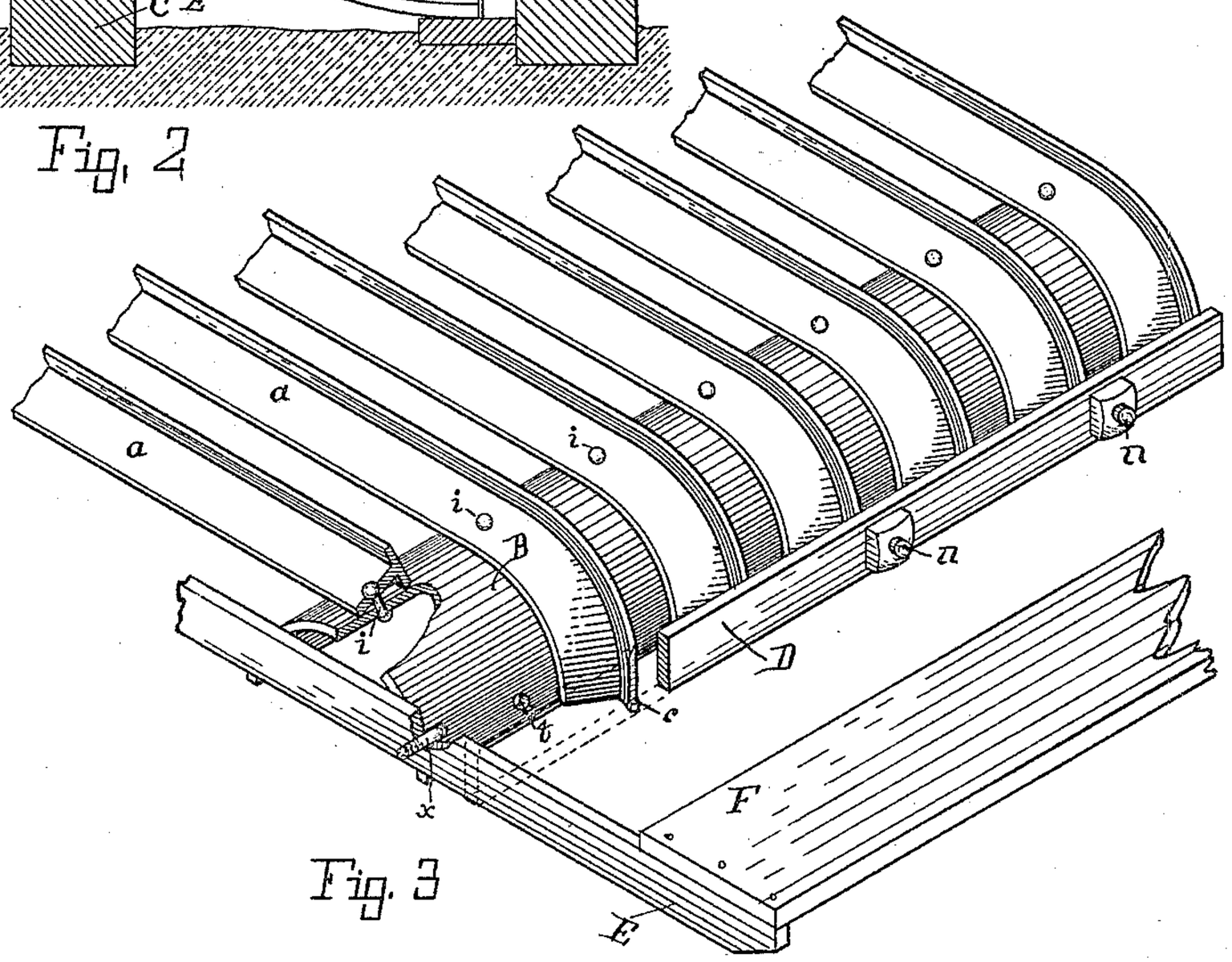

Fig. 3

Witnesses:
Walter S. Wood
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Inventor.
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

PARKER MERRILL, OF ST. LOUIS, MICHIGAN.

RAILWAY CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 446,601, dated February 17, 1891.

Application filed September 27, 1890. Serial No. 366,355. (No model.)

To all whom it may concern:

Be it known that I, PARKER MERRILL, a citizen of the United States, residing at St. Louis, county of Gratiot, State of Michigan, have invented certain new and useful Improvements in Railway Cattle-Guards, of which the following is a specification.

This invention relates to new and useful improvements in railway cattle-guards employing guard-bars elevated above the ties.

The object of the invention is to construct the guard so that it may be secured to the tie with spikes at the ends of the section at any point desired within the width of the section, thus obviating the necessity for extra-length ties to make fastening-places for the sections outside the rails; and a further object is to provide for safety by having only part of the guard-bars secured to the center-beam and by placing a fulcrumed platform at the approach to the guard, said platform being provided with side levers which support the same at their front ends, the rear ends of which levers are carried laterally beneath the guard-bars and are provided with upward projections which would be thrown up as signals of warning if an animal should step upon the platform, all as hereinafter described.

In the drawings forming a part of this specification, Figure 1 is a plan showing one section of the guard in position, the full guard being composed of four like sections. Fig. 2 is a side elevation showing the end of the section at which the fulcrumed platform is attached. Fig. 3 is a broken perspective of a lettered detail.

Referring to the lettered parts of the drawings, *a a* are the longitudinal guard-bars. These guard-bars are separated from each other and have a space between them and the upper surface of the ties sufficient to be noticed by an animal should it approach the guard. In the construction of a guard to show the said space is considered a very essential point, as animals do not like to go upon a metal grating that is elevated sufficiently to show a space beneath. The guard-bars *a a* here shown are T-bars lying upon their sides upon the upper surface of the transverse beams B, of which there are three for each section, and they rest upon the upper surface of the ties. In this position the T-bar covers more space horizontally in width than in any other. One fault of many metallic guards now in use is the small or thin bar, which the animal does not notice before it steps upon the guard, while with the T-bar in this position a large angled and notched surface is shown by a bar of light weight. The guard-bars are bent down to the tie at their ends outside the terminal beams, and are secured to the beams with rivets *i*.

D D are cross-bars which fit in the depressions *c* on the outside of the guard-bars at their ends, and are clamped against the guard-bars by bolts *n* through holes *t* and are secured to the beams B. The guard is secured to the ties with spikes that may catch over the bolts *n* or on the plate D. At the center beam of each section every alternate guard-bar may be left unsecured to the beam, so that in case the feet of an animal are forced between them the loose one will be sprung to one side to free it, as shown by dotted lines in Fig. 1.

At F is shown a fulcrumed platform at the end of the guard which stock would first approach, and it is attached to the end of the lever E, which lever is pivoted by the bolt *x*, attached to the end of the transverse beam B. The opposite end of the lever E is carried laterally beneath the guard-bars and is attached to a similar lever on the opposite side of the section. The part of the lever beneath the guard-bars is marked *h*, and has attached to it upright projections *v*, which may be painted any color, and may come up between the guard-bars as high as desirable. When an animal depresses the platform F, the projections *v* are elevated above the surface of the guard, as shown by dotted line in Fig. 2. When the animal steps off the platform, the lever and projections drop to their normal position.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a cattle-guard, the combination of T-bars elevated above the ties and lying upon their sides with two or more transverse beams that rest upon the ties, said T-bars resting upon and secured to the upper surface of said transverse beams, substantially as set forth.

2. In a cattle-guard, the combination of ele-

vated guard-bars that are bent down at their ends to the tie with the spike-plate D clamped against the ends, substantially as set forth.

3. In a cattle-guard, the combination of guard-bars elevated above the ties with a fulcrumed bridge or platform located at the approach to the guard, levers supporting the said bridge at their front ends, the rear ends of which levers are carried laterally beneath the guard-rails, and upward projections attached to the part of said levers beneath said guard-rails, whereby if an animal approaching the guard should step upon the platform the latter would trip and the projections would be thrown up as signals of warning, substantially as set forth.

In testimony of the foregoing I have hereunto subscribed my name in presence of two witnesses.

PARKER MERRILL.

Witnesses:
BELLE C. FREEMAN,
L. N. BURKE.