

C. P. REED.  
CATTLE GUARD.  
APPLICATION FILED SEPT. 27, 1909.

974,092.

Patented Oct. 25, 1910.

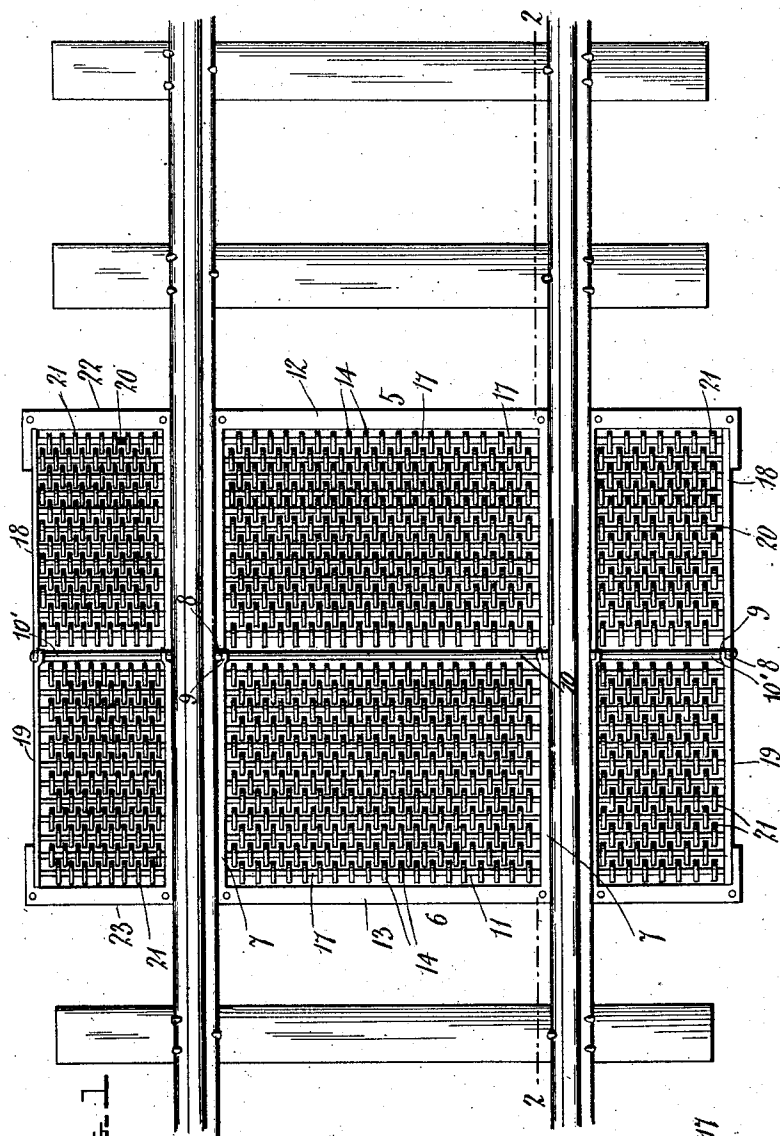


FIG. 1

FIG. 4

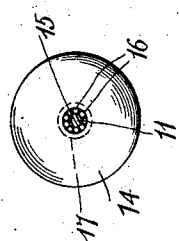


FIG. 3

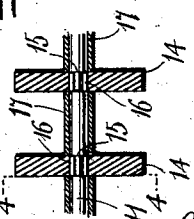
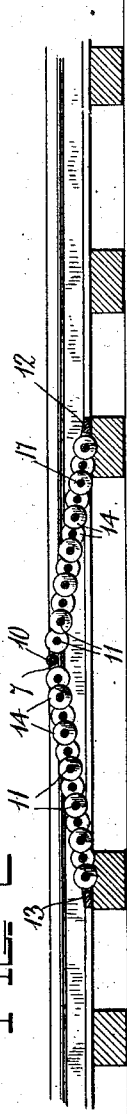


FIG. 2



Witnesses  
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*Conwell P. Reed*  
By *[Signature]*  
Attorneys

# UNITED STATES PATENT OFFICE.

CONWELL P. REED, OF BRIDGEPORT, TEXAS, ASSIGNOR OF ONE-HALF TO SAMUEL J. CULWELL, OF BRIDGEPORT, TEXAS.

## CATTLE-GUARD.

974,092.

Specification of Letters Patent.

Patented Oct. 25, 1910.

Application filed September 27, 1909. Serial No. 519,718.

*To all whom it may concern:*

Be it known that I, CONWELL P. REED, a citizen of the United States, residing at Bridgeport, in the county of Wise, State of Texas, have invented certain new and useful Improvements in Cattle-Guards; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in cattle guards and has particular reference to a device of that kind adapted to be placed on either side and between the rails of a railway track in order to prevent cattle walking along the track.

One object of the invention is the provision of a guard provided with a plurality of rollers, the latter being journaled on roller bearings carried by a plurality of shafts so that the slightest pressure produced by the feet of an animal on the rollers will cause them to rotate, whereby the animal will slide on the guard and have a tendency to fall.

Another object is the provision of a guard formed of hingedly united sections which may be folded one upon the other and occupy a comparatively small space for packing and shipping.

With these and other objects in view as will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings and more particularly pointed out in the appended claims; it being understood that various changes in the form, proportion, size and minor details of the device may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming part of the specification:—Figure 1 is a plan view of railway track and showing my improved device applied thereto. Fig. 2 is a longitudinal sectional view approximately on the line 2—2 of Fig. 1. Fig. 3 is a detailed sectional plan view of a portion of one of the shafts, also showing the rollers in section and roller bearings and means for holding the rollers in spaced relation. Fig.

4 is a sectional end elevation on the line 4—4 of Fig. 3.

Similar numerals of reference are employed to designate corresponding parts throughout.

The sections comprising that portion of the guard located between the rails are designated in general by the numerals 5 and 6. These sections are frame like structures and of a size to nicely fit between the base flanges of the rails. As shown the sections include the side walls 7; these members being preferably formed of single pieces of sheet metal oblong in contour and substantially rectangular in cross section. The upper sides of the side walls 7 incline upwardly from one end and terminate in overlapping lugs 8 and 9. Owing to the sections 5 and 6 being of the same size it is evident that one of the lugs will be slightly off-set in order to bear upon the lug of the opposite section. The lugs 8 and 9 are provided with alining openings for the reception of a common pintle 10 which serves to pivotally unite the sections.

Secured in the opposite side walls 7 are the opposite ends of a plurality of shafts 11. These members are preferably of metal and are spaced equal distances apart and located adjacent the upper edges of the side walls and are so positioned that they will lie in an inclined plane below and parallel with the planes of the upper inclined edges of the sides.

The highest points of the side walls 7 are slightly above the plane of the track and uniting the lower or free ends of the side walls are bearing plates 12 and 13. The bearing plates 12 and 13 are provided with suitable openings for the reception of spikes or nails by means of which the sections are firmly secured to the cross-ties, the side walls being disposed longitudinally of the track.

Journaled on the shafts 11 are a plurality of rollers 14. These rollers are arranged in staggered order that is to say, the rollers on adjacent shafts alternate, as shown in Fig. 1. In order that the rollers may have a smooth bearing on the shafts and at the same time be held in spaced relation the following construction is employed:—By reference to Fig. 3 it will be seen that each shaft is provided at intervals throughout its length with circular grooves 15 and ar-

ranged within these grooves are a plurality  
 of roller bearings 16. The roller bearings  
 are of such diameters that their surfaces  
 will be in a plane with the outer surfaces  
 5 of the shaft to which they are applied and  
 the openings in the rollers 14 will be of a  
 size to loosely receive the shafts. With  
 this construction it is evident when the roll-  
 10 ers are positioned as shown in Fig. 3 they  
 will revolve on the bearings 16. In order to  
 prevent endwise movement of the rollers on  
 the shafts spacing sleeves 17 are employed.  
 These members are preferably formed of  
 15 pieces of metallic tubing of a size to nicely  
 receive the shafts 11 and in the arrange-  
 ment of parts these sleeves are designed to  
 be placed between the outer-most rollers and  
 side walls of the sections and between the  
 20 adjacent rollers on each of the shafts. With  
 this construction it is evident that the roll-  
 ers will be held in spaced relation on the  
 shafts and at the same time will be free to  
 rotate on their bearings.

Reference now to Fig. 1 discloses the fact  
 25 that located on the outer sides of the track  
 rails and bearing on the cross-ties are sec-  
 tions 18 and 19 similar to the sections 5 and  
 6. The sections 18 and 19 are provided with  
 transverse shafts 20 similar to the shafts  
 30 11 and also with rollers 21 similar to the rol-  
 lers 14. The said shafts 20 have annular  
 recesses and roller bearings for the rollers  
 21 similar to the construction already de-  
 scribed for the sections 5 and 6. The sec-  
 35 tions 18 and 19 are hingedly united at their  
 highest points by pintles 10' and the lower  
 or free ends of their side walls are connected  
 by bearing plates 22 and 23, similar to the  
 bearing plates 12 and 13 and performing  
 40 the same function as that recited for the  
 said bearing plates 12 and 13.

Owing to the fact that the side walls of

the sections are disposed longitudinally of  
 the track the shafts are transverse with re-  
 spect to the track and the inclines formed 45  
 by the sections are longitudinal of the track  
 so that should an animal get upon the guard  
 and slip thereon the animal will move lon-  
 gitudinally of the track and will not be  
 50 likely to get its hoofs caught between the  
 sides of the sections and the track rails.  
 Furthermore, owing to the fact that the  
 sections are pivotally connected together,  
 their angle of inclination may be varied as  
 55 may be required by the varying spaces be-  
 tween the ties on which the bearing plates  
 rest and are secured, and hence the guard  
 may be adjusted longitudinally as may be  
 required by the extent of the space between  
 the ties on which the guard is mounted. 60

From the foregoing it can be seen that I  
 have provided a device which is exceedingly  
 simple in structure and comparatively inex-  
 pensive to manufacture, embodying few  
 parts and these so arranged that the danger 65  
 of derangement will be reduced to a  
 minimum.

What is claimed is:—

A cattle guard consisting of a pair of  
 frames having spaced overlapping hinge 70  
 lugs at their meeting ends, a single pintle  
 passed through the spaced hinge lugs and  
 hingedly connecting the frames together,  
 spaced shafts having their ends journaled in  
 the sides of the frames, and overlapping 75  
 rollers arranged on said shafts in staggered  
 relation.

In testimony whereof, I affix my signature  
 in presence of two witnesses.

CONWELL P. REED.

Witnesses:

SAM J. CULWELL,  
 W. E. GREEN.