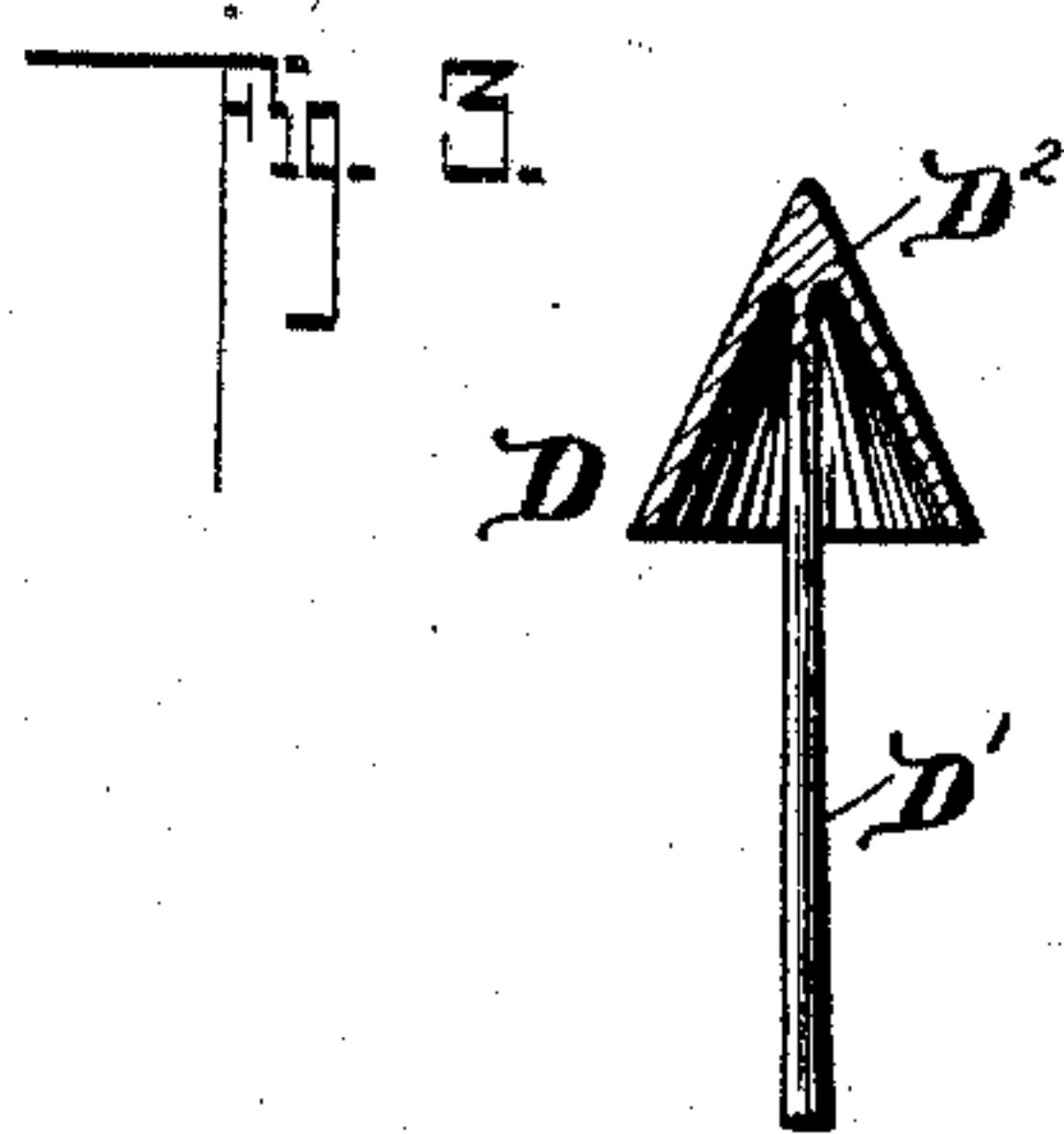
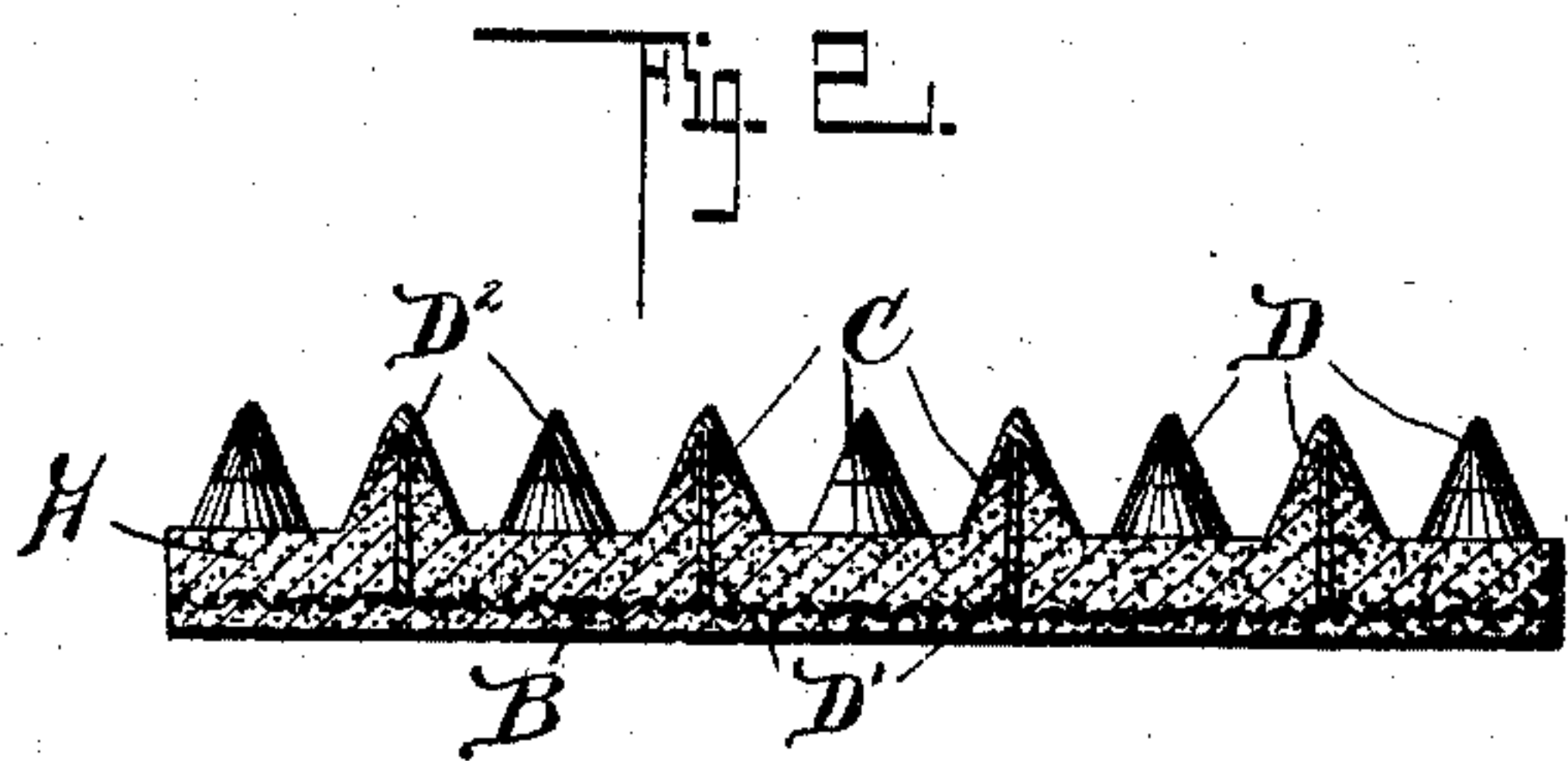
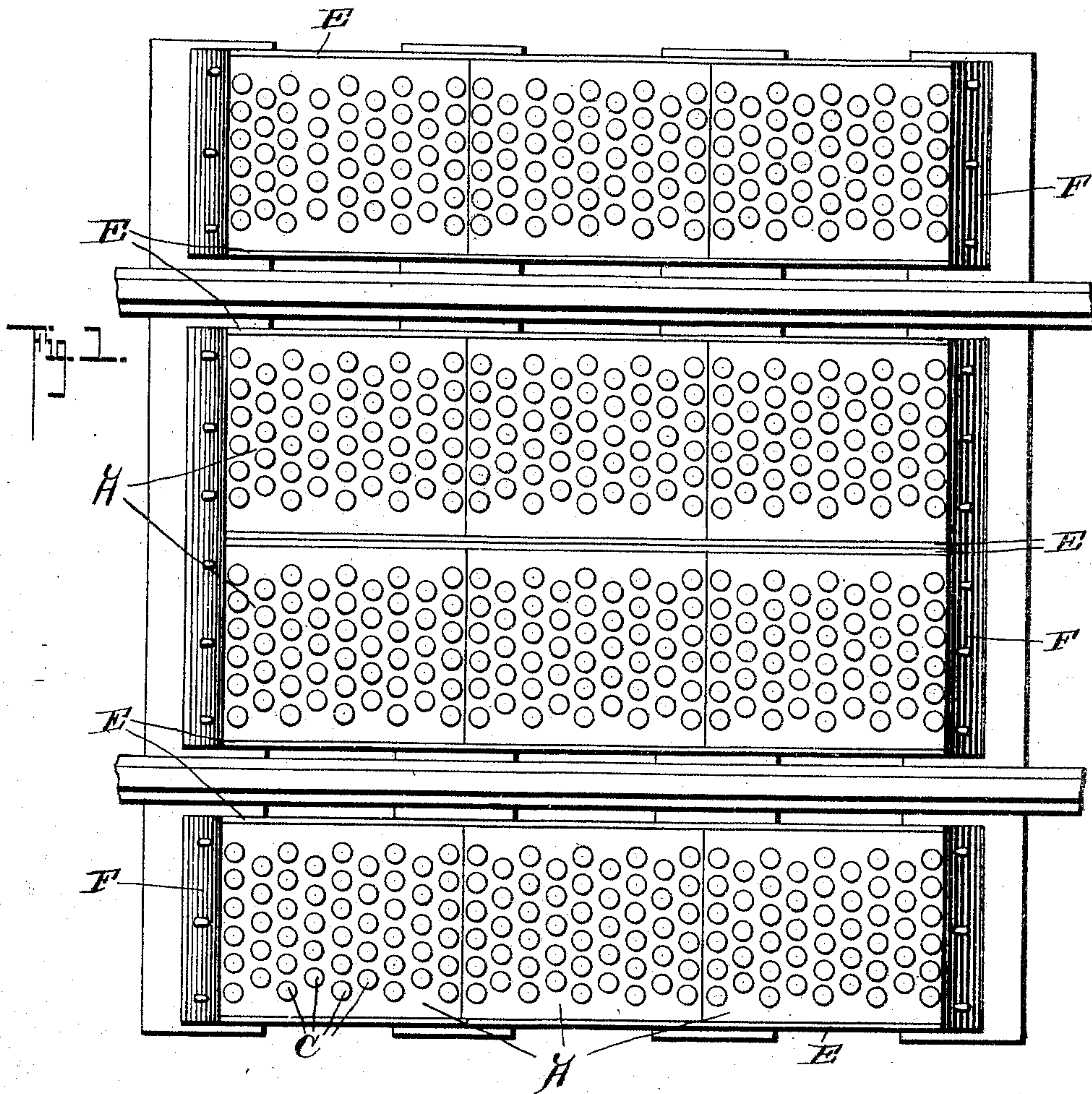


J. H. HAMMILL.  
 REINFORCED CONCRETE CATTLE GUARD.  
 APPLICATION FILED OCT. 12, 1908.

928,192.

Patented July 13, 1909.



Inventor  
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Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN H. HAMMILL, OF CEDAR RAPIDS, IOWA, ASSIGNOR OF FIFTY-ONE ONE-HUNDREDTHS TO CHARLES P. MURRAY, TWENTY-FOUR ONE-HUNDREDTHS TO A. J. MURRAY, AND ONE-FOURTH TO JOHN E. MURRAY, ALL OF CEDAR RAPIDS, IOWA.

## REINFORCED-CONCRETE CATTLE-GUARD.

No. 928,192.

Specification of Letters Patent.

Patented July 13, 1909.

Application filed October 12, 1908. Serial No. 457,393.

*To all whom it may concern:*

Be it known that I, JOHN H. HAMMILL, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented a new and useful Improvement in Reinforced-Concrete Cattle-Guards, of which the following is a specification.

This invention relates to reinforced concrete cattle guards the object being to provide a guard in which the cone shaped projections are reinforced in such a manner that it is almost impossible for the same to become broken.

A further object of the invention is to provide a guard which is composed of a plurality of sections adapted to be arranged between and alongside of the track at the points desired whereby it will be impossible for live stock to pass over the same.

A further object of the invention is to provide a guard which is exceedingly simple in construction and one which can be molded very readily.

A still further object of the invention is to provide a guard in which the reinforcing members are so arranged that a cap will be formed for the cone shaped projections.

With these various objects in view, my invention consists in the novel features of construction, arrangement and combination of parts hereinafter described, pointed out in the claims and shown in the accompanying drawings, in which:—

Figure 1 is a top plan view of my improved guard showing the application of the same. Fig. 2 is a vertical section through one of the sections. Fig. 3 is a side elevation of one of the reinforcing members detached.

In carrying out my improved invention, I employ a plurality of blocks A which are preferably formed of cement having a wire netting B arranged horizontally therein so as to prevent the block from parting if it should become cracked or broken in any way. These blocks are adapted to be arranged between the tracks or alongside of the same at the junction of a fence or roadway, and in practice I employ three rows of

these blocks as clearly shown which has been found sufficient to prevent the cattle from passing over the same.

Cone shaped projections C are formed on the top of the blocks through which extend the spiked portions of the reinforcing members D which comprise a central spike D' having a cone shaped cap D<sup>2</sup> secured on their upper ends adapted to fit snugly over the cone shaped projections so as to form a cap for the same and it will be seen that these reinforcing members are molded in the blocks and projections when the same are molded so as to securely hold the reinforcing members in position.

In practice, I have found that fifty projections to a block obtain better results when arranged as clearly shown which allows the blocks to be placed together so that projections will all be the same distance apart so that it is impossible for cattle to pass over the same. It is of course understood that sufficient distance is left at the sides of the block adjacent the rails so as to prevent the projections being struck by the wheels as they pass over the same.

From the foregoing description, it will be seen that I have provided a reinforced concrete cattle guard which is composed of a plurality of block sections which enables the guard to be placed in position easily. It will also be seen that each of the blocks is provided with a plurality of cone shaped projections having a metal cap reinforced by a central vertical rod.

For supporting the blocks upon the ties I employ angle irons E on which the blocks are arranged as clearly shown and for securing the blocks at the ends, I arrange double blocks F which are spiked to the ties.

What I claim is:—

1. A cattle guard comprising a block having a plurality of cone shaped projections reinforced by metal caps.

2. A cattle guard comprising a reinforced block provided with a plurality of cone shaped projections reinforced by metal caps.

3. A concrete cattle guard comprising a block having a plurality of cone shaped pro-

jections, said projections being reinforced by metal caps carried by a spike extending through said projections into said block.

4. A concrete cattle guard comprising a  
5 plurality of concrete blocks adapted to be arranged between and alongside of a track, said blocks being reinforced by a wire netting arranged horizontally therein, cone shaped

projections formed on the top of said blocks, and spikes embedded in said projections and 10 block having cone shaped caps fitting over said cone shaped projections.

JOHN H. HAMMILL.

Witnesses:

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