No. 686,912. Patented Nov. 19, 1901.

A. I. SHAW.

CATTLE GUARD.

(Application filed May 2, 1901.)

(No Model.)

Fig. 1.

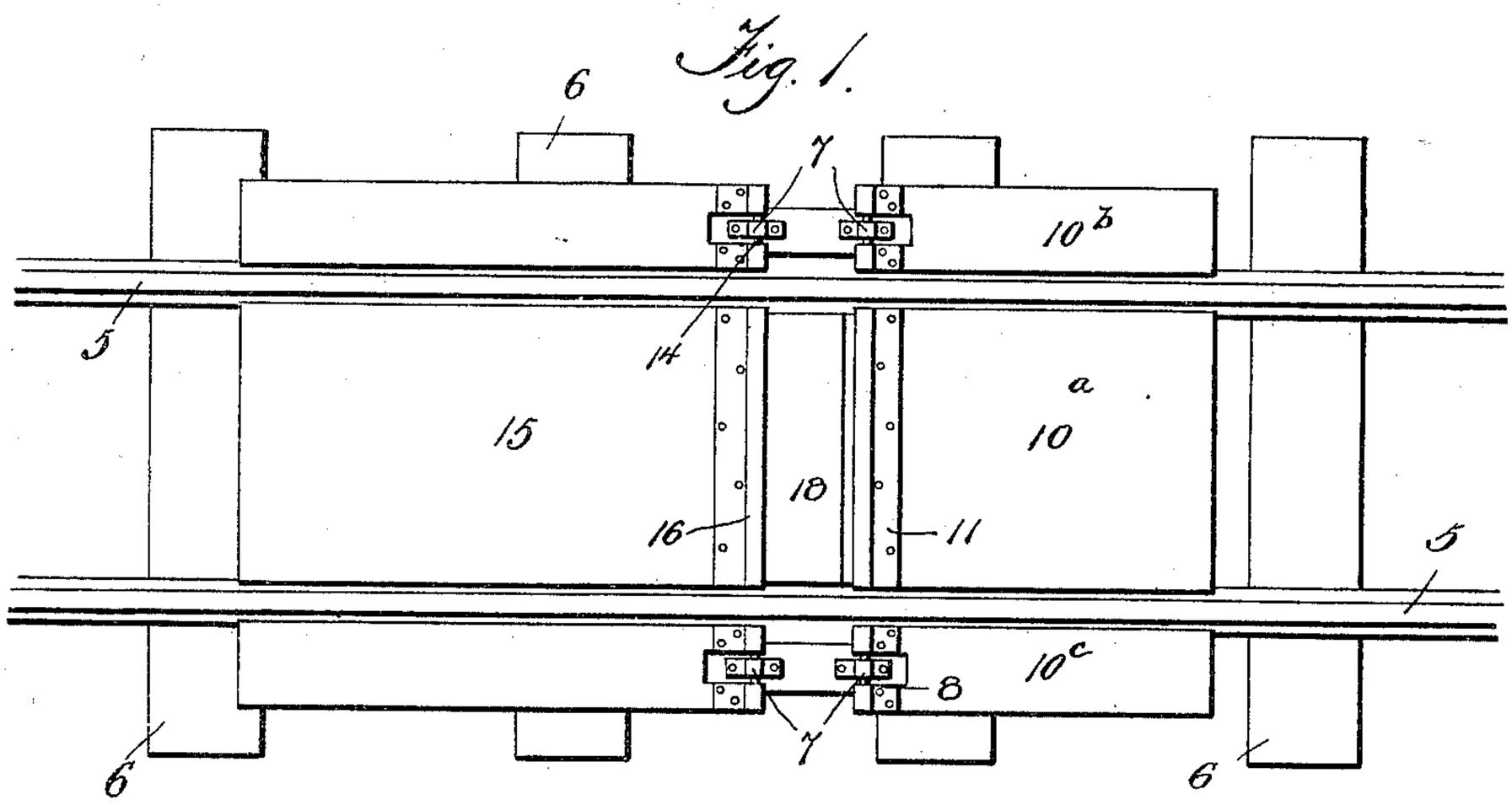


Fig. 3.

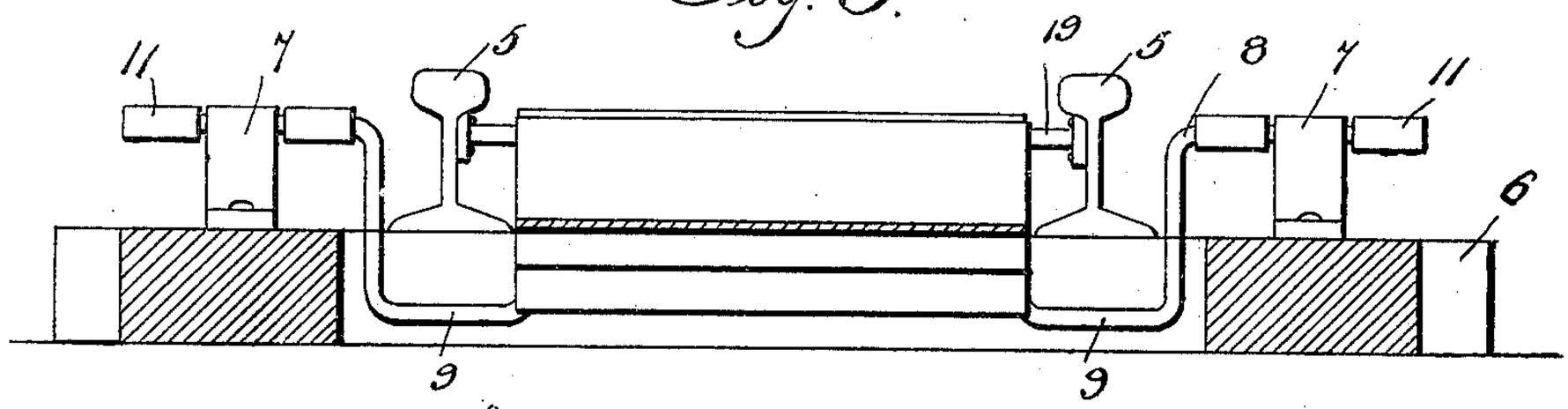


Fig. 4.

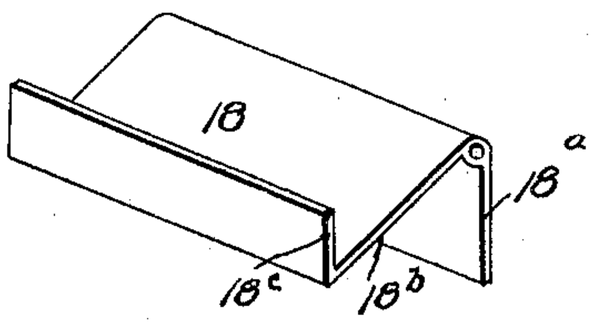
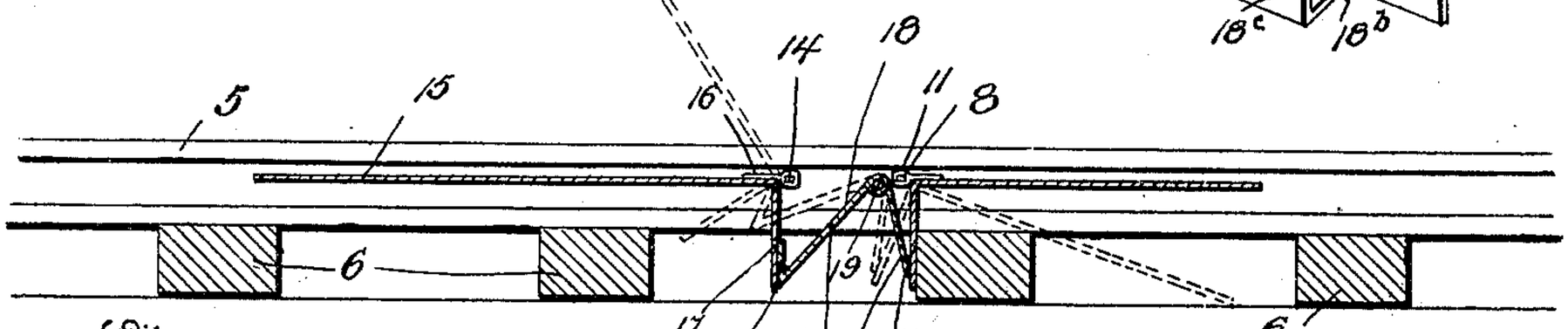


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALFRED ISAAC SHAW, OF RAT PORTAGE, CANADA.

CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 686,912, dated November 19, 1901.

Application filed May 2, 1901. Serial No. 58,415. (No model.)

To all whom it may concern:

Be it known that I, ALFRED ISAAC SHAW, a subject of His Majesty the King of Great Britain, residing at Rat Portage, district of Rainy River, Province of Ontario, Canada, have invented certain new and useful Improvements in Cattle-Guards; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in cattle-guards; and the object in view is to provide a simple construction adapted to be easily and quickly installed on a railway-track and arranged when a horse steps upon the track to automatically throw a barrier in the path of the animal.

With this end in view the invention consists in the novel construction and arrangement of parts, which will be hereinafter fully described and claimed.

In the drawings hereto annexed forming a part of this specification, Figure 1 is a plan view of my improved cattle-guard applied to a track. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is a cross-section. Fig. 4 is a detail perspective view of the barrier-actuator.

The same numerals of reference denote like parts in each of the several figures of the drawings.

5 designates the rails of a track, and 6 the ties thereof. These parts are of the usual construction, and the rails are intended to remain solid or unbroken, because the improved cattle-guard has its parts adapted for installation in a manner which will require no drilling or mutilation of the rails.

7 designates suitable shaft-bearings, which are secured to suitable supports between the ties 6, and in these bearings is journaled a pivotal shaft 8, the latter having cranked portions 9, that are arranged to fit beneath the rails in such a way as to afford ample clearance between the cranks and the rails, whereby the shaft is free to turn in its bearings for the required distance and without hindrance from the rails. A tread-platform of sectional construction is made fast with this pivotal shaft, said platform consisting of the sections 10^a, 10^b, and 10^c, each of which may consist of a metallic plate fastened to a suitable casting 11, that is slipped or fitted upon an angular portion of the pivotal shaft. The members of the platform are flush with the rails or slightly below the heads thereof, and the members 10^b and 10^c are arranged outside of the rails, while the member 10^a is between the rails. The three members constituting the platform are made fast with the pivotal shaft, so as to turn the latter when an animal steps upon the platform or either member thereof. Each member of the platform has a depending lip or arm 13, the same arranged to extend at right angles from the plane of the platform and to lie close to the tie upon which the pivotal shaft is mounted.

14 designates a barrier-shaft, the same being similar in construction to the pivotal shaft for the platform—that is to say, this barrier-shaft is provided with cranked portions arranged to fit beneath the rails and to have a limited play relative thereto. The barrier-shaft is journaled in proper bearings, which will provide for its maintenance in operative relation to the track, and, furthermore, said barrier-shaft has square portions adapted to receive the castings of the gate.

The barrier 15 is represented in the form of a gate, having its parts or members secured in castings 16, that are fixed on the square portions of the shaft. This barrier-shaft serves to pivotally support the gate in operative relation to the track so that it will lie in a horizontal position below the heads of the rails. The barrier, which is carried by the shaft 14, is provided with a depending lip or arm 17, which is arranged a short distance from the lip or arm 13 of the members of the platform.

18 is the barrier-actuator, which is disposed in a horizontal position between the platform and the barrier and which has operative relation thereto. This actuator is hung for movement on a horizontal axis, which is afforded by a shaft or rod 19, disposed between the pivotal platform-shaft and the barrier-shaft and supported by any suitable bearings. This actuator has a depending member 18^a, that is operatively disposed to the lip or arm 13 on the platform so as to lie normally in contact therewith. Furthermore, the actuator has an element 18^b, that is inclined to-

ward the lip or arm 17 of the barrier, said element 18^b terminating in an extended flange 18^c, which is arranged to fit against the barrier-lip 17. The actuator may be bent from sheet metal or cast in a single piece of metal.

By reference to the drawings it will be seen that the platform-shaft and the barrier-shaft are very close together and that the platform extends from its shaft in one direction, while the barrier extends in the opposite direction from its pivotal shaft. When an animal treads upon either member of the platform, the latter is depressed to the inclined position shown by dotted lines in Fig. 2, thereby turning the shaft in its bearings and moving the lip or arm, so as to turn or rock the actuator on its axis. The member 18^b of this actuator presses against the lip or arm 17 of the barrier, thereby turning the latter on its pivotal shaft and making it assume the inclined position indicated by dotted lines. From this description it will be seen that the barrier is automatically thrown to a raised position in the path of the animal when the latter steps on the track; but when the animal walks off the platform the barrier is lowered by gravity and its lip or arm strikes against the actuator, so that the member 18^a of the latter will press against the lip or arm of the platform and raise the same to a horizontal position, whereby the barrier serves as a counterpoise for the platform, owing to the interposition of the actuator between the same, and said platform is kept in a horizontal operative position with relation to the track.

Changes within the scope of the appended claims may be made in the form and proportion of some of the parts while their essential features are retained and the spirit of the invention is embodied. Hence I do not desire to be limited to the precise form of all the parts as shown, reserving the right to vary therefrom.

Having thus described my invention, what I claim as new is—

1. A cattle-guard comprising a pivoted platform having a projection, a barrier pivoted adjacent to the platform and likewise having a projection, and an actuator pivoted independently of, and disposed normally in engagement with, the projections of the platform and the barrier and adapted to throw the weight of the barrier against the platform projection, whereby said platform is maintained normally in a raised operative position, as set forth.

2. A cattle-guard comprising a pivoted platform, a pivoted barrier, lips or projections extending from said platform and the barrier, and an actuator hung between the pivots of the platform and the barrier and having its members disposed at an angle one to the other and normally in engagement with the lips or projections of the barrier and the platform, substantially as described, for the purposes set forth.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

ALFRED ISAAC SHAW.

Witnesses:
W. J. ROWLEY,
ALLAN MCLENNAN.