No. 617,347. Patented Jan. 10, 1899.

W. NEWELL & F. M. SULLIVAN.

RAILWAY CATTLE GUARD.

(Application filed July 29, 1898.)

(No Model.) 2 Sheets—Sheet 1.

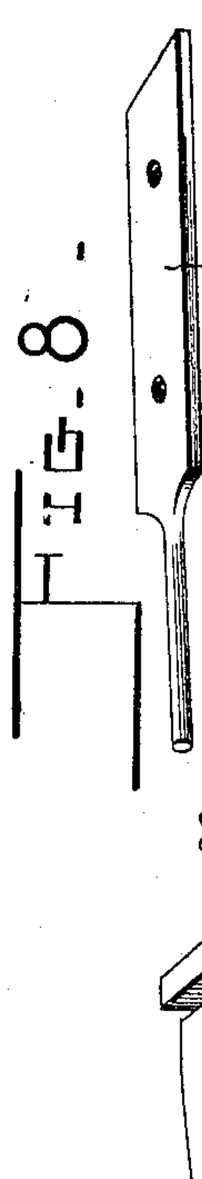

FIG. 8.

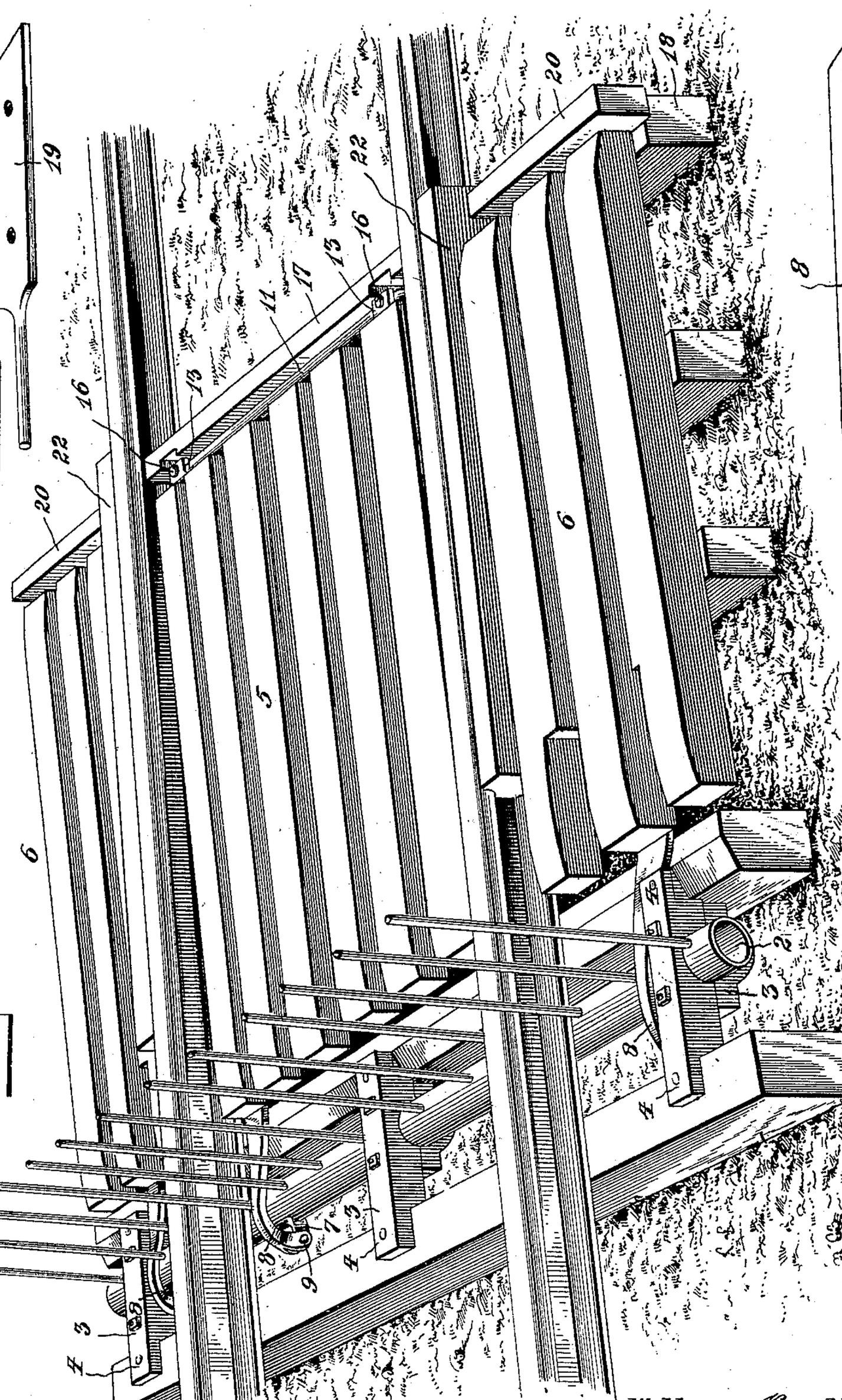

FIG. 1.

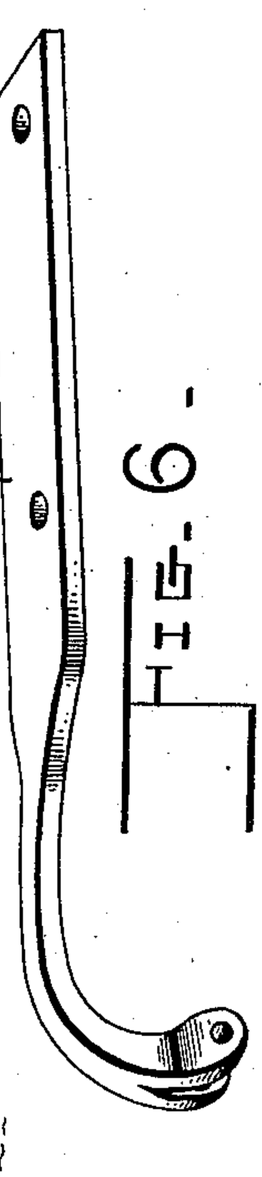

FIG. 6.

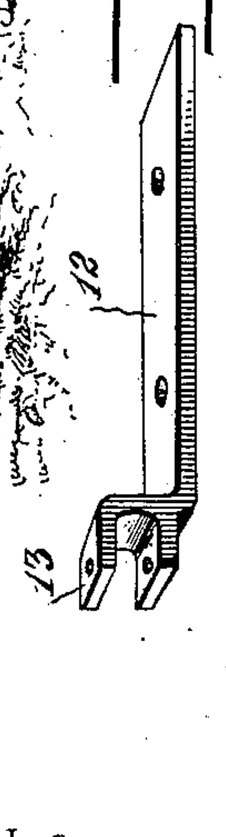

FIG. 7.

Witnesses
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By Their Attorneys,
William Newell, Inventors
Franklin M. Sullivan.
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No. 617,347. Patented Jan. 10, 1899.

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RAILWAY CATTLE GUARD.

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(No Model.) 2 Sheets—Sheet 2.

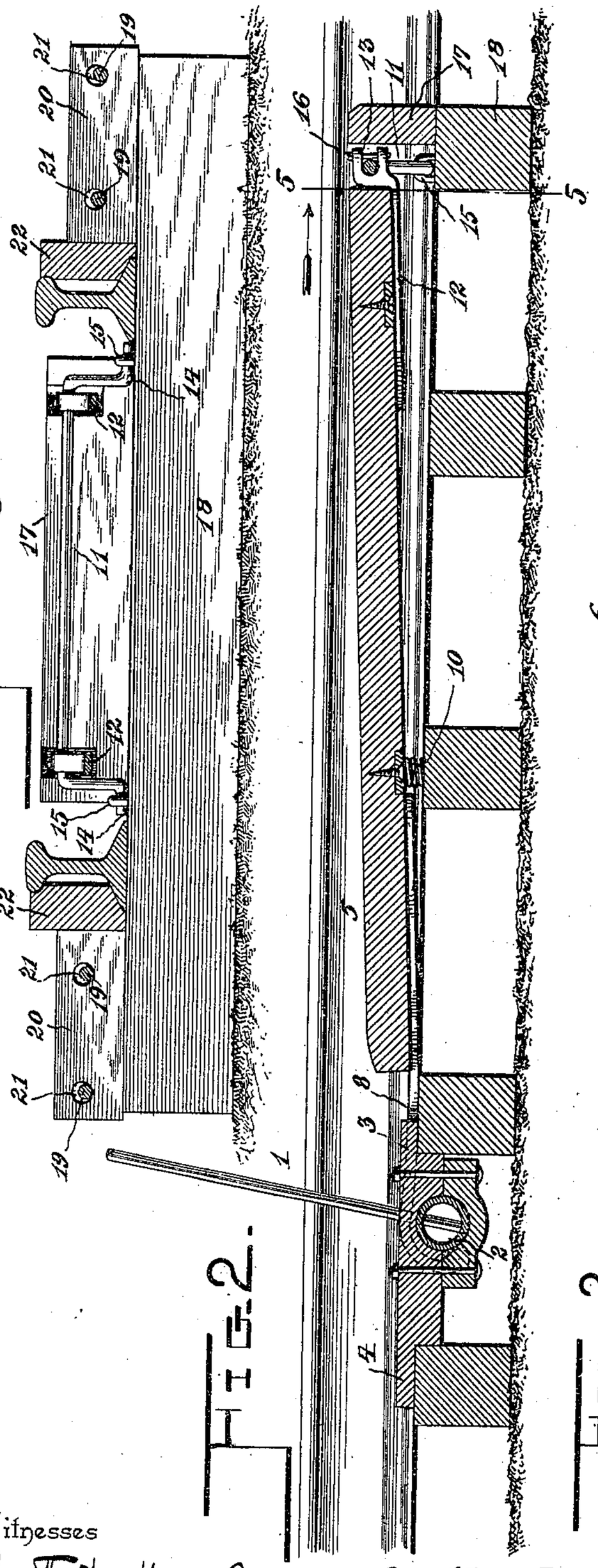

FIG. 2.

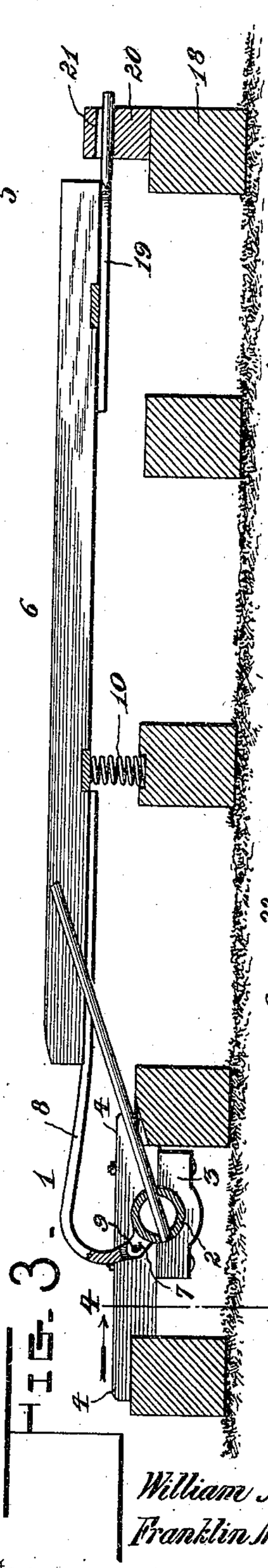

FIG. 3.

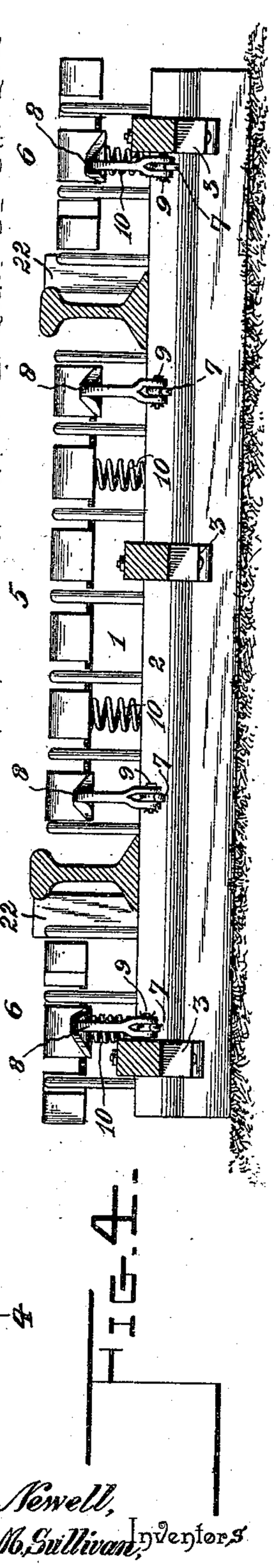

FIG. 4.

FIG. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM NEWELL AND FRANKLIN M. SULLIVAN, OF AMBOY, INDIANA;
SAID SULLIVAN ASSIGNOR TO SAID NEWELL.

RAILWAY CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 617,347, dated January 10, 1899.

Application filed July 29, 1898. Serial No. 687,228. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM NEWELL and FRANKLIN M. SULLIVAN, citizens of the United States, residing at Amboy, in the county of Miami and State of Indiana, have invented a new and useful Railway Cattle-Guard, of which the following is a specification.

The invention relates to improvements in railway cattle-guards.

The object of the present invention is to improve the construction of railway cattle-guards and to provide a simple, inexpensive, and efficient one which will be positive, reliable, and automatic in operation and adapted to prevent cattle from passing by way of a railroad-track from one inclosure to another.

A further object of the invention is to provide a cattle-guard which will be out of the way of passing trains and which will be operated by the weight of stock treading upon it.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a cattle-guard constructed in accordance with this invention and shown applied to a railroad-track, the gate being raised. Fig. 2 is a longitudinal sectional view of the same, the section being taken through the central section of the depressible platform. Fig. 3 is a similar view, the section being taken through one of the end sections of the depressible platform. Fig. 4 is a transverse sectional view on line 4 4 of Fig. 3. Fig. 5 is a similar view on line 5 5 of Fig. 2. Fig. 6 is a detail perspective view of one of the curved arms of the depressible platform. Fig. 7 is a detail perspective view of one of the hinge-bars of the central section. Fig. 8 is a similar view of one of the sliding bars of the end or side sections of the depressible platform.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a gate consisting of a series of pickets or rods mounted upon a transverse shaft 2, journaled in suitable bearings 3 at opposite sides of a railroad-track and extending across the same. The bearings 3, which are mounted upon the cross-ties, extend across the space between the same and are provided with arms or portions 4, arranged on the upper faces of the cross-ties and secured to the same, and a similar bearing 3 is arranged at the center of the shaft. The upper ends of the pickets normally lie below the plane of the upper faces of the rails in order to be out of the way of passing trains, and the gate is automatically swung upward to the position illustrated in Fig. 1 of the accompanying drawings to prevent the passage of animals, so that the same cannot leave one field or inclosure and enter another by way of a railroad-track.

The gate is automatically operated by the pressure of stock treading upon a depressible platform, which is composed of a central section 5 and the end or side section 6, the central section extending across the space between the rails and the side sections being located at the outer sides of the same. Each section preferably consists of a series of longitudinal bars connected at their lower faces by transverse bars, the latter being preferably constructed of metal and arranged in recesses of the longitudinal bars.

The transverse shaft of the gate is provided at its outer side at intervals with perforated ears 7 and is connected with the adjacent ends of the sections 5 and 6 by curved arms 8, extending over the transverse shaft and having shanks secured to the lower faces of the sections. Each side section is provided with one of the curved arms, and the central section is preferably provided with two, arranged at opposite sides of the same. The outer ends of the curved arms are bifurcated to receive the perforated ears, and the pivots 9 may consist of bolts or any other suitable fastening devices.

When the sections of the platform are depressed, they move both downward and longitudinally of the track in the direction of the gate, and after they are relieved of pressure they are returned or elevated to their normal position by coiled springs 10, interposed between the sections and the adjacent cross-

ties. The central section is hinged at its outer end to the adjacent cross-tie by means of a transverse loop 11 and hinge-bars 12, secured to the lower face of the central section 5 and having their outer ends bifurcated to form eyes 13. The loop 11, which is provided at the terminals of its sides with journals or pintles 14, is arranged in eyes 15, formed by staples or other suitable devices. The loop is retained in the eye of the bars 12 by means of bolts 16 or other suitable fastening devices spanning the bifurcations. A transverse bar 17 is mounted on the cross-tie 18 to form a guard for the hinge connection between the central section and the cross-tie 18 to prevent cattle from striking the loop or pintle 11. Each side section is provided with rods or bars 19, arranged in pairs and supported by guides 20, consisting of blocks or pieces mounted upon the ends of the cross-tie 18 and provided with openings 21, receiving the rods or bars 19. The rods or bars 19, which are preferably rounded where they pass through the openings 21, are adapted to slide longitudinally, and the openings are of sufficient diameter to permit the necessary upward and downward movement of the rods incident to the depression and elevation of the section. The spaces between the side sections 6 and the rails are filled and closed by longitudinal bars 22 to prevent the feet of cattle from becoming caught in the guard, and the central section has its side edges arranged sufficiently close to the inner faces of the rails to prevent the hoofs of animals from becoming caught.

The invention has the following advantages: The cattle-guard, which is positive, reliable, and automatic in its operation, possesses great strength and durability and is simple and inexpensive in construction. The depressible platform moves longitudinally as well as downward, and thereby tends, by affording such an unstable support for an animal, to deter it from advancing. The loop at the outer end of the central section of the platform forms an upwardly-offset pintle for the section, and the sliding rods or bars at the outer ends of the side sections permit the necessary vertical longitudinal movement of those sections.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What we claim is—

1. In a railway cattle-guard, the combination of a gate mounted transversely of a track and arranged to swing upward and downward, a depressible platform composed of central and side sections and capable of a limited longitudinal movement, arms extending from and rigid with the inner ends of the sections and pivotally connected with the gate, and connections between the outer end of the platform and the adjacent cross-tie, whereby the platform is adapted to swing upward and downward and move longitudinally, substantially as described.

2. In a railway cattle-guard, the combination of a gate hinged at its bottom and extending transversely of a track, a depressible platform provided at its outer end with eyes, an arm extending from and rigid with the inner end of the platform and pivotally connected with the gate, and a loop provided at its ends with journals and arranged in the eyes at the outer end of the platform, whereby the latter is permitted to move vertically and longitudinally, substantially as described.

3. In a railway cattle-guard, the combination of a gate hinged at the bottom and extending across a track, a depressible platform connected at one end with the gate, a guide arranged at the other end of the platform and provided with openings, and longitudinal bars or rods mounted on the outer end of the platform and arranged in the openings of the guide and adapted to slide thereon, substantially as described.

4. In a railway cattle-guard, the combination of a gate consisting of pickets, and a shaft provided with ears, bearings supporting the shaft, a depressible platform composed of central and side sections, springs for supporting the platform, curved arms mounted on the inner end of the platform and connected with the ears of the shaft, eyes arranged at the outer end of the central section of the platform, a loop disposed transversely of the track and arranged in said eyes and forming a pintle for the central section, the transverse bar arranged at the outer side of the loop, the guides located adjacent to the outer ends of the side sections and provided with openings, the sliding bars mounted on the side sections and arranged in the openings of the guides, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

WILLIAM NEWELL.
FRANKLIN M. SULLIVAN.

Witnesses:
EMSLEY F. COX,
JESSE M. HINSHAW.