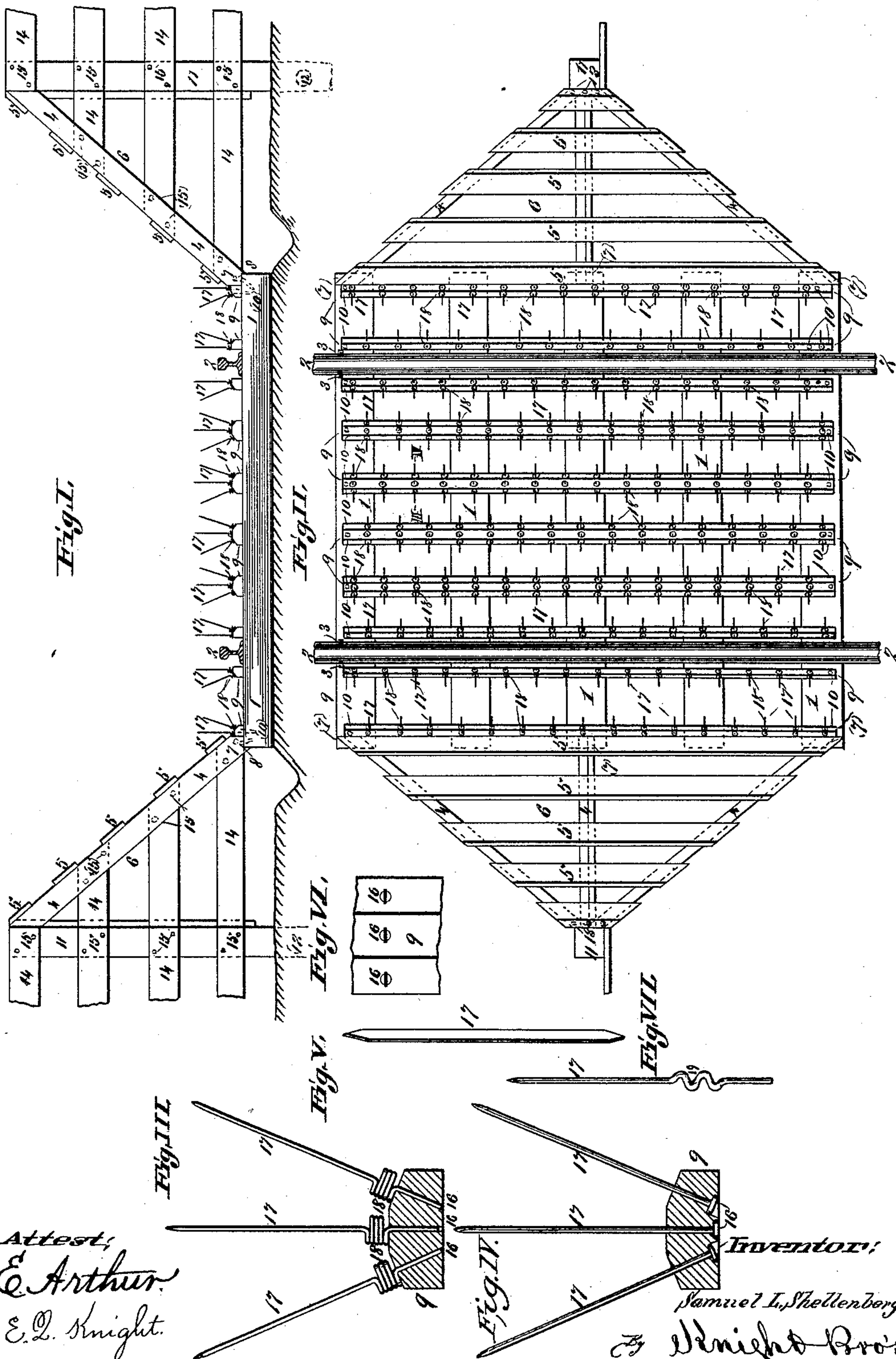


(No Model.)

S. L. SHELLENBERGER.  
STOCK GUARD FOR RAILWAYS.

No. 446,793.

Patented Feb. 17, 1891.



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# UNITED STATES PATENT OFFICE.

SAMUEL L. SHELLENBERGER, OF SOUTH MCALESTER, INDIAN TERRITORY.

## STOCK-GUARD FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 446,793, dated February 17, 1891.

Application filed May 31, 1890. Serial No. 353,843. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL L. SHELLENBERGER, of South McAlester, Indian Territory, have invented a certain new and useful Improvement in Surface Stock-Guards for Railways, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 The invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a side elevation of the guard. Fig. II is a plan top view of the same. Fig. 15 III is an enlarged vertical section taken on line III IV, Fig. II, and shows my preferred form of the reactionary elastic steel guard-spikes secured to a section of one of the guard-rails. Fig. IV is a like view and shows 20 a modification with round steel spikes driven through perforations in the guard-rail and projecting divergently therefrom, as do the spikes shown in Fig. III. Fig. V is an elevation of another modification of said guard-spikes made out of a section of band-steel, 25 preferably about three-sixteenths of an inch wide and one-sixteenth thick and pointed at each end. Fig. VI is a horizontal detail of one of the guard-rails and shows one of the 30 perforate seats therein for holding the guard-spike shown in Fig. V, the width of the guard-spike being of larger diameter than that of the hole bored for its seat, its edges cutting slightly into the sides thereof; and 35 Fig. VII is an elevation of another modification of the steel guard-spike, the surmounting body of which spike immediately above the guard-rail is of an undulating form to aid its reactionary spring movement.

40 Referring to the drawings, 1 represents the rail-ties beneath the track, and 2 the track-rails that are secured to said ties by the spikes 3.

4 represents the outwardly-inclined posts, 45 which, with the rails 5, that they carry, constitute a fence 6, that laterally incloses the ground-surface of the stock-guard. The feet 7 of the posts may be securely toe-nailed to the ties by spikes 8.

50 9 represents the guard-rails, which are secured on top of the rail-ties 1 at suitable parallel distances apart by the spikes 10.

11 represents the vertical standard fence-posts, the feet 12 of which may be secured in the ground. The tops of said posts support 55 the apexes of the inclined posts 4, which, besides outwardly inclining, also converge toward each other at top, as shown in the plan view in Fig. II. The tops of said inclined posts are secured at their meeting ends to the 60 tops of the standard-posts 11 by spikes 13.

14 represents the tie-boards that are secured by nails 15 to the center inclined posts, the standard-posts, and other posts that may be 65 in transverse line to connect with the longitudinal running fence that incloses the railway ground.

The guard-rails 9 are preferably three-sided at top, as shown in Figs. I, II, III, V, and VII, and are perforated by three holes 16, in which 70 are secured the fast ends of the elastic steel guard-spikes 17. The guard-spikes are preferably made in the form shown in Fig. III, being pointed at their upper ends, are manufactured from steel wire, and have a coil or 75 spiral spring 18 formed integrally thereon at such a point that when they are secured in operative position the lower coil rests on the face-surface of the guard-rail. Now it will be 80 seen (see Figs. I, II, and III) that the central guard-spikes rise in vertical positions from the guard-rails in which they are seated, while the side spikes diverge from said central spikes on either hand, except on the sides adjacent to the track-rails 2 and to the toes of 85 the inclined posts 4, in which case, facing said track-rails and toes of said posts, the guard-rails that hold the spikes there rise vertically from the ties to which they are secured, and are not armed by any divergent spikes on said 90 adjacent sides. Thus are formed a chevaux-de-frise that are plainly seen by stock even at a distance long before their near approach thereto, so that even in the case of a stampede stock would be likely to divert their course 95 therefrom rather than to plunge over so formidable and evident an obstruction. When, on the other hand, a train passes over the steel guard-spikes, they (the spikes) pliantly bend before the pressure of the platform or other 100 parts that come in contact therewith, the coil-spring aiding said movement, and also after the passage of the train aiding their return to their normal position, in which they stand



erect and approximately so as a chevaux-de-frise.

In Fig. IV is shown a modification of the guard-spike, in which steel-wire sixty-penny spikes are used or other sizes, as may under certain contingencies be deemed best. When said steel spikes are used, they are driven through the perforations 16 in the guard-rails, which for the purpose are placed in an inverted position and afterward turned over and spiked to their seats, the guard-spikes being then in their erect position. This modified form of guard-spike is capable of an accommodating spring adjustment under the pressure of the passing train and of a reactionary spring adjustment after the train is past.

In Fig. V is shown another modification of the spring guard-spike made from strap or band steel, and which may be about one-sixteenth of an inch thick and three-sixteenths wide; (but said proportionate size may be varied to suit contingencies.) When said guard-spike is made in this form, the lower as well as the upper ends are preferably pointed, and the lower ends are forced downward in their perforate seats 16 in the guard-rails, the flat sides having a face presentation along the road-bed, for the twofold reason that thus placed they are the more apparent to the stock that they warn from intrusion, and they spring more readily under the pressure of the passing train. The diameter of guard-spikes of this form being slightly in excess of that of their perforate seats in the guard-rails, the edges of said spikes force themselves slightly into the body of the timber of the rail, as shown in Fig. VI, and the flat guard-spike is thus held from turning.

In Fig. VII is shown another modification of the guard-spike, in which that portion of the spike that is immediately above the face-surface of the guard-rail when seated therein has given to it an undulating form 19, which

aids its spring action under the pressure of the passing train and its after reaction. 45

I claim as my invention—

1. In a cattle-guard for railways, &c., the combination of the guard-rails 9, and the guard-spikes whose lower extremities are seated in said rails, and which spikes are provided with an integral coil above said seat, substantially as and for the purpose set forth. 50

2. In a cattle-guard for railways, &c., the combination of the guard-rails 9 and the divergent spring-spikes 17, secured in and surrounding said guard-rails, arranged to stand guard over the rail-track, substantially as and for the purpose set forth. 55

3. In a cattle-guard for railways, &c., the combination of the fence that incloses and guards the track laterally, the ties that carry the track-rails, the guard-rails 9, secured to said ties, some of said rails being provided with bevel-faces on each side and such of them as are contiguous to said track-rails, and said lateral fence having vertical sides next said parts and bevel outer sides, and the divergent spring-spikes secured in said rails and that guard the entrance to the track between said lateral fence, substantially as and for the purpose set forth. 60 65 70

4. In a cattle-guard for railways, &c., the combination of the fence that guards the approach to the track laterally, the guard-rails that run parallel with the track-rails, and the pointed spring guard-spikes secured in said guard-rails, the said spring guard-spikes having respectively an upright and divergent presentation to guard the surface of the track from the intrusion of stock, substantially as and for the purpose set forth. 75 80

SAMUEL L. SHELLENBERGER.

In presence of—

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