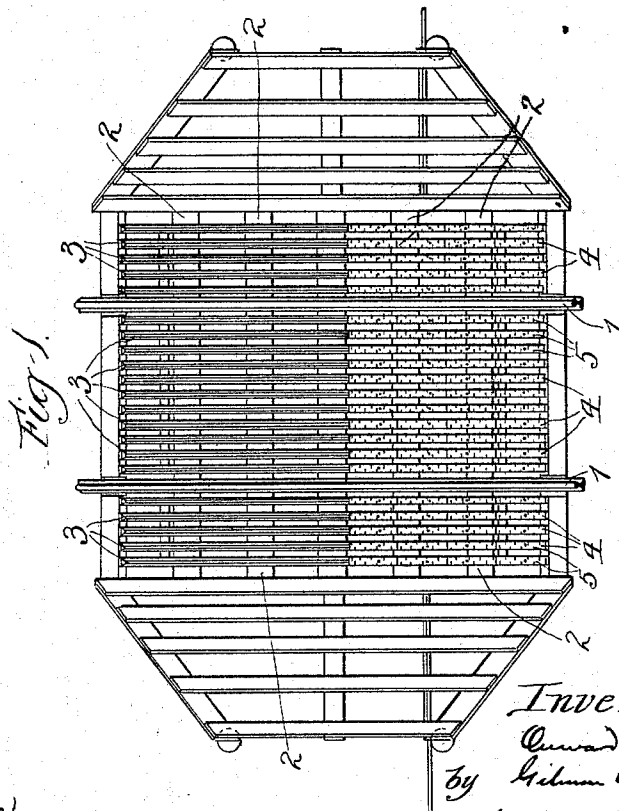
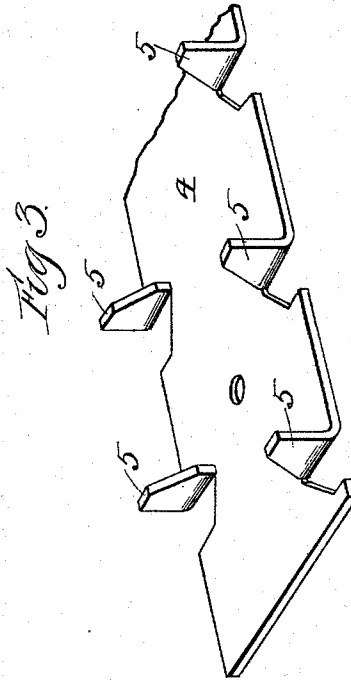
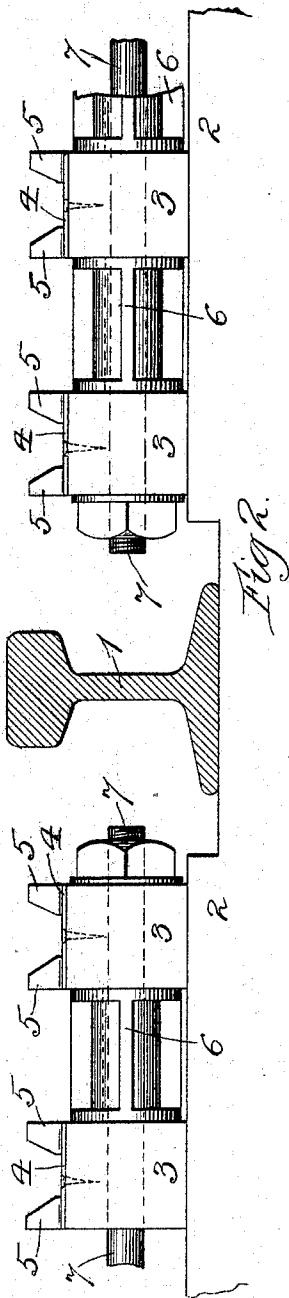


(No Model.)

O. BATES & G. W. SMITH.
GUARD FOR RAILWAYS.

No. 527,192.

Patented Oct. 9, 1894.



Witnesses.
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UNITED STATES PATENT OFFICE.

ONWARD BATES AND GILMAN W. SMITH, OF CHICAGO, ILLINOIS.

GUARD FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 527,192, dated October 9, 1894.

Application filed April 21, 1894. Serial No. 508,458. (No model.)

To all whom it may concern:

Be it known that we, ONWARD BATES and GILMAN W. SMITH, of Chicago, Illinois, have invented certain new and useful Improvements in Cattle-Guards for Railways, of which the following is a specification.

Our invention relates to guards for preventing cattle from straying upon railway tracks from road crossings and similar points.

The invention consists in a series of wooden slats whose tops are wholly or partly surfaced with metal strips having blunt teeth projecting upward from them to destroy the footing of the cattle; also in certain matters of detail as hereinafter set forth.

In the accompanying drawings, Figure 1 is a plan view of a railway cattle guard with our invention applied to it. Fig. 2 is a partial end view on an enlarged scale. Fig. 3 is a perspective view of one of the surfacing strips.

1 are the track rails and 2 the ties.

3 are wooden slats which when in place are ordinarily placed parallel with the rails and fastened down to the ties. On the top of each slat is a metal surfacing strip 4 with blunt teeth projecting up from its edges as at 5. These strips 4 are of flat rolled steel with the teeth struck up from the body of the strip at the edges as shown in Fig. 3. It is not necessary that the strips 4 extend the entire length of the slats but they may cover only a portion of the slats as, for example, in Fig. 1.

6 are spacing thimbles between adjacent slats and 7 are bolts extending through the

slats and the thimbles and binding a series of slats together into a guard section.

It is obvious that the parts of the guard may be variously modified without departing from the invention.

We claim—

1. In a cattle guard the combination of wooden slats and metal surface strips composed of flat steel bars with blunt teeth struck up from their edges, substantially as set forth.

2. A cattle guard embracing in combination a series of wooden slats, a series of spacing thimbles between said slats, bolts extending through said slats and thimbles, and a series of metal surface strips on the upper sides of said slats having blunt teeth projecting upward from both edges thereof, substantially as set forth.

3. In a cattle guard, the combination, substantially as set forth, of a series of wooden slats, and a series of metal strips, with teeth projecting upward at their edges, covering a portion only of the tops of the slats.

4. In a cattle guard, the combination substantially as set forth, of a series of wooden slats, and a series of metal strips with upward projecting teeth thereon, covering a portion only of the tops of the slats.

ONWARD BATES.
GILMAN W. SMITH.

Witnesses:

NELLIE MCKIBBEN,
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