C. A. NORMAN.

GANGWAY.

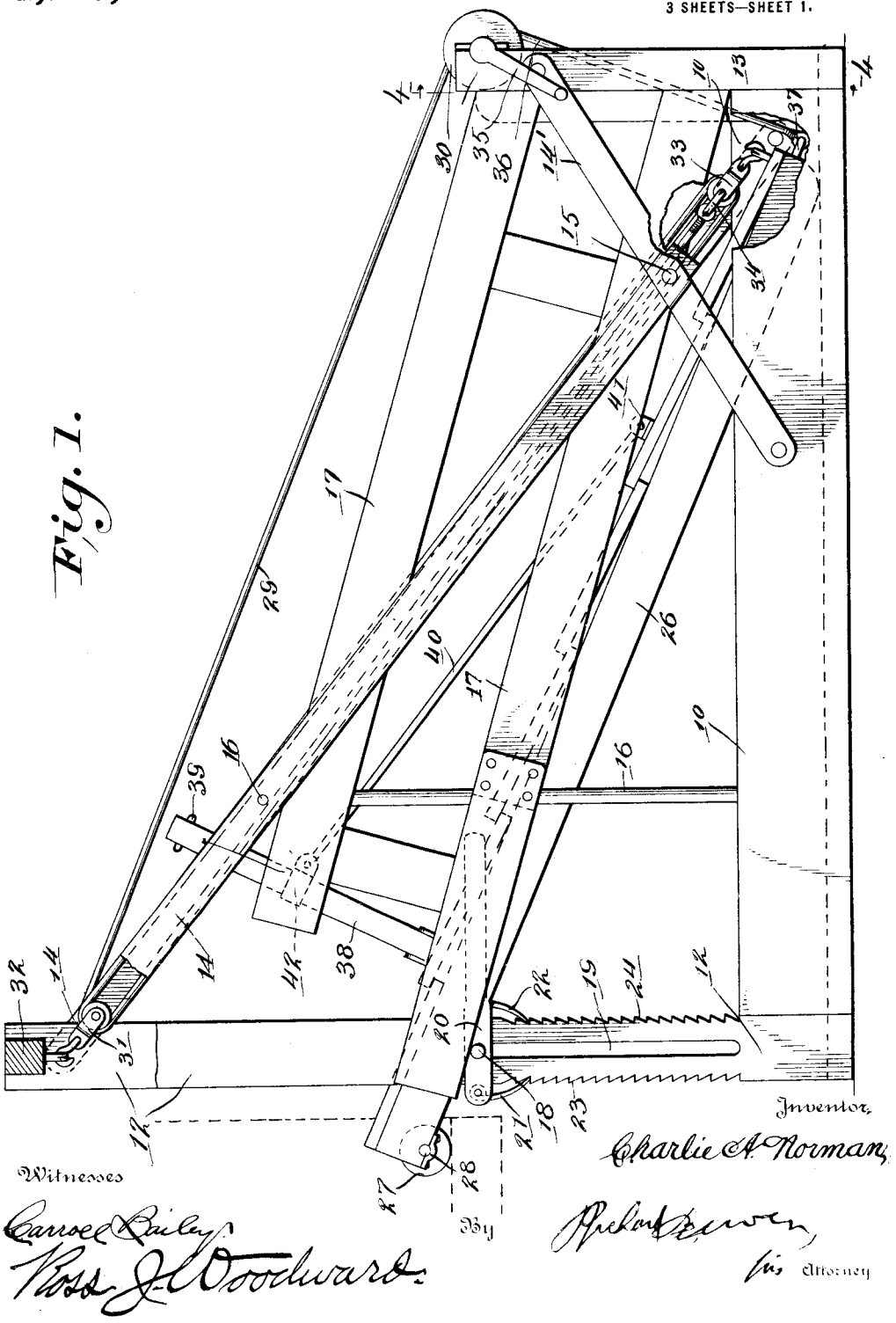
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1,137,276.

Patented Apr. 27, 1915.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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3 SHEETS—SHEET 2.

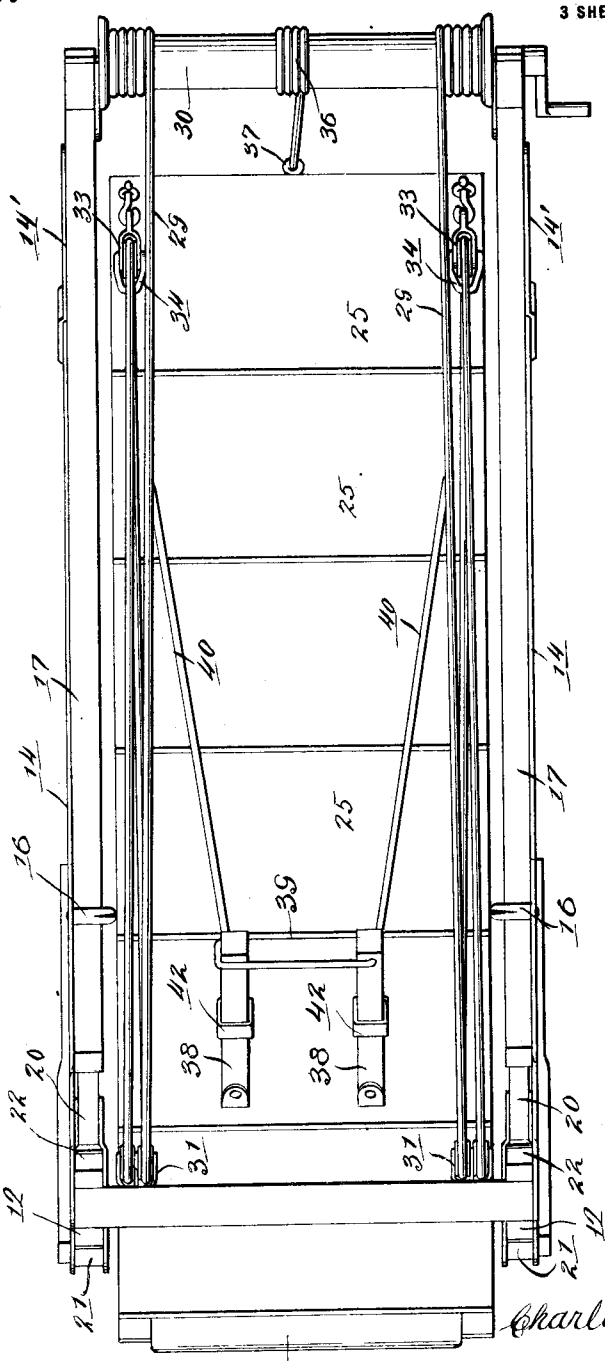


Fig. 2.

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3 SHEETS—SHEET 3.

Fig. 4.

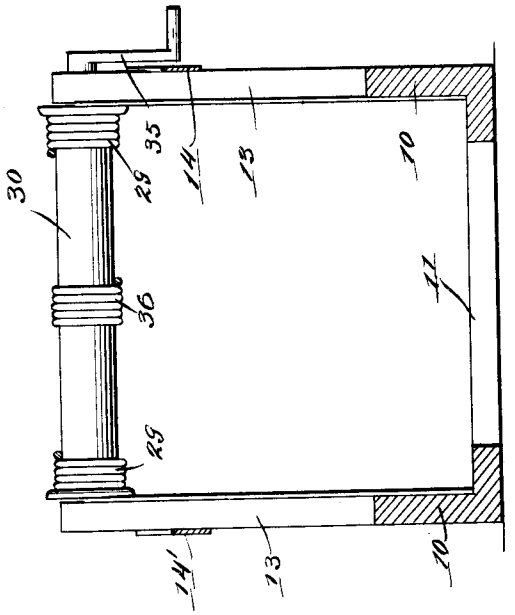
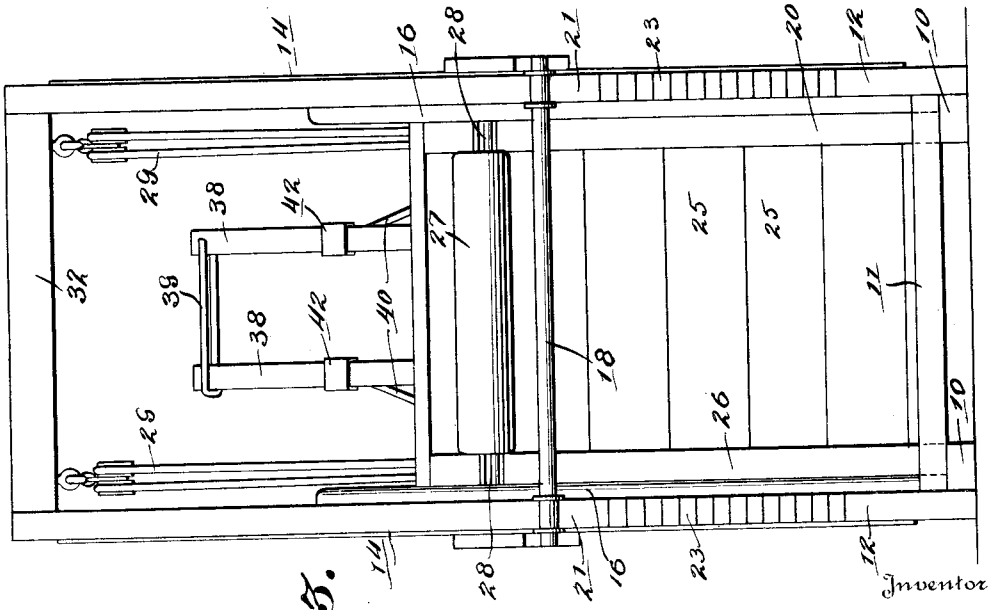


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

CHARLIE A. NORMAN, OF FRANKFORT, SOUTH DAKOTA.

GANGWAY.

1,137,276. Specification of Letters Patent. Patented Apr. 27, 1915.

Application filed February 18, 1914. Serial No. 819,585.

To all whom it may concern:

Be it known that I, CHARLIE A. NORMAN, a citizen of the United States, residing at Frankfort, in the county of Spink and State of South Dakota, have invented certain new and useful Improvements in Gangways, of which the following is a specification.

This invention relates to an improved gangway which is intended to be used for loading live stock into a wagon or train and for permitting the live stock to be easily removed from the wagon or train.

The principal object of the invention is to provide a gangway which is so constructed that it may be held at any angle desired according to the height of the wagon or which may be held level if desired so that animals may be transferred from one wagon or car to another.

Another object of the invention is to provide an improved frame in which the adjustable gangway is mounted.

Another object of the invention is to provide the gangway with means for holding an animal so that the animal may be easily slaughtered.

This invention is illustrated in the accompanying drawings wherein—

Figure 1 is a side elevation of the improved gangway; Fig. 2 is a top plan view of the same; Fig. 3 is a rear elevation of the gangway; Fig. 4 is a section taken along the line 4—4 of Fig. 1.

The frame is provided with the side beams 10 which are connected by the cross bars 11 and carry the rear standards 12 and forward standards 13. Diagonal bracing strips 14 and 14′ are carried by the side bars 10 and have upper ends secured to the upper end portions of the standards 12 and 13 so that these standards will be held in a vertical position. The bracing strips 14 and 14′ are crossed as shown in Fig. 1 and connected by means of rivets 15 so that the strips will not have any pivotal movement. Vertical rods 16 are carried by the side bars 10 and have their upper ends bent outwardly and secured to the bracing strips 14. These metallic rods 16 form supports for the bracing strips 14 and also form guides for the side rails 17. A supporting rod 18 is slidably mounted in slots 19 formed in the standards 12 and carries levers 20 to which are pivotally connected the pawls 21 and 22. It will thus be seen that by operating the levers at the pawls they may be brought into engagement with the teeth 23 and 24 formed upon the standards 12 and the supporting rod 18 thus held at a desired height. The adjustable gangway has its flooring boards 25 carried by the side bars 26 and positioned in overlapped relation as shown in Fig. 1 so that the animals will have no trouble in walking up the gangway. A roller 27 is rotatably connected between the upper ends of the side bars 26 by means of the bearing brackets 28 and is provided so that the upper end of the gangway which rests upon the flooring of the wagon or car may be moved easily when desired.

In order to easily adjust the inclination of the gangway, the cables 29 have been provided. These cables have their outer ends wound upon a drum 30 carried by the standards 13 and are then passed around the pulleys 31 carried by the cross bar 32 which connects the upper ends of the standards 12. After passing around the pulley 31, the cables are passed around the pulley 33 secured at the lower end of the gangway and are then again passed around the pulleys 31 and have their ends secured to eyes 34 carried by the pulleys 33. It will thus be seen that by turning the crank 35 to wind or unwind the cables 29, the gangway may be caused to move longitudinally in the frame. A cable 36 is wound upon the drum 30 in an opposite direction to the cable 39, and is connected with an eye 37 at the end of the gangway so that when the drum is turned to unwind the cables 29, the cable 36 will be wound upon the drum and thus draw the gangway toward the outer end of the frame.

In order to hold an animal upon the gangway so that the animal may be conveniently slaughtered, there has been provided a yoke comprising the pivotally mounted arms 38, one of which carries a link 39. This link is intended to engage the opposite arm 38 so that the arms may be held upon opposite sides of the neck of an animal and prevent the animal from breaking loose. Rods 40 have their lower ends connected with the flooring of the gangway by means of the brackets 41 and have their upper ends connected with the arms 39 by means of the collars 42.

The operation of this device is as follows: When this device is in use, the frame is moved to a point in front of the car door or

the wagon is placed with its rear end facing the standards 12 and the levers 20 of the jacks are then moved to raise the supporting rod 18 to a point adjacent the level of the flooring of the car or wagon. At the same time the drum 30 is turned to move the gangway forwardly and prevent the upper end of the gangway from slipping off of the rod 18. As soon as the rod 18 has been raised to the desired height, the drum is wound a sufficient amount to move the gangway forwardly a sufficient extent to move the roller onto the flooring of the car or wagon. The animals can now be driven up the gangway into the car or wagon.

The side rails 17 when raised as shown in Fig. 1 have their upper ends resting upon the outer ends of the rod 18 and are then held in the raised position. By winding the cables 29 upon the drum a greater extent the gangway may be moved into the wagon to any extent desired or if the gangway is used with a high wagon, the gangway may be moved forwardly to such an extent that it will be pitched at a sufficient incline to bring the upper end of the gangway into engagement with the flooring of the wagon. As soon as the gangway is no longer required, the drum can be turned in the opposite direction to unwind the cable 29 and wind the cable 36 thus drawing the gangway to its original position. The pawls 21 and 22 can then be moved out of engagement with the rack teeth 23 and 24 and the shaft 18 moved to the lower end of the slots 19.

When it is desired to slaughter an animal, the animal can be driven upon the gangway between the rods 40; and when in the proper position, the arms 38 can be moved to engage the opposite sides of the animal's neck and the link 39 moved to a locked position to prevent the animal from withdrawing its head from between the arms. The animal will then be held so that it can be easily killed. The arms 38 and rods 40 are removably secured to the flooring of the gangway so that when it is not desired to use the same, they can be removed.

I have thus provided a gangway which may be vertically and longitudinally adjusted so that the height and incline of the gangway may be regulated. I have also provided a gangway in which the side rails may be moved with the gangway and which are held in the raised position by the supporting rod 18. It should also be noted that if desired, the standards 12 and 13 may be removably connected with the lower bars 10 and that therefore the frame of the gangway will be collapsible and may be thus packed in a compact mass for shipping or storing.

What is claimed is:

1. In a device of the character described a frame including forward and rear standards, a support adjustably connected with said forward standards, a drum rotatably connected with said rear standards, a gangway mounted in said frame and having its forward end resting upon said support, pulleys carried by said gangway and forward standards, cables having their inner ends connected with the pulleys of said gangway and passed around the pulleys of said gangway and forward standards with their outer ends wound upon said drum, and a cable wound upon said drum in an opposite direction to that of said first-mentioned cables and connected with said gangway.

2. In a device of the character described a frame including forward and rear standards, a supporting shaft positioned between said forward standards, means adjustably connecting said shaft with said forward standards whereby said shaft may be releasably set at a desired height, a gangway having its rear end resting upon the lower portion of said frame and having its forward end resting upon said shaft, a drum rotatably carried by said rear standards, a guide carried by said forward standards, a cable connected with the rear end of said gangway and passing around said guide and having its opposite end wound upon said drum, and a second cable connected with the rear end of said gangway and wound upon said drum in an opposite direction to said first-mentioned cable.

3. In a device of the character described a frame including forward standards, said forward standards being provided with slots, a shaft extending between said forward standards and through said slots, levers pivotally connected with the end portions of said shaft, said forward standards being provided with rack teeth, pawls carried by said levers and engaging said rack teeth to releasably hold said shaft in an adjusted position, a gangway mounted in said frame with its forward end portion resting upon said shaft, and means for moving said gangway longitudinally in said frame whereby the angle of said gangway may be regulated.

4. In a device of the character described a frame including side beams, forward and rear standards carried by said side beams, diagonally-extending bracing strips having their lower ends connected with said side beams and their upper ends connected with the upper end portion of said standards, rods carried by said side beams and having their upper end portions connected with the bracing strips of said forward standards, side rails movably mounted between said rods and the diagonal bracing strips, a supporting shaft adjustably connected with said forward standards, a drum rotatably connected with said rear standards, a gang way mounted in said frame for longitudinal movement and having its forward end rest-

ing upon said supporting shaft, and means carried by said drum and connected with said gangway for moving said gangway in said frame upon rotation of said drum.

5. In a device of the character described a frame including side beams, standards, bracing strips having their lower ends connected with said side beams and their upper ends connected with said standards, rods carried by said side beams and having their upper ends connected with said bracing strips, side rails movably mounted between said rods and bracing strips, supporting means carried by said standards for engaging said side rails to support the same, a gangway movably mounted in said frame and having one end resting upon said supporting means, and means for moving said gangway in said frame.

6. In a device of the character described, a frame, a gangway movably mounted in said frame, arms pivotally connected with said gangway, means for releasably connecting said arms, rods pivotally connected with said gangway, means slidably connecting said rods with said arms, and means for moving said gangway longitudinally in said frame.

7. In a device of the character described a frame, a gangway movably mounted in said frame, arms pivotally connected with said gangway, a latch carried by one of said arms for releasably engaging the other of said arms, rods pivotally connected with said gangway, collars mounted upon said arms and connected with said rods, and means for moving said gangway longitudinally in said frame.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLIE A. NORMAN.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."