No. 730,794. PATENTED JUNE 9, 1903.

F. W. PERKINS.

RAILWAY CATTLE GUARD.

APPLICATION FILED MAR. 9, 1903.

NO MODEL.

Fig. 1.

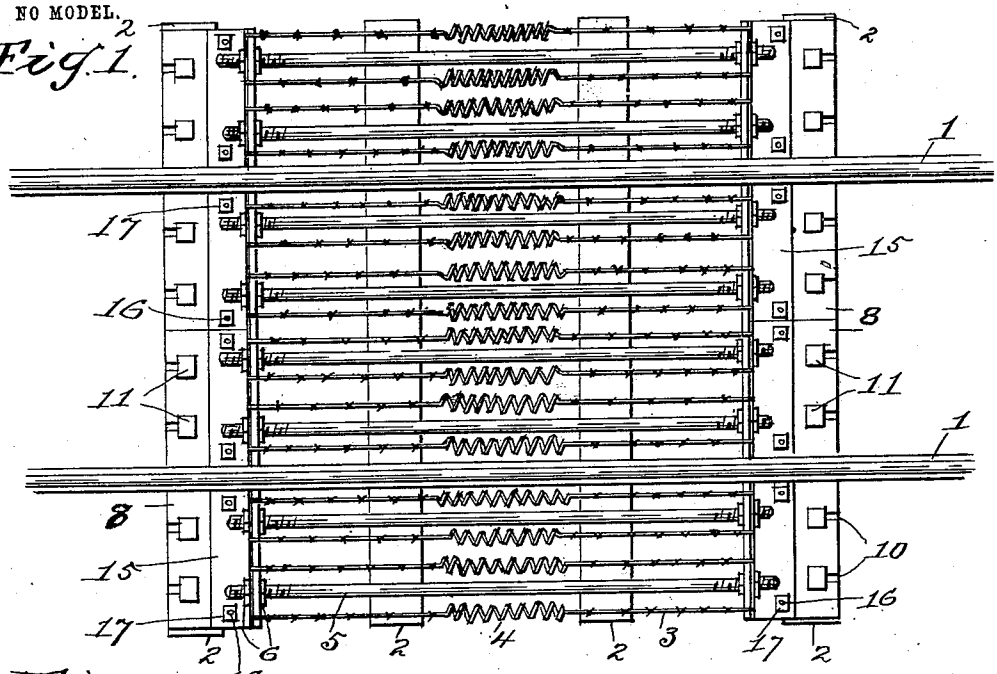


Fig. 2.

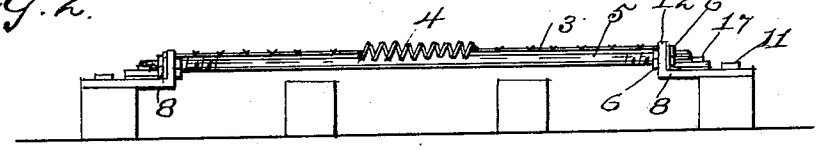


Fig. 3.

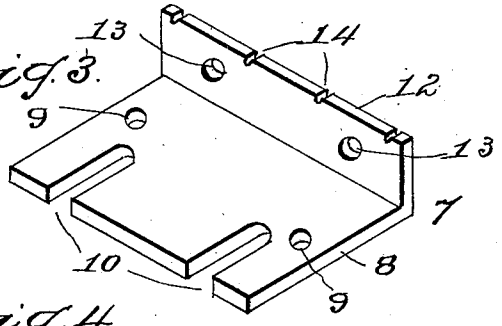
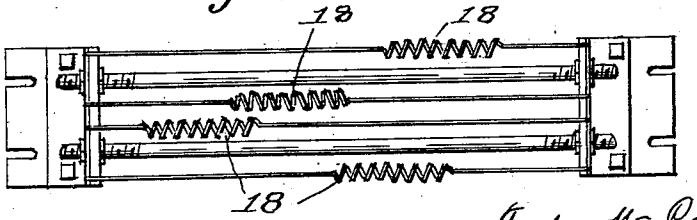


Fig. 4.



Witnesses

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 730,794. Patented June 9, 1903.

UNITED STATES PATENT OFFICE.

FOSTER W. PERKINS, OF WOODBINE, KENTUCKY.

RAILWAY CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 730,794, dated June 9, 1903.

Application filed March 9, 1903. Serial No. 147,003. (No model.)

To all whom it may concern:

Be it known that I, FOSTER W. PERKINS, a citizen of the United States, residing at Woodbine, in the county of Whitley and State of Kentucky, have invented certain new and useful Improvements in Railway Cattle-Guards, of which the following is a specification.

This invention relates to railway cattle-guards, and particularly to the class of such guards having a spring-tread.

The invention consists in a cattle-guard having a series of alternating parallel rods and spiral spring-wires, the latter being expanded by longitudinal adjustment of the rods and to provide adjustable brackets to carry the rods and wires.

The invention further consists in a cattle-guard having a series of rods and spiral springs arranged together in sets, an adjustable bracket for each set, and a clamping-plate for the wires carried by each bracket.

The invention still further consists in the novel construction and arrangement of the several parts whereby the tread of the guard is made flexible vertically and expansible and contractible longitudinally.

In the accompanying drawings, forming part of this application, Figure 1 is a plan view of the guard applied to a railway. Fig. 2 is a side elevation of the guard. Fig. 3 is a detail perspective view of one of the brackets. Fig. 4 is a top view of a guard set, showing a modification.

The same numeral references denote the same parts throughout the several views of the drawings.

The rails 1 and ties 2 are of the usual form, and the guard may span one or more ties, as desired or as occasion may demand.

The sections or sets constituting the guard all comprising the same elements constructed and arranged alike, only one section will be herein described in detail. This statement also applies to the brackets and clamping-plates.

The barbed wires 3 have a spiral coil 4, preferably central thereof, permitting a longitudinal expansion and contraction of the wires and a yieldable or elastic vertical movement of the wires. The rods 5 are screw-threaded at each end and are provided with suitable lock-nuts 6. The brackets 7 have a base 8, provided with bolt-holes 9, outer-edge slots 10 for set-bolts 11 to adjustably secure the brackets to the ties, and a flange 12, perpendicular to the base and provided with holes 13, in which the rods 5 are adjustably secured parallel with each other. The top of the flange 12 has notches 14 for the wires, which are positioned parallel with the rods, but on a plane above that of the rods, one wire being placed outside of the rods and two wires between the rods. The ends of the wires are fixed against the flange 12 and bracket-base 8 by a clamping-plate 15, held by bolts 16, extending through the holes 9 and provided with suitable nuts 17.

In assembling the sections or guard sets one section is placed upon the outside of the rails 1, and two sections or sets are positioned between the rails. The sections or sets may be increased in number and the number of wires varied as desired or as occasion may demand.

Referring to the modification shown in Fig. 4, the coils 18 are positioned at various points in the wires out of the center thereof.

It is obvious that the brackets can be readily adjusted on the ties, that the wires may be adjusted by the rod lock-nuts, and that one or more of the wires may be repaired, removed, or replaced without disturbing the remaining wires.

It will be seen that the wires stand sufficiently above the rods to permit contact therewith by an animal treading on the guard, that such tread will depress the wires and expand the coils without catching the foot or feet of the animal, that the tendency of coil to retract the wire will impart the same to the foot of the animal and cause an upward or outward pressure on the foot, and that the coils being remote from ends of the tread-wires there is no liability of the foot being caught in the coils.

The device may be set up in sections for convenience in packing, storing, and transportation or the section parts may be packed separate for shipping. In either case the parts arranged and applied in sections afford an expeditious means of assembling the sections to form a simple and effective cattle-guard.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A surface cattle-guard consisting of a series of brackets adjustably secured to the cross-ties, a series of rods adjustable in the brackets, and a series of wires parallel with the rods and provided with spiral coils and having their ends secured to the brackets.

2. A cattle-guard comprising a series of brackets adjustably secured to the cross-ties, a series of tread-wires provided with spiral coils and clamped to the brackets, and a series of rods provided with lock-nuts and adjustable in the brackets to vary the tension of the wires.

3. In a railway cattle-guard, the combination, with a series of brackets adjustably secured on the cross-ties, of a series of rods and spring-wires adjustably carried by the brackets in sections, and lock-nuts to effect the adjustment of the rods and brackets relative to each other and to the ties.

4. In a railway cattle-guard, the combination, with a series of brackets adjustably secured on the cross-ties, of a series of rods and spring-wires adjustably carried by the brackets, lock-nuts to effect the adjustment of the rods and brackets relative to each other and to the ties, and plates for clamping the wire ends to the brackets.

5. In a railway cattle-guard, the combination, with a series of flanged brackets adjustably secured to the rail-ties, a set of alternating parallel rods and spring-wires arranged with the wires out of the plane of the rods, plates to clamp the wires over the bracket-flange, and lock-nuts to effect adjustment of the rods in said flange and vary the tension of the wires.

In witness whereof I hereunto set my hand in the presence of two witnesses.

FOSTER W. PERKINS.

Witnesses:
R. M. SULLIVAN,
A. S. WILDER.