No. 714,940. Patented Dec. 2, 1902.

J. M. McMANNAMA & J. N. BALLON.

CATTLE GUARD.

(Application filed July 14, 1902.)

(No Model.)

Fig. 1.

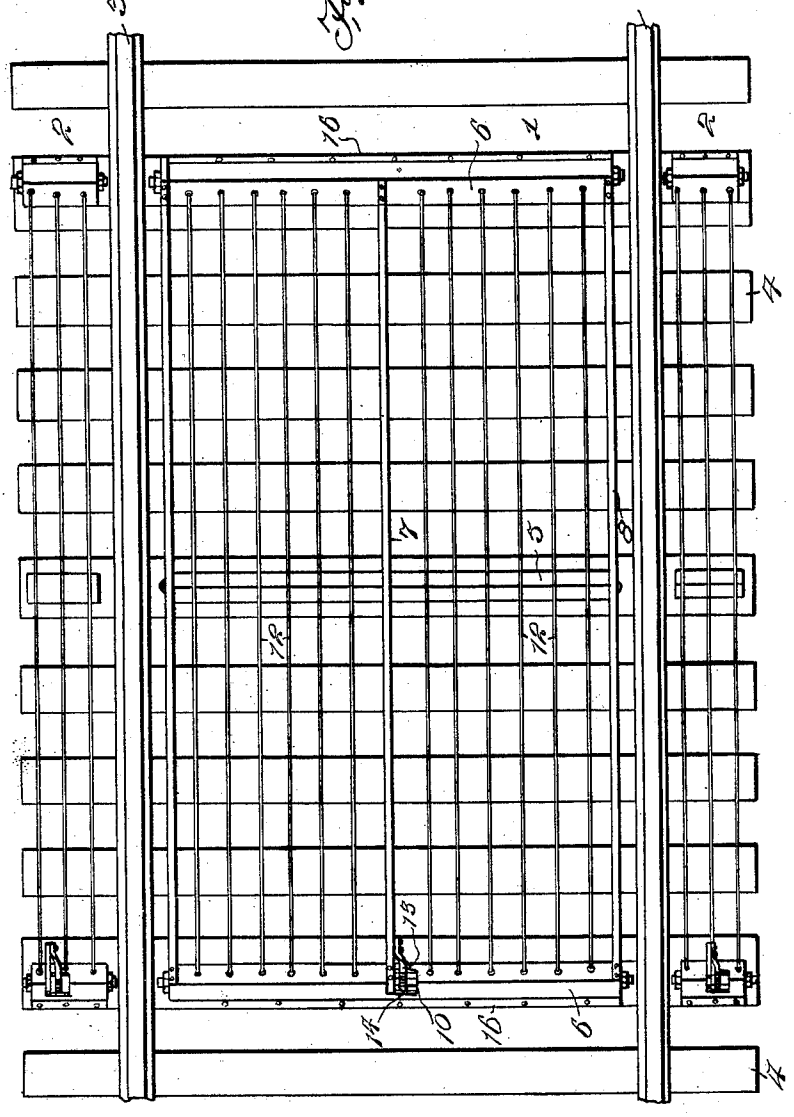
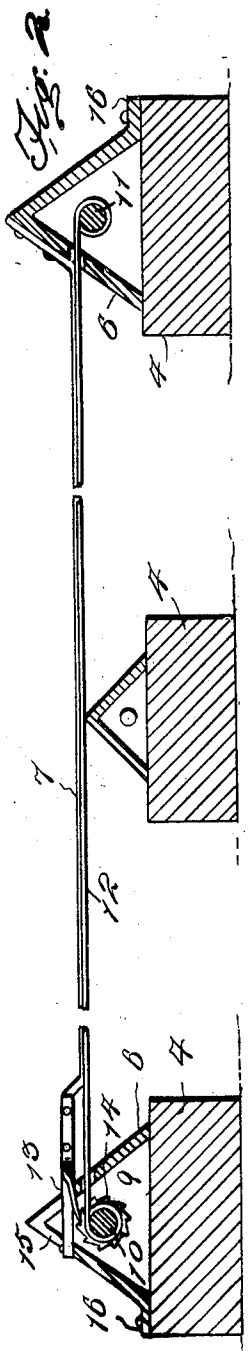


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN M. McMANNAMA, OF CLARINDA, AND JOSEPH N. BALLON, OF OSCEOLA, IOWA.

CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 714,940, dated December 2, 1902.

Application filed July 14, 1902. Serial No. 115,476. (No model.)

To all whom it may concern:

Be it known that we, JOHN M. McMANNAMA, of Clarinda, in the county of Page, and JOSEPH N. BALLON, of Osceola, in the county of Clarke, State of Iowa, citizens of the United States, have invented a new and useful Cattle-Guard, of which the following is a specification.

The invention relates to improvements in cattle-guards.

The object of the present invention is to improve the construction of cattle-guards and to provide a simple and comparatively-inexpensive one of great strength and durability, capable of effectually preventing cattle from passing from one field or inclosure into another at a point where the division-fence is intersected by a railroad-track.

A further object of the invention is to provide a cattle-guard of this character which will leave the track completely exposed to view to enable the same and the road-bed to be inspected without removing the cattle-guard.

The invention consists in the construction and novel combination and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a plan view of a cattle-guard constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same.

Like numerals of reference designate corresponding parts in both figures of the drawings.

1 and 2 designate central and side sections of a cattle-guard designed to be arranged between the rails and at the outer sides thereof, as illustrated in Fig. 1 of the drawings, and at a point where a fence is intersected by a railroad-track. The central section is of less width than the distance between the rails 3, and the side sections 2 may be of any desired width. The central section 1 consists of a frame supported by the cross-ties 4 and composed of inverted approximately V-shaped central and end pieces 5 and 6 and connecting longitudinal bars 7 and 8, located at the center and sides of the central section. The end pieces 6, which are constructed of metal or other suitable material, are disposed transversely of the rails and are composed of inclined side portions resting upon the cross-ties, as clearly shown in Fig. 2 of the drawings. The longitudinal central and side bars or rods are secured at their ends to the end pieces 6 by suitable fastening devices, and they firmly hold the transverse pieces in proper position.

The central and end pieces are preferably provided with end portions 9, and the end pieces receive transverse shafts 10 and 11, to which are connected the terminals of wires 12, arranged at regular intervals and adapted to be stretched to the desired tension by rotating the shaft 10. The shaft 11 is designed to be fixed, and it may consist of a rod or bar, or any other suitable means may be provided for securing the adjacent ends of the wires.

The shaft 10 is held against retrograde rotation by means of a ratchet-wheel 14, mounted on the shaft 10, adjacent to an opening 15 of the end piece, within which the shaft 10 is mounted and arranged to be engaged by a pawl 13. The pawl 13 is preferably secured to the central longitudinal bar 7 and is resilient, and the shaft 10, which may be rotated by any suitable means, preferably has one of its ends squared to receive a wrench or other suitable tool for rotating it; but the squared portion may be arranged adjacent to the ratchet-wheel, if desired. The shaft is held against longitudinal movement in its bearings by any suitable means. The pawl is constructed of a thin piece of metal secured by bolts or other suitable fastening devices and is provided between its ends with a quarter-bend to arrange its outer portion at right angles to its inner attached portion for enabling it to spring readily upwardly and downwardly. The wires extend over the apex of the central transverse piece 5, and the latter is secured at its ends to the side bars or rods 8, the central longitudinal rod preferably passing over the top of the central transverse piece, as shown; but it may be secured to the same, if desired.

The side sections are constructed in the same manner as the central sections, with the exception that no central longitudinal bar is employed, as the same is unnecessary.

The end transverse pieces are provided at

their outer inclined sides with lower outwardly-extending perforated flanges 16, formed by bending the side portions outward, as clearly shown in Fig. 2, and adapted to be secured to the cross-ties, as shown.

The wires extend through perforations 17 of the inner side portions of the end pieces of the sections of the cattle-guard, and the fastening devices are concealed and protected by this arrangement.

It will be seen that the cattle-guard is exceedingly simple and inexpensive in construction, that it possesses great strength and durability, and that while effectually preventing cattle from crossing it does not conceal the rails, the cross-ties, and the road-bed and will permit the same to be readily inspected.

What we claim is—

1. A cattle-guard comprising approximately V-shaped end pieces provided at their inner sides with apertures, a series of wires connecting the end pieces and extending through the said apertures and shafts located within the V-shaped end pieces and receiving the wires, one of the shafts being mounted in suitable bearings and adapted to be rotated to tighten the wires, and means for holding said shaft at the desired adjustment, substantially as described.

2. A cattle-guard comprising approximately inverted-V-shaped pieces, one of the pieces being provided with an opening, longitudinal rods connecting the V-shaped pieces, wires extending from one end of the cattle-guard to the other and secured at one end of the same, a shaft receiving the other ends of the wires and arranged within the V-shaped piece having the opening, a ratchet-wheel mounted on the shaft at the said opening, and a pawl consisting of a piece of resilient material and secured at one end to one of the said rods and engaging the ratchet-wheel, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JOHN M. McMANNAMA.
JOSEPH N. BALLON.

Witnesses as to John M. McMannama:
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Witnesses as to Joe. N. Ballon:
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