T. MORIARTY.

CATTLE GUARD.

APPLICATION FILED AUG. 23, 1909.

954,039.

Patented Apr. 5, 1910.

Fig. 5.

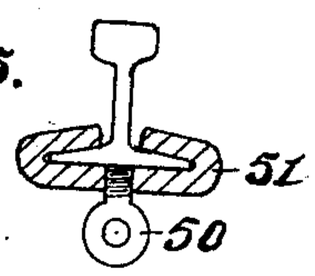

Fig. 1.

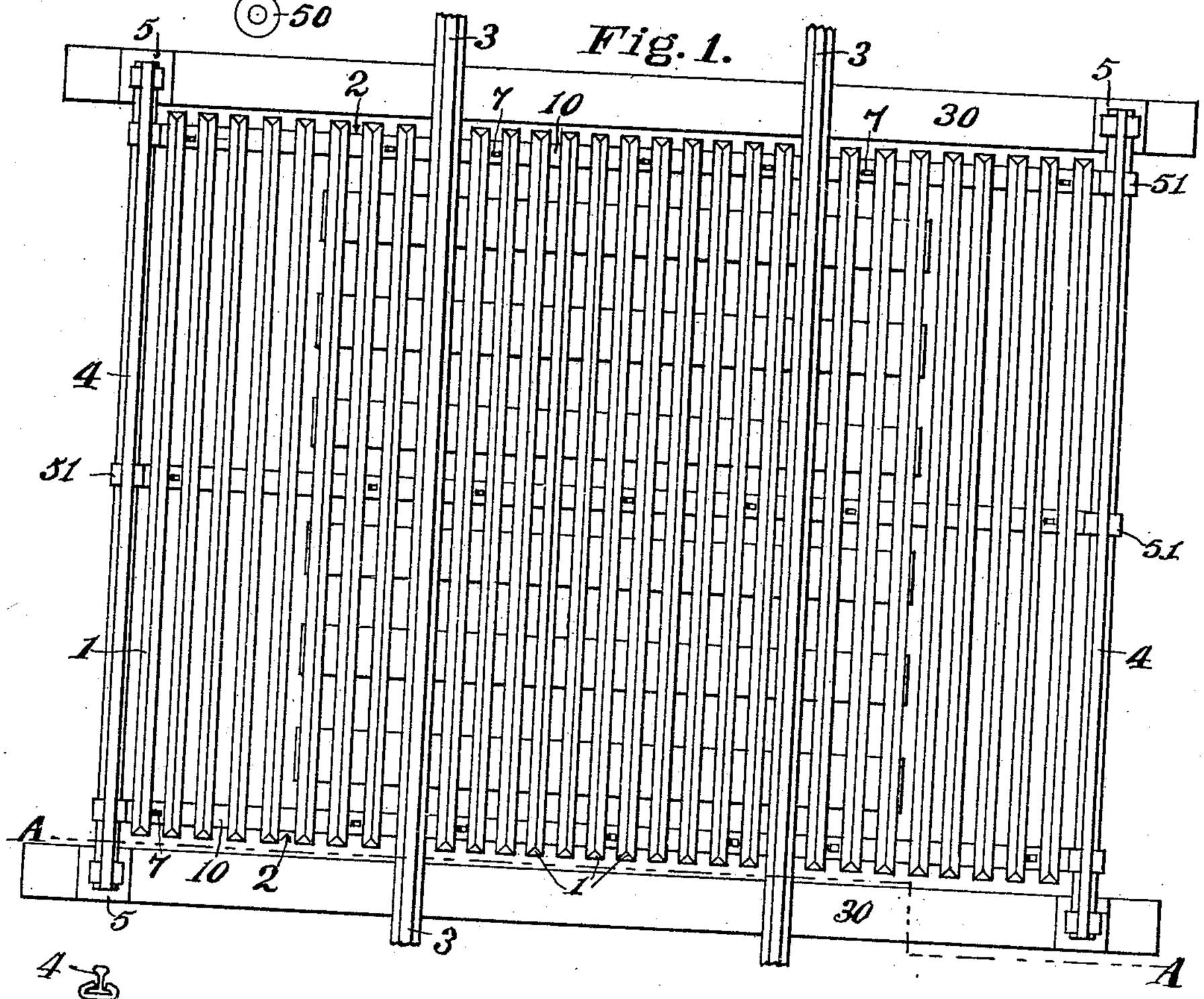

Fig. 2.

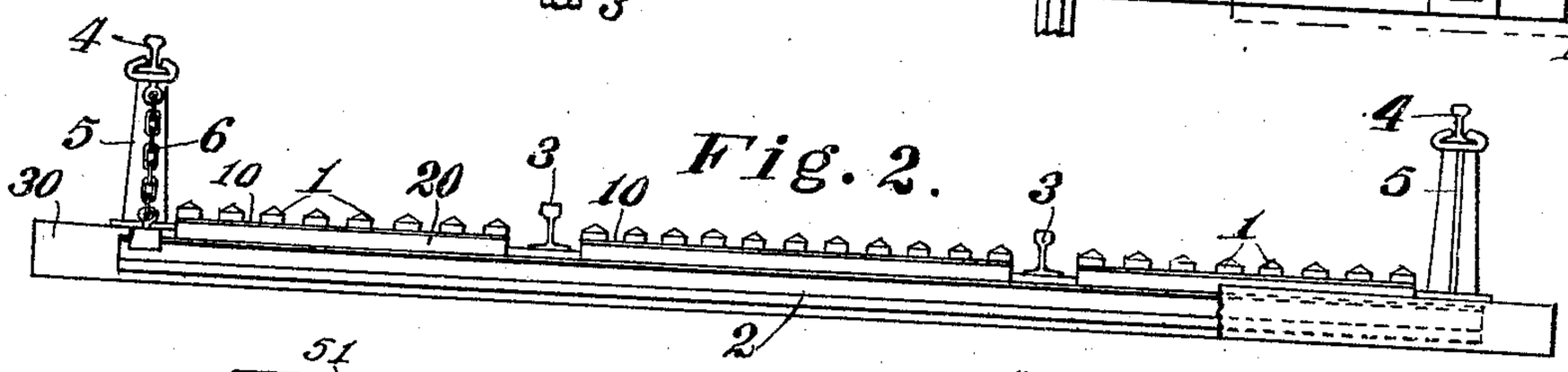

Fig. 3.

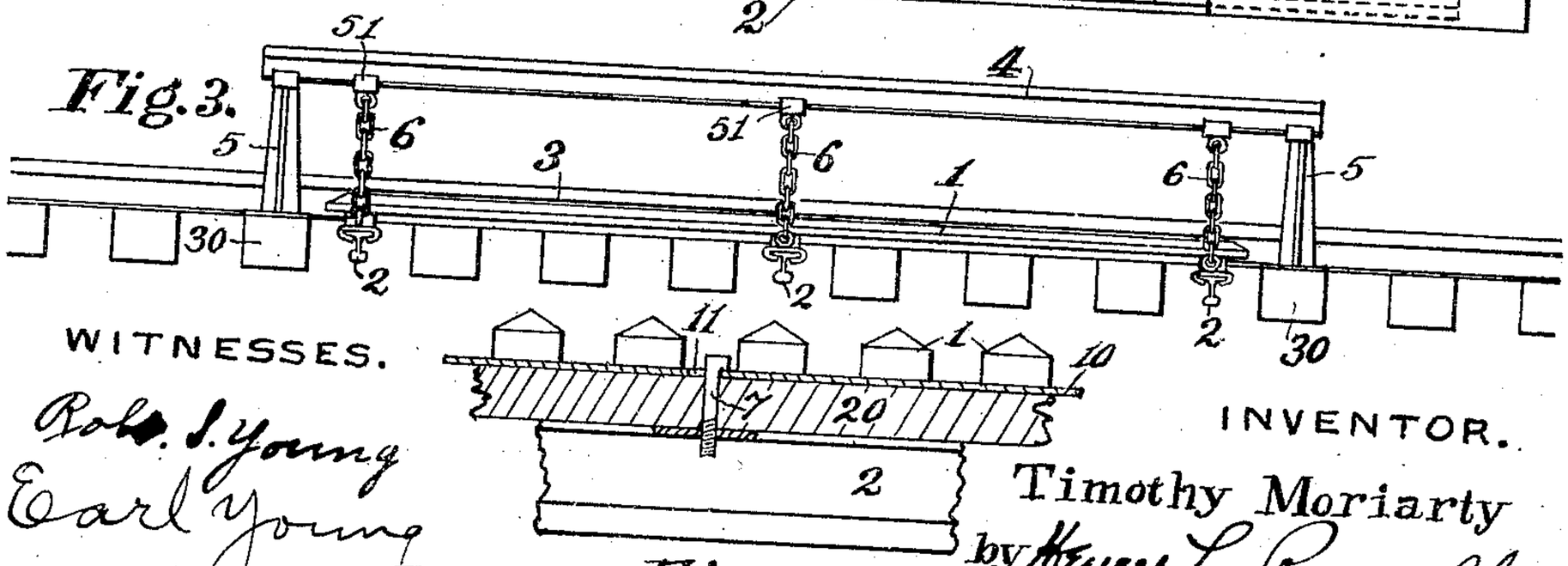

Fig. 4.

WITNESSES.

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UNITED STATES PATENT OFFICE.

TIMOTHY MORIARTY, OF SEATTLE, WASHINGTON.

CATTLE-GUARD.

954,039. Specification of Letters Patent. Patented Apr. 5, 1910.

Application filed August 23, 1909. Serial No. 514,256.

To all whom it may concern:

Be it known that I, TIMOTHY MORIARTY, a citizen of the United States, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Cattle-Guards, of which the following is a specification.

My invention relates to improvements in cattle guards and comprises the novel parts and combinations of parts which will be hereinafter described and particularly pointed out in the claims.

The object of my invention is to improve and simplify such devices and to make them more efficient.

In the drawings accompanying this specification I have shown my device embodied in the form which is now preferred by me. Figure 1 is a plan view of my device. Fig. 2 is a sectional elevation taken on the line A, A, of Fig. 1. Fig. 3 is a side view of my device. Fig. 4 is a detail section illustrating the means employed for detachably securing the guard sections to the supporting beams. Fig. 5 is a detail section showing the means employed for attaching the suspension members to the beams.

In designing my improved cattle guard it has not been my intention to rely wholly upon making it physically impossible or difficult for stock to pass over it, but, in addition to this, to make the conditions of passage such as to act upon the fears of the stock to turn them back, thereby making it probable that any animal attempting the passage would, at the outset, be persuaded to turn back and give up the attempt. In doing this I have mounted the guard members upon supporting beams or a frame, and support this frame or the beams so that they may swing freely within certain limits. An animal stepping upon this swinging platform and feeling it yield under its feet, will hardly continue its attempt to pass over.

The character of the guard members employed may vary. As a simple, cheap and effective form, I prefer wooden bars 1, which are also preferably beveled upon their upper surface, as shown. The simplest form of supporting frame consists of beams 2, which extend transversely of and beneath the track rails 3. I have shown three of these in the drawings. These beams occupy spaces between the ties, which spaces should be cleared of ballast sufficiently to permit a free swinging movement of the beams. I have shown the supporting beams 2 as consisting of old steel rails, as such material is usually plentiful and cheap about railroad shops and besides, is very well adapted for this purpose. They may, however, be made of any suitable material. These beams should be sufficiently long to cover the entire width of the space to be covered by the guard. I provide elevated supports for these beams at each side of the track and support them at their ends by suspension from said elevated supports, this connection being such as will permit free swinging within certain limits. The elevated supports shown and preferred consist of a beam 4 at each side of the track, carried upon posts 5, which latter may be conveniently mounted upon ties 30 of extra length. The suspension means shown consist of chains 6, which connect the elevated beams 4 and the transverse floor beams 2. Any other form of device may be used for this purpose which connects these parts flexibly so as to permit swinging as described. The method of connecting these chains with the beams as shown is best illustrated in Fig. 5, and consists in using a clamp or socket member 51, adapted to fit over the base of the rails and having an eye bolt 50 or rivet secured thereto. As the cross or floor beams 2 must be lower than the rails 3 forming the track, and the guard bars 1, must be higher than the ties, I employ filler blocks or bars 20, between the beams 2 and bars 1.

I make the flooring of my device removable in sections so that it may be taken up and out of the way in order that the road bed at this point may be accessible for easy maintenance. Three sections, one for the part between the track rails and one at each side of the track is all that is needed for convenience. The bars for each of these sections are secured to transverse connecting members which preferably, are placed over the beams 2. In the construction shown these connecting members consist of iron plates 10, which are separable from the filler bars 20, although the filler bars 20 may also act as connecting members. I have shown these plates 10 as provided with holes 11, which are adapted to pass the heads of securing bolts 7, which engage the cross beams 2. These bolts have eccentrically placed heads, projecting mainly at one side, and may be turned so as to hold the sections in

place or to permit their removal. In this way any section may be quickly removed and replaced, facilitating a proper care of the road bed at this point.

Experience has proven that cattle will not, of their own volition, pass over such a swinging guard. On setting foot upon the platform it yields and swings away and the animal will back off and will not try it again. To install this cattle guard necessitates no pit and leaves the surface normal. When installed the clearance is whatever desired and there is nothing to trap and hold animals and thereby cause accidents. The materials used are largely scrap which has little value. It is durable and, except for the wooden bars, practically indestructible, while the bars may be renewed at slight cost.

What I claim as my invention is:

1. A cattle guard comprising a grillage between the rails, supporting members outside the rails and a suspension support connecting the grillage and the supporting members and permitting the grillage to swing.

2. A cattle guard comprising two beams, one at each side, without and parallel with the rails, a guard section between the rails and means for suspending said guard section from said beams to permit the guard swinging.

3. A cattle guard comprising beams extending crosswise the track and beneath the rails, suspension supports for said beams without the rails permitting them to swing, and guard bars carried by said beams.

4. In a railroad cattle guard, in combination, supporting beams extending across the track beneath the track rails and free to move, elevated supports outside of and at each side of the track, suspending members connecting said supports and the beams, and guard members carried by said beams.

5. In a rail road cattle guard, in combination, an elevated beam at each side of the track and extending parallel therewith, beams extending across the track and beneath the rails, flexible suspension members connecting the two sets of beams to permit swinging of the lower set, and guard members carried by the lower set of beams.

6. In a railroad cattle guard, in combination, posts at each side of and disposed along the track, a section of rail supported by said posts at each side of the track, rail sections extending transverse the track and beneath the rails thereof, suspension members having flexible connections with said transverse and parallel rail sections, and guard members carried by said transverse rails.

7. In a rail road cattle guard, in combination, beams extending transversely of and beneath the track rails, suspension supports for said beams permitting a free swinging movement, guard members, and means for removably securing the guard members to said transverse beams, whereby they may be readily removed and replaced.

8. In a rail road cattle guard, in combination, beams extending transversely of and beneath the track rails, suspension supports for said beams permitting a free swinging movement, guard members secured together in sections adapted respectively to occupy the spaces between the rails and at each side the track, and means for removably securing said sections to the transverse beams.

9. A rail road cattle guard having guard members secured together in sections adapted to occupy respectively the spaces between and outside the track rails, beams extending across and beneath the track rails, an elevated beam at each side of and without the rails, suspension connection between said elevated and the transverse beams, and means for removably securing said sections to the said transverse beams whereby they may be removed and replaced at will.

10. In a railroad cattle guard, in combination, guard members, metal plates securing said guard members together in sections, said plates having holes adapted to pass securing bolts and their heads, and securing bolts having eccentrically projecting heads adapted to be turned to secure or release said plates.

11. In a railroad cattle guard, in combination, frame members or beams, swinging supports therefor, guard members, plates securing said guard members in sections and having holes adapted to pass securing bolts and their heads, securing bolts held by said frame members and having eccentrically placed heads, whereby said guard sections may be removed and replaced at will.

12. In a railroad cattle guard, in combination, beams extending across and beneath the track rails, elevated supports outside the track rails, swinging supporting members connecting said elevated supports and the transverse beams, guard bars, plates connecting said guard bars in sections, offset-head bolts having holding engagement with the supporting frame and adapted to engage said sections, whereby said sections may be readily secured or released as desired.

In testimony whereof I have hereunto affixed my signature this 16th day of August, 1909, at Seattle, Washington, in the presence of the subscribing witnesses.

TIMOTHY MORIARTY.

Witnesses:

W. B. Stratton,

Peter Pratt.