

C. L. WILCOX.
CATTLE GUARD.
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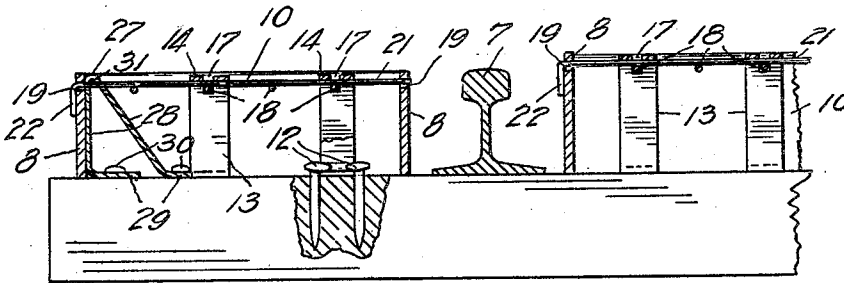
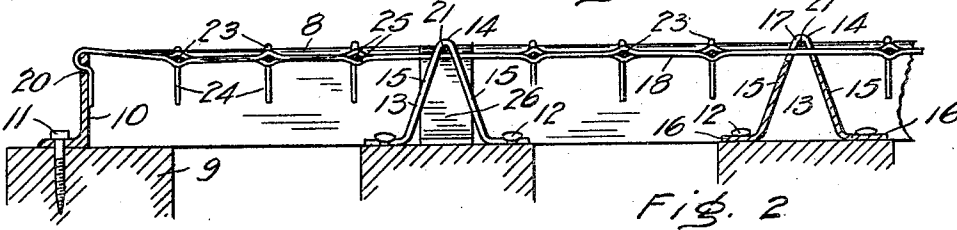
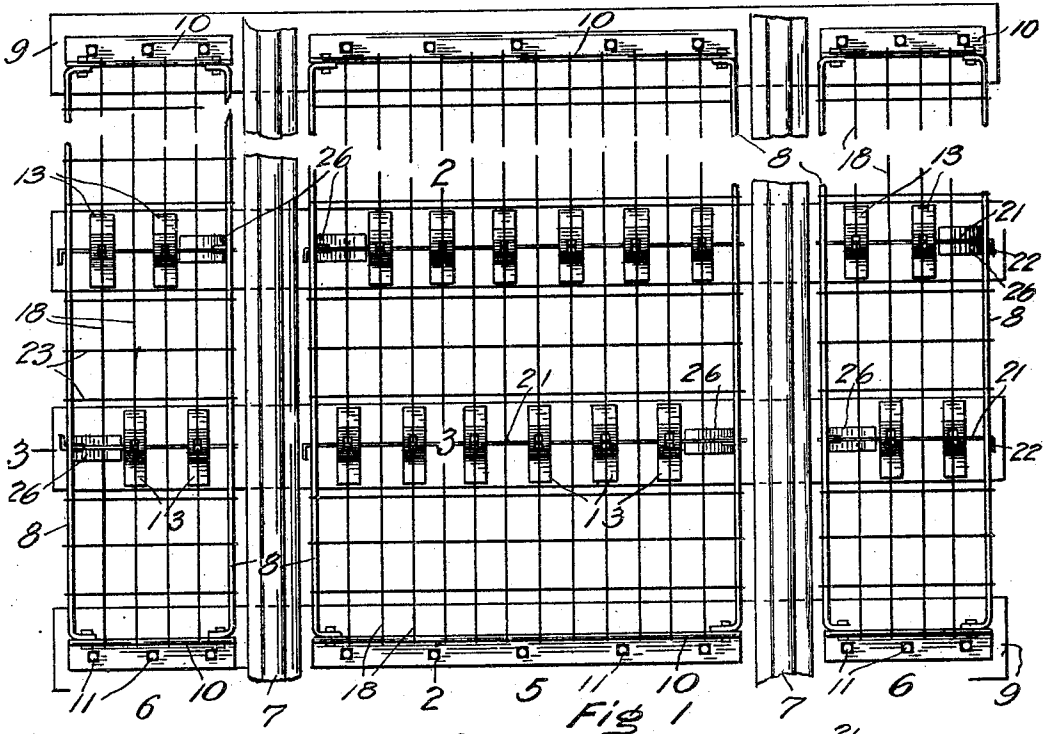


Fig. 3

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CATTLE-GUARD.

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To all whom it may concern:

Be it known that I, CLARENCE L. WILCOX, a citizen of the United States, residing at Houghton, 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.

This invention relates to improvements in cattle-guards; and its object is to provide a simple and comparatively inexpensive device of this class which will effectively prevent cattle from passing over the same from grade crossings to the adjacent rights of way.

A still further object is to provide a cattle-guard which is adapted to be conveniently removed from the track for cleaning the latter of any rubbish or trash which may be collected between the track-ties, and for resetting the ties or repairing the track.

The invention consists in the novel construction, adaptation and combination of parts as hereinafter described and claimed.

In the accompanying drawings, where similar reference characters designate corresponding parts in the several views, Figure 1 is a plan view of a portion of a cattle-guard embodying my invention. Fig. 2 is a longitudinal sectional view taken through 2—2 of Fig. 1. Fig. 3 is a transverse sectional view taken substantially through 3—3 of Fig. 1.

The cattle-guard is comprised of central and side sections 5 and 6, which are respectively located between the track-rails 7 and at the sides, as clearly shown in Fig. 1. Each of these sections is formed of a rectangular frame comprised of side members 8 to reach over a number of the track crossings 9 as, for example, six; and which members are rigidly connected from their ends with transversely arranged end members 10. Said end members are desirably formed of angle bars having their horizontal flanges bored to accommodate lag-screws 11 which engage in the underlying ties for removably securing the frames in place. Fixedly secured, as by spikes 12, Figs. 2 and 3, to the ties which are intermediate those which support the end members of the respective sections are a plurality of chairs 13. These chairs may be constructed of wrought iron or steel and are each formed with a centrally arranged and upwardly directed loop 14 whence extend diverging legs 15 which ter-

minate in feet 16 which serve as a support to bear upon the individual ties. Each chair is provided with a notch 17 which extends downwardly from the top of the loop, as illustrated. The chairs are arranged in spaced relation upon the various ties and in such manner that those upon the alternate ties will be in longitudinal rows, as shown in Fig. 1. Extending lengthwise of each section is a plurality of wires 18 which are spaced, say, three inches apart and are hooked over the frame end members 10, Fig. 2, having their ends threaded through apertures, such as 20, provided in proximity to the top edges of the members and to the inside of the latter their extremities are bent to lie against the respective members. These longitudinal wires extend through the notches of the respective rows of chairs and are thereby sustained at intervals. Apertures, such as 19, are provided near the top edges of said side members and are spaced at, say, four and a half inches apart or at such distances that certain of them will occur in lines with the axes of the loops of the respective transverse rows of chairs 13. Through the apertures 20 which are in alignment with the chairs are passed rods 21 to extend above the wires 18 and through the chair loops to thus engage the frames with the chairs which, as before explained, are secured to the various ties. For convenience in withdrawing said rods for releasing the frames one end of each of the rods is bent to afford handles 22.

Groups of transverse wires 23 are secured to the frame members 8 by being engaged in the apertures thereof and having their extremities 24 bent down against such members, as described with respect to the longitudinal wires. In the construction of the various sections said transverse and longitudinal wires are interwoven by being offset to provide loops 25, Fig. 2, where they intersect and wherein the cross wires are lodged to secure the wires in their relative positions.

For the purpose of preventing the side members 8 of a frame from being bent through the tension of the wires 23, braces 26 may advantageously be employed for securement with the members and the ties. These braces may be constructed of wrought iron or steel and are each formed with a looped top 27 and two legs 28 with terminal

feet 29. One of the said legs is disposed to face with the member 8, but is not secured thereto, while the other leg is directed in an angular direction to serve as a thrust support. These braces are fixedly secured to the ties by spikes 30, or an equivalent. As illustrated in the drawings, the braces are disposed in alinement with the transverse rows of chairs 13 and to accommodate the rods 21 the braces are each provided with a notch 31.

To remove a cattle-guard section requires only the withdrawal of the screws 11 from the ties, and of the rods 21 from engagement with the chairs to free the same, when it may be lifted up without disturbing the chairs or the braces.

The operation is very simple: Should a cloven-hoofed animal put his foot upon a cattle-guard such as described, one of the wires would enter between the hoof-toes which would compel the animal to back away to extricate his foot, and consequently safeguards the right-of-way from being entered by cattle.

What I claim as my invention, is—

1. In a cattle-guard, a rectangular frame, wires extending across said frame and having their ends secured thereto, supports for said wires intermediate their lengths, said supports being rigidly secured to the ties of a track, and means engageable with said supports for removably securing the frame to said ties.

2. A cattle-guard consisting of central and side sections which are each composed of a rectangular frame having end and side members, said end members being provided with flanges which are apertured for bolts whereby the frame is secured to the ties of a track, chairs secured to ties intermediate the aforesaid end members, longitudinal wires connected from their ends to said end members and supported intermediately by the respective chairs, and rods removably secured to said side members and extending across the frames above said longitudinal wires to engage the respective chairs.

3. In a cattle-guard, a frame formed of side members and end members which are rigidly secured together, said end and side

members being each provided near their top edges with a series of spaced apertures, wires extending longitudinally and transversely of the frame and having their ends passed through the apertures of the respective members and secured to the latter, chairs for supporting said wires intermediate said end members, and removable rods for securing the frame and the wires to said chairs.

4. A cattle-guard consisting of central and side sections which are each composed of a rectangular frame having end and side members, said end members being provided with flanges which are apertured for bolts whereby the frame is secured to the ties of a track, chairs secured to the ties intermediate the aforesaid ties, longitudinal wires connected at their ends to said end members and supported intermediately by the respective chairs, transverse wires connected at their ends to said side members, rods removably secured to said side members and extending across the frames above said longitudinal wires to engage the respective chairs, and braces for supporting said side members.

5. In a cattle-guard, a frame formed of side members and end members which are rigidly secured together, means for securing said end members to the ties of a track, said end and side members being each provided near their top edges with a series of spaced apertures, wires extending longitudinally and transversely of the frame and having their ends passed through the apertures of the respective members and secured to the latter, chairs rigidly secured to ties of a track for supporting said wires intermediate said end members, and removable rods for securing the frame and the wires to said chairs.

6. In a cattle-guard, a rectangular frame with wires extending thereacross, and a plurality of chairs fixedly secured to the track-ties for supporting the wires between the frame members and affording means for detachably securing the frame to said ties.

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