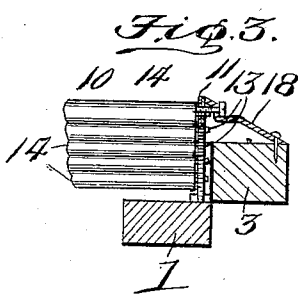
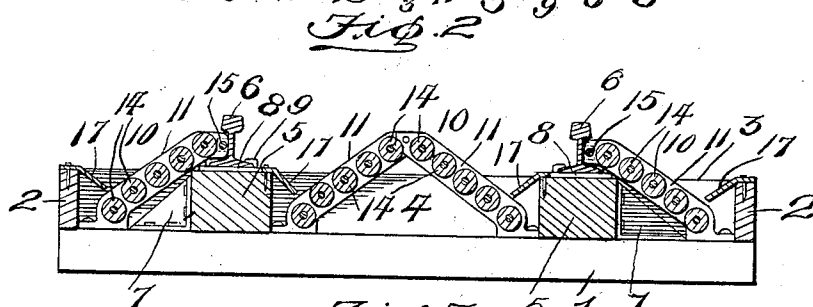
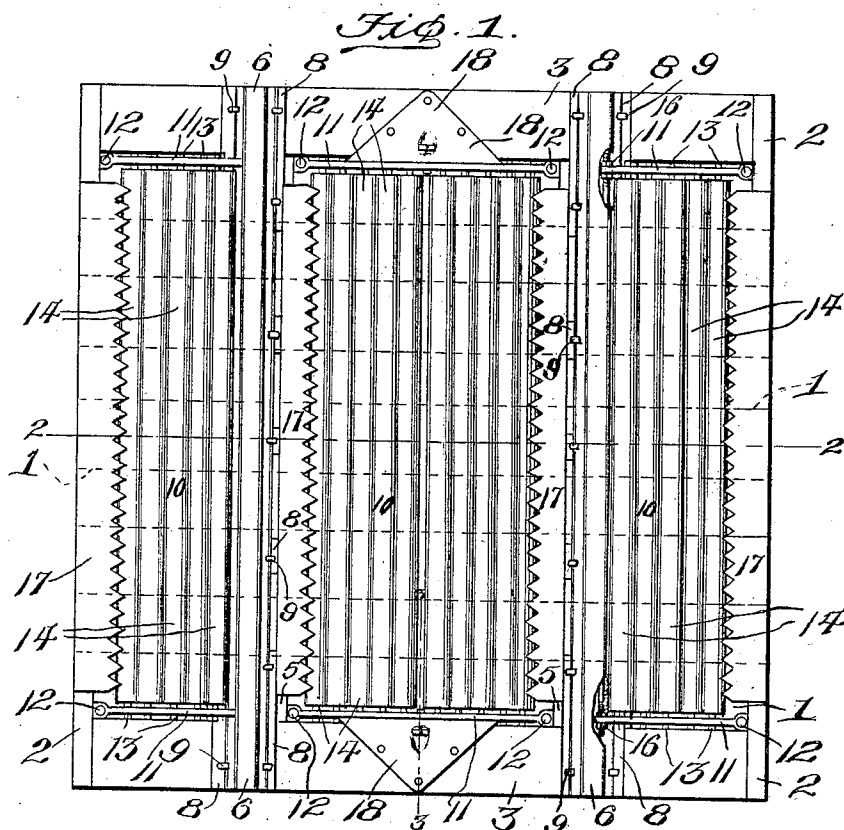


No. 870,469.

PATENTED NOV. 5, 1907.

F. SACK & F. A. TYLER.  
RAILROAD CATTLE GUARD.  
APPLICATION FILED MAR. 23, 1907.



Witnesses  
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# UNITED STATES PATENT OFFICE.

FRANK SACK AND FRANK A. TYLER, OF SMARTVILLE, NEBRASKA.

## RAILROAD CATTLE-GUARD.

No. 870,469.

Specification of Letters Patent.

Patented Nov. 5, 1907.

Application filed March 23, 1907. Serial No. 364,087.

*To all whom it may concern:*

Be it known that we, FRANK SACK and FRANK A. TYLER, citizens of the United States, residing at Smartville, in the county of Johnson and State of Nebraska, have invented new and useful Improvements in Railroad Cattle-Guards, of which the following is a specification.

This invention relates to a railroad cattle guard of that type comprising a plurality of groups of rollers arranged on inclines so as to form an unsteady footing for the cattle in attempting to cross the guards, thereby deterring them from passing over the tracks.

The invention has for one of its objects to improve and simplify the construction and operation of devices of this character so as to be comparatively easy and inexpensive to manufacture, of strong and durable design, and thoroughly reliable and efficient in use.

A further object of the invention is the provision of a cattle guard in the nature of a unitary structure that can be inserted in the railroad track at any desired point, the guard including sections disposed between the tracks and also at the out sides thereof.

An important feature of the invention is that the structure can be built in a shop or in other convenient places and carried in completed form to the point where it is to be laid in the track, it being necessary merely to spike the rails to the structure and to the cross ties of the road bed.

With these objects in view and others, as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claims appended hereto.

In the accompanying drawing, which illustrates one of the embodiments of the invention, Figure 1 is a plan view of the guard. Fig. 2 is a transverse section on line 2—2, Fig. 1. Fig. 3 is a detail sectional view of the middle portion of the guard at one end.

Similar reference characters are employed to designate similar parts throughout the several views.

Referring to the drawing, the frame of the guard comprises a plurality of cross ties 1 which support side members 2 and end beams 3 that cooperate with the said members to form a pit 4 of suitable depth. In the pit are arranged longitudinal sleepers 5 on which the rails 6 are mounted. In order to prevent the sleepers 5 from spreading, a plurality of metal brackets 7 are arranged between the outer surfaces of the sleepers and the tops of the cross ties, the brackets being spiked or otherwise suitably secured to the parts. Under the rails 6 are disposed apertured plates 8 that rest on the end beams and sleepers for receiving the spikes 9, whereby the rails are firmly held in place and prevented from spreading.

Arranged in the pit 4 are guard sections designated

generally by 10, a pair of sections being disposed between the sleepers 5 and single sections at the outside of the sleepers. Each section comprises inclined end plates or brackets 11 that are bolted or otherwise suitably secured at their lower ends to the cross ties 1 adjacent the beams 3, the bolts being indicated at 12. These brackets have spaced apertures for receiving parallel shafts or rods 13 extending longitudinally of the track for supporting the metal rollers 14 which may be sections of pipe. The upper ends of the brackets 11 of the outer sections 10 rest on the rails, as shown in Fig. 2, and are held properly spaced apart by rods 15 tapped at their ends for receiving the nuts 16. The brackets 11 of the middle sections are inclined upwardly toward each other and overlap and are secured together in any suitable manner. Disposed over the bottom roller of each section is a metal guard plate 17, the outer plates being secured to the side members 2 and the inner plates to the sleepers 5, and the said plates are inclined downwardly and have their lower edges serrated. In order to prevent any trash caught on the trains passing over the track from entanglement with the central guard sections, metal shield plates 18 of triangular form are spiked or otherwise suitably secured to the cross beams 3 and bolted to the brackets 11 of the central sections of the guard.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains. In practice, the cattle in attempting to cross the guard are unable to find a firm place on which to walk since the rollers 14 turn under the weight of the cattle when stepping on the guard, and cattle are thus deterred from crossing. The guard plates 17 prevent the cattle from getting their feet caught between the lower rollers and the adjacent side portions of the supporting frame so that danger of entrapping cattle is effectively prevented. A cattle guard of the construction set forth is simple, durable and highly efficient in operation.

We have described the principle of operation of the invention, together with the apparatus which we now consider to be the best embodiment thereof, but we desire to have it understood that the apparatus shown is merely illustrative and that such changes may be made when desired, as are within the scope of the claims.

Having thus described the invention, what I claim is:—

1. In a cattle guard, the combination of a supporting structure consisting of cross ties and sleepers secured thereto, with guard sections rigidly secured to the structure and disposed intermediate and along the outside of the sleepers and guard strips secured to the sleepers and arranged to cover the space between the guard sections and sleepers.

2. In a cattle guard, the combination of a supporting structure, rails thereon, inclined guard sections disposed between and at the outside of the rails, stationary guard members arranged parallel with the sections, and fixed serrated guard strips adjacent the bottom of the sections, each section comprising inclined supporting members, means for holding them spaced apart, and rollers mounted on the supporting members.
3. In a cattle guard, the combination of a plurality of cross ties, side and end members cooperating with the ties to form a pit, sleepers on the cross ties, rails on the sleepers, inclined guard sections disposed in the pit and on opposite sides of the sleepers, and guard strips arranged on the sleepers and side members in cooperative relation with the guard sections.
4. In a cattle guard, the combination of a plurality of cross ties, sleepers thereon, brackets for preventing lateral movement of the sleepers, rails mounted on the sleepers, apertured metal plates under the rails for receiving

the spikes driven into the sleepers to hold the rails in place, and guard sections mounted on the cross ties.

5. In a cattle guard, the combination of a supporting structure including cross members, sleepers secured thereto, and side members spaced from the sleepers, with guard sections each comprising inclined end pieces secured to the structure, rods secured to the inclined end pieces, a roller on the rods, shields secured to the structure and to the end pieces between the sleepers, and guard strips secured to the sleepers, near the insides thereof and to the side members and projecting inwardly therefrom.

In testimony whereof, we affix our signatures in presence of two witnesses.

FRANK SACK.  
FRANK A. TYLER.

Witnesses:

DAVID COLLINS,  
JAMES F. MURPHY.