Aug. 7, 1928. 1,679,945

F. RIEDER

MOVABLE PLATFORM FOR UNLOADING STOCK

Filed Sept. 8, 1925 2 Sheets-Sheet 1

Fig. 1.

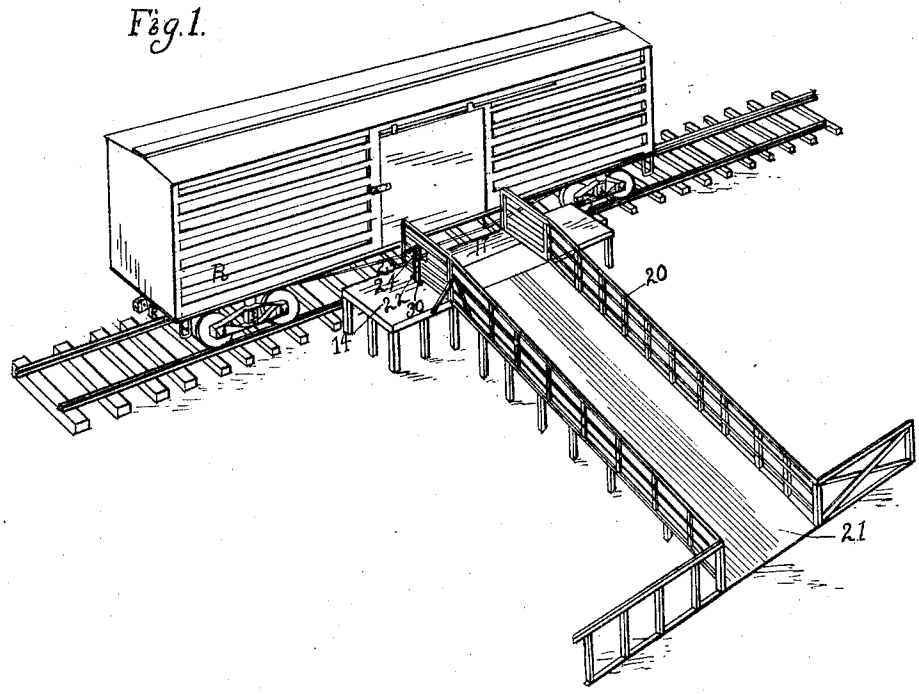


Fig. 2.

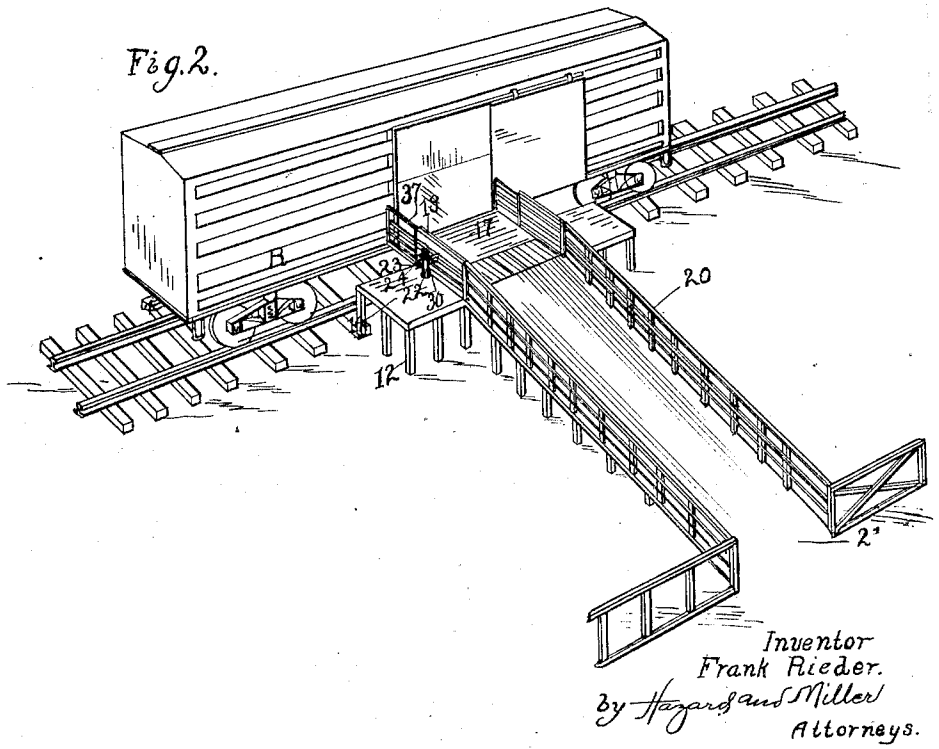


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Fig. 7.

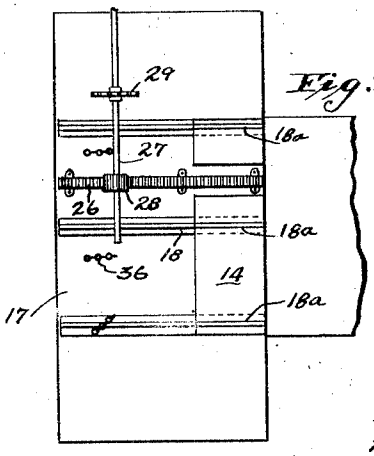



Fig. 3.

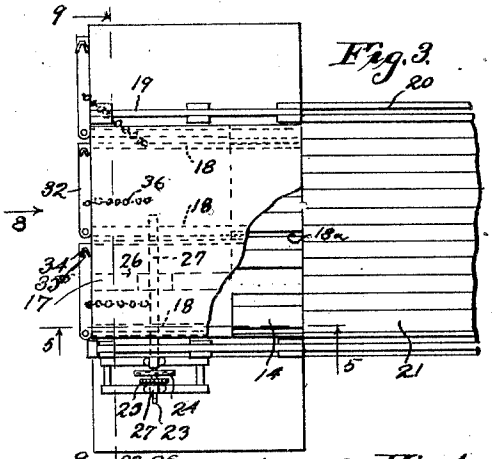



Fig. 8.

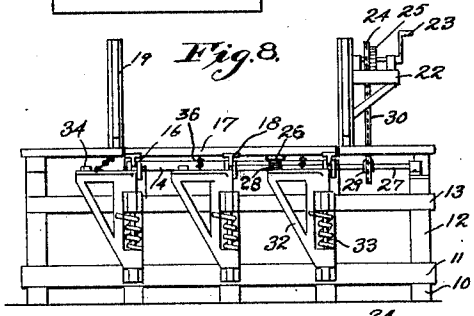



Fig. 4.

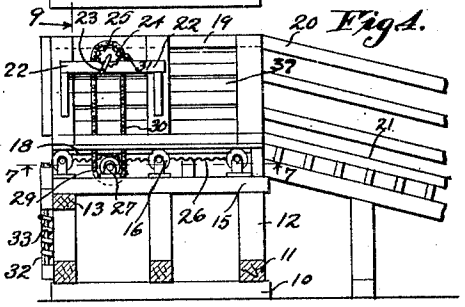



Fig. 9.

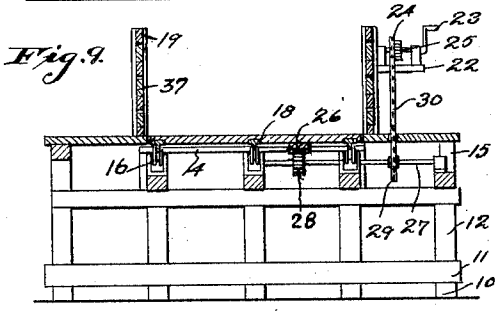



Fig. 5.

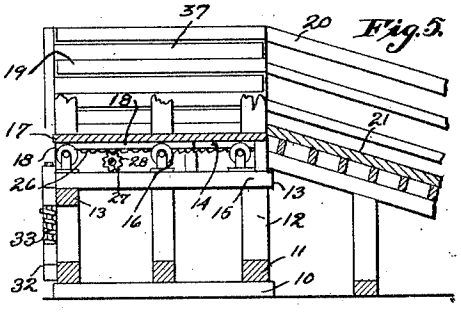



Fig. 10.

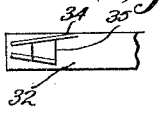



Fig. 11.

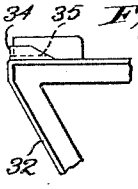
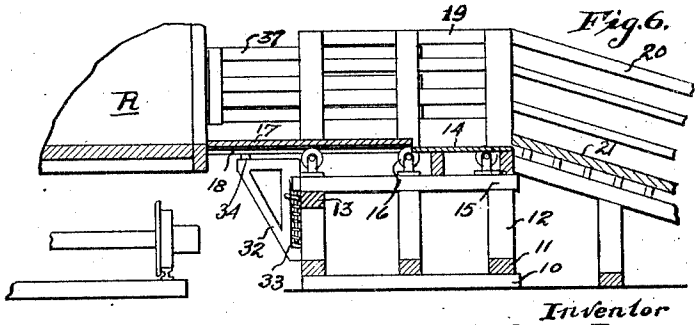



Fig. 6.

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# UNITED STATES PATENT OFFICE.

FRANK RIEDER, OF HUNTINGTON PARK, CALIFORNIA.

## MOVABLE PLATFORM FOR UNLOADING STOCK.

Application filed September 8, 1925. Serial No. 55,055.

This invention relates to improvements in platforms for loading and unloading railroad cars, and particularly to those platforms designed for loading and unloading stock cars.

Restrictions are placed upon the distances at which a stationary platform may be built from a railroad track. Usually this distance amounts to about three feet and the problem presented is to provide a construction which will bridge the distance between a stationary platform and the floor of a railroad car so as to permit the loading and unloading of live stock.

An object of this invention is to provide an improved construction consisting essentially of a stationary platform and a movable platform which may be extended from the stationary platform to the floor of the railroad car and to provide slidable side walls which when extended will form side walls for the movable platform.

Another object of the invention is to provide a platform for loading and unloading railroad cars which may be retracted so that all parts will be the required distance from the railroad track when not in use, and to provide a construction wherein braces and platform may be moved into extended position by rotating a single crank.

With the foregoing and other objects in view which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrated embodiment of the invention, wherein;

Figure 1 is a perspective view of the platform of the improved construction shown in retracted position adjacent a railroad car.

Fig. 2 is a view similar to Fig. 1, the platform being shown in extended position.

Fig. 3 is a top plan view of a portion of the platform when in retracted or collapsed position.

Fig. 4 is an end elevation of the platform.

Fig. 5 is a partial section taken substantially on the line 5—5 of Fig. 3.

Fig. 6 is a view similar to Fig. 5, the movable platform beng shown in extended or projected position.

Fig. 7 is a view taken substantially upon the line 7—7 of Fig. 4 in the direction indicated.

Fig. 8 is a view in elevation taken substantially in the direction of the arrow 8 upon Fig. 3.

Fig. 9 is a vertical section taken substantially upon the line 9—9 of Fig. 3.

Fig. 10 is a top plan view of the end of one of the braces.

Fig. 11 is a side elevation of the end of one of the braces.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, the improved platform consists of a stationary platform from the rear of which extends an inclined runway. The stationary platform is constructed so as to be of approximately the same height as the height of the floor of the railroad car above the ground and the inclined runway leads from the top of the platform to the ground.

The stationary platform and runway may be constructed in any desired manner and upon the drawing the stationary platform is shown as consisting of mudsills 10 on which longitudinal joists 11 rest. On the longitudinal joists 11 there are supporting posts 12, the foremost of which support a longitudinal joist 13. Transverse joists 15 are supported on the longitudinal joist 13 and on the rear supporting posts 12, and extend in a direction perpendicular to the rails of the railroad track. On these joists a stationary platform 14 is supported, which has its center portion provided with slots 18ª beneath which, rollers 16 are mounted on the joists 15.

A movable platform 17 is provided which is arranged above the center portion of the stationary platform and has T-irons 18 secured upon its under side. The webs of the T-irons 18 extend through the slots 18ª in the stationary platform and rest upon the rollers 16 so that the movable platform can be readily moved relatively to the stationary platform. On the stationary platform, at the sides of the movable platform there are constructed side walls 19, the continuations of which are indicated at 20 and extend downwardly along the sides of the inclined runway 21. On the side of one of the side walls 19 there is mounted a suitable support 22 on which a crank 23 is rotatable. This crank carries a sprocket wheel 24 and a ratchet wheel 25. On the underside of the movable platform 17 there is secured a rack 26; and rotatably mounted upon the transverse joists

15, is a shaft 27. The shaft 27 carries a gear 28 and a sprocket 29, the former meshing with the rack 26. An endless chain 30 passes over the sprockets 24 and 29 so that by rotating the crank 23 the shaft 27 will rotate and move the movable platform relatively to the stationary platform upon the rollers 16. A pawl 31 is engageable upon the ratchet wheel 25 and serves to prevent rotation of the crank in at least one direction, so that the movable platform can be locked in extended position.

As clearly shown in Fig. 6, the movable platform is adapted to be extended beyond the edge of the stationary platform to bridge the distance between the stationary platform and the railroad car R. On the forward supporting posts 12, triangular braces 32 are pivotally mounted so as to be capable of swinging upon vertical axes. Springs 33 are associated with the braces and urge them into outermost position. The major portion of the upper portion of the braces 32 is arranged so that it will be below the webs of the T-irons 18. On the outer end of each of the braces, however, there are arranged convergent guide ribs 34 and between these guide ribs the top surface of the braces is arranged as indicated at 35 so as to be engageable by the bottoms of the webs of the T-irons 18.

Flexible elements indicated at 36, which may be cables or section of chain, are fastened to the underside of the movable platform 17 and to the braces 32 and when the movable platform 17 is moved into its retracted position these flexible elements swing the braces 32 into their retracted positions against the forward side of the stationary platform. Movable side walls 37 have side boards which are slidable between the side boards of the stationary side walls 19 so that these movable side walls may be caused to slide toward the railroad car R, as clearly shown in Fig. 6.

The operation of the device is as follows:

When the railroad car R has been positioned so that its door is opposite the platform, the crank 23 is rotated, causing the shaft 27 to rotate and slide the movable platform 17 forwardly. As the movable platform moves, the braces 32 are allowed to swing forwardly in advance of it under the action of the springs 33; and in the extreme position the movable platform has its rails, which are the webs of the T-irons 18, resting upon the raised portions 35 on the braces between the convergent guides 34. In such a position the movable platform bridges the space between the stationary platform and the floor of the railroad car. The pawl 31 can then be caused to engage the ratchet wheel 25 to prevent backward movement of the movable platform 17. The man who has operated the crank can then swing around the stationary side wall 19 on which the crank is mounted and while on the movable platform 17 can slide the movable side wall 37 on that side so that it engages the side of the railroad car. He can then unlock the door of the car and slide it into open position and walk to the other end of the stationary platform and swing or slide the movable side wall remaining, into that position wherein it forms a side wall for the movable platform in extended or projected position.

From the above described construction it will be readily appreciated that it is very easy to form a continuous passage or viaduct from the floor of a railroad car to the ground, permitting stock to readily pass from the railroad car to a stock yard or from the stock yard to the car. Furthermore, by reversely rotating the crank 23 after the movable side walls have been retracted the complete structure will be withdrawn to assume a position which is the required distance from the railroad tracks.

Heretofore it has been customary practice to first open the railroad car door and lift a runway from the stationary platform to the floor of the railroad car after the door has been opened. This has been found extremely disadvantageous for the reason that it frequently occurs that stock within a railroad car will atttempt to run out or may be pushed out at soon as the door is opened and before the runway can be lifted across, consequently the stock often fall and become injured, so that it is frequently necessary to kill certain of the animals. By the improved construction however the runway or movable platform is caused to bridge the space between the stationary platform and the railroad car before the door is opened so that upon opening the door, if any stock should attempt to run out or should be pushed out there is no danger of their falling and becoming hurt. The improved movable platform greatly facilitates the opening of the railroad car door and effectively prevents any loss or injury to the animals.

Various changes may be made in the details of construction without departing from the spirit or scope of the invention as defined by the appended claims.

What I claim is:

1. A car loading and unloading platform, comprising a stationary platform and a movable platform mounted thereon, adapted to be projected beyond the edge of the stationary platform, braces pivoted to the stationary platform adapted to be swung outwardly therefrom to support the projecting ends of the movable platform, spring means for urging the braces into outermost position and flexible elements connecting said braces to the movable platform whereby when the movable platform is moved into its retract-

ed position the braces will be swung against the side of the stationary platform.

2. A car loading and unloading platform comprising a stationary platform having slots formed therein, rollers secured to the stationary platform beneath the said slots, a movable platform, rails secured to the underside of the movable platform extending downwardly through the slots and resting upon said rollers, and means for moving the movable platform.

In testimony whereof I have signed my name to this specification.

FRANK RIEDER.