

No. 814,863.

PATENTED MAR. 13, 1906.

I. MYERS & C. SIMENSEN.  
CATTLE GUARD.

APPLICATION FILED OCT. 21, 1905.

Fig. 1.

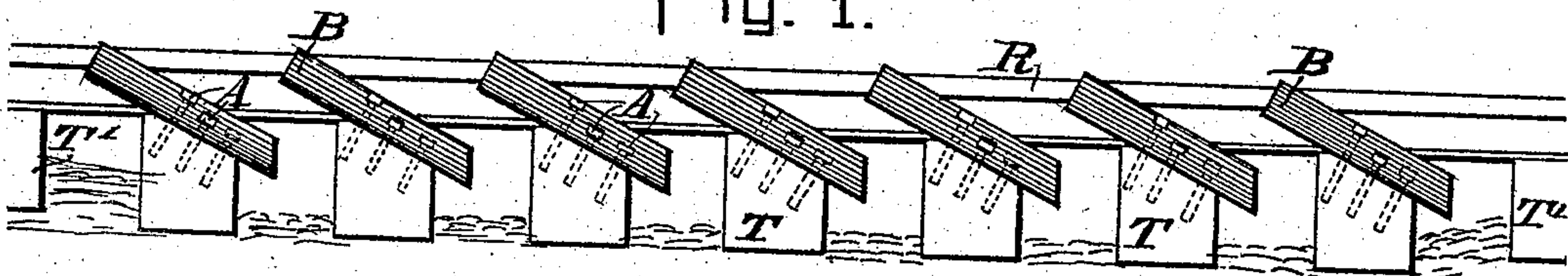


Fig. 2.

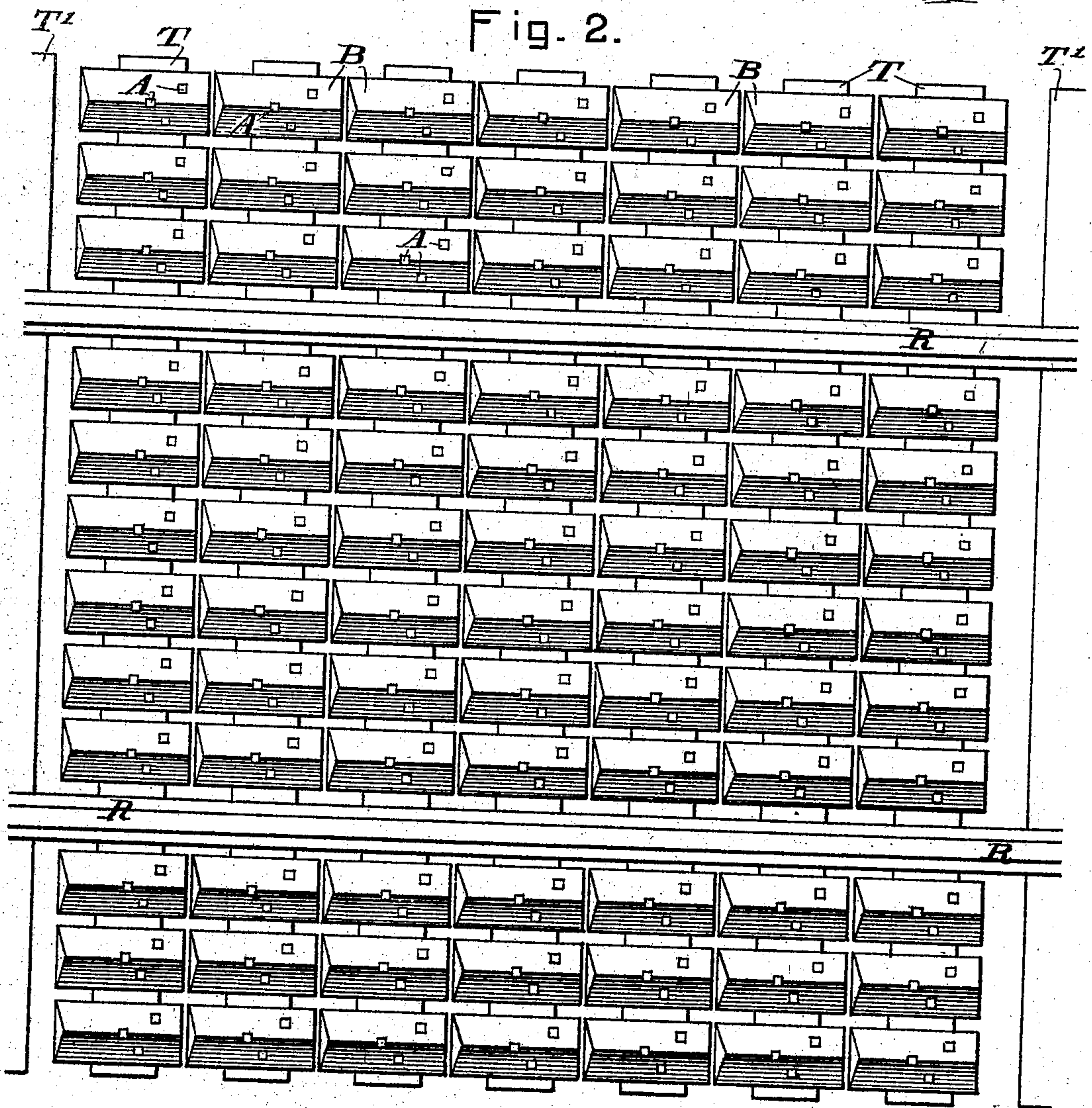


Fig. 3.

WITNESSES,

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# UNITED STATES PATENT OFFICE.

IRVIN MYERS AND CHARLES SIMENSEN, OF SPOKANE, WASHINGTON.

## CATTLE-GUARD.

No. 814,863.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed October 21, 1905. Serial No. 283,828.

*To all whom it may concern:*

Be it known that we, IRVIN MYERS and CHARLES SIMENSEN, citizens of the United States, and residents of the city of Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Cattle-Guards, of which the following is a specification.

Our invention relates to an improvement in cattle-guards, and comprises the novel parts and combinations of parts, which will be hereinafter particularly set forth in the claims.

The object of our invention is to improve and simplify such devices.

In the specification we will describe and in the drawings have shown our device embodied in the form which is now preferred by us.

Figure 1 is a side elevation of a section of track which includes our improved cattle-guard. Fig. 2 is a plan view of the same. Fig. 3 is an end elevation of one of the blocks used in our guard.

In installing our improved cattle-guard we take a certain number of ties, seven as shown, and bevel their upper sides, as shown in Fig. 1, so as to form inclined surfaces upon which to secure the blocks B, which constitute the obstructive feature and prevent the passage of cattle. The angle of this bevel is not necessarily a fixed quantity; but we prefer that it be about as shown, approximating thirty degrees. The number of ties to be thus beveled may also vary. The top surfaces of these ties are beveled both between the rails and outside the rails. A flat bearing should, however, be left for the rail.

The blocks B, which are secured to the beveled surfaces of the ties, are triangular in cross-section and preferably rectangular in plan. They are secured to the ties so as to project somewhat at each end beyond the sides of the ties. The securing means preferred by us consists of lag-screws A, preferably three for each block, one placed centrally of the block—that is, at the apex of the triangle—and the other two one at each side on the inclined surfaces. The latter need not be as long as the central one.

The blocks are placed so close to each other that there is but a small space between adjacent blocks and are also made of such a width that they will nicely fill the space between the rails and the space outside the rails R. We prefer that the length of these blocks be

such that those of one row will nearly, but not quite, overlap those of the next adjacent row.

The triangular shape of the blocks produces a surface on the guard which has no flat spots upon which an animal may with either safety or comfort place its foot. The result is that they will back out if they attempt a crossing. The triangular shape of the blocks is a material improvement over a block in which the top surface is flat transversely, as it gives a greater actual incline for the same inclination of the blocks. As a result the chance of an animal safely crossing the guard is very much lessened.

We have shown the upper ends of the blocks as cut squarely and the lower ends as cut obliquely. The square cut for the upper ends gives an inclined surface which is desirable; but the oblique cut at the lower end is not essential. We have used it out of arbitrary preference.

The lag-screws A, with which the blocks are held in place, hold better than spikes, and therefore contribute to the sure maintenance of the guard in proper condition. The side screws are inclined toward a perpendicular from the surface of the block and away from a perpendicular from the surface of the tie, whereby they hold still better.

The guard is a very efficient one, cheap in manufacture, can be put together with ordinary labor, shipped in knockdown shape, and can be readily repaired if this should become necessary.

The ties T, to which the blocks B are secured, are preferably made of greater depth than the usual ties, two of the latter, T', being shown, one at each side of the guard. This provides sufficient depth to form what is, in effect, a slight pit between each pair of ties in the guard, and thus increases the efficiency of the guard at the slightest additional expense. This also obviates the necessity for using longitudinal stringers for this purpose. We have also shown the surface of the ballast between the ties of the guard to illustrate this effect.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A cattle-guard comprising a series of ties having beveled upper surfaces and a series of blocks secured upon said beveled surfaces with their greater length extending transversely of the ties; and having upper sur-



faces which are inclined transversely of their greater length.

2. A cattle-guard comprising a series of ties having beveled upper surfaces and a series of blocks secured thereto and having a triangular cross-section.

3. A cattle-guard comprising a series of ties or like bearing members extending transversely of the track, and a series of blocks of triangular cross-section secured to said ties with their length substantially parallel with the rails and inclined lengthwise the track, said blocks being spaced so as to substantially cover the space to be protected.

4. A cattle-guard comprising a series of ties having beveled upper surfaces and a series of blocks of a triangular cross-section secured thereto by lag-screws, a portion of said screws being inclined with reference to the central plane of the blocks.

In testimony whereof we have hereunto affixed our signatures, this 14th day of October, 1905, in presence of two witnesses.

IRVIN MYERS.

CHARLES SIMENSEN.

Witnesses:

CHARLES GRANT,

B. P. SMITH.