W. E. DEMENT & A. C. CRAWFORD.

CATTLE GUARD.

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962,554. Patented June 28, 1910.

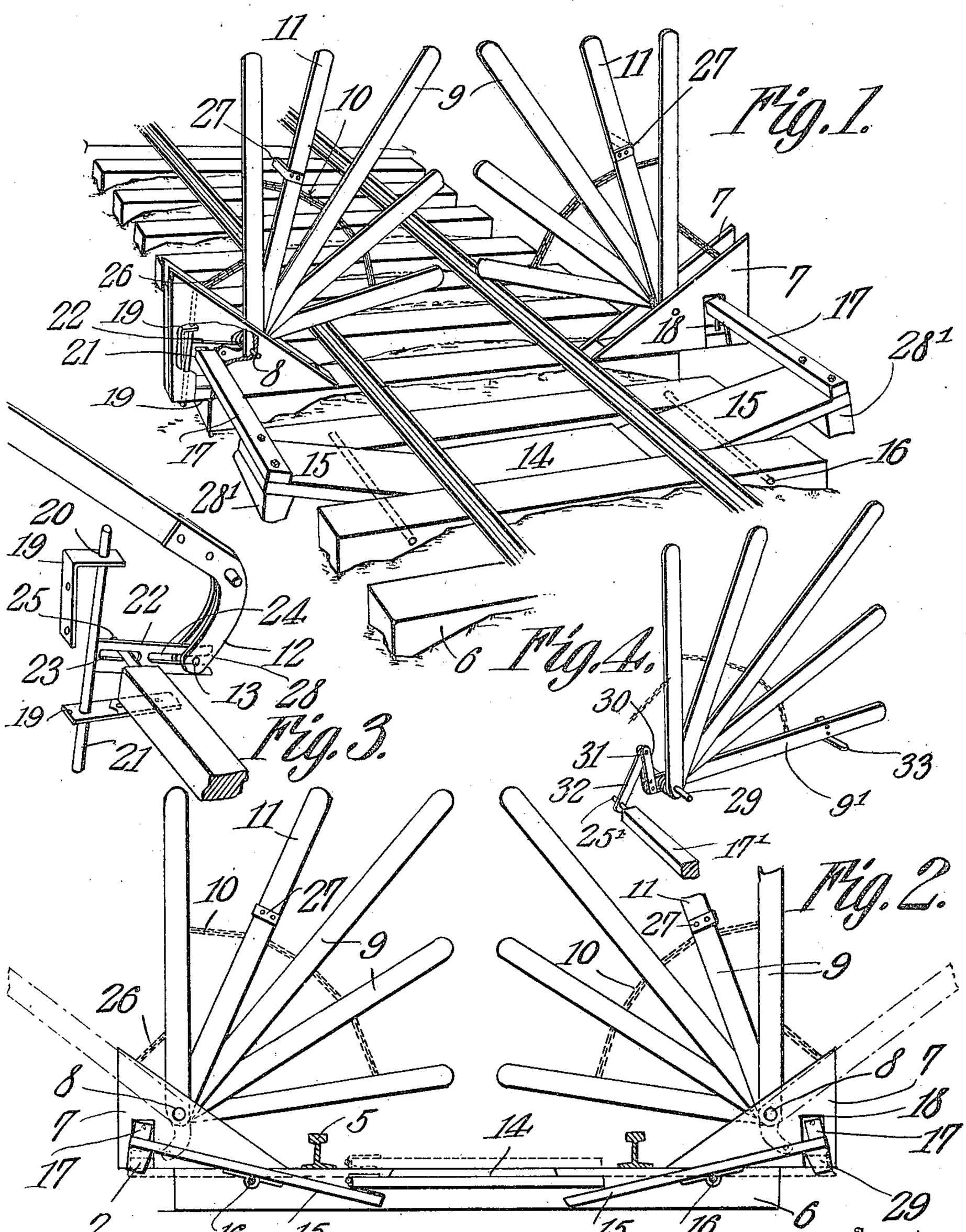

Fig. 1.

Fig. 4.

Fig. 3.

Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

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CATTLE-GUARD.

962,554. Specification of Letters Patent. Patented June 28, 1910.

Application filed October 2, 1908. Serial No. 455,886.

To all whom it may concern:

Be it known that we, WALLACE E. DEMENT and ALVIN C. CRAWFORD, citizens of the United States, residing at Blaine, in the county of Whatcom and State of Washington, have invented a new and useful Cattle-Guard, of which the following is a specification.

This invention relates to cattle guards of that general class shown and described in United States Letters Patent issued to Wallace E. Dement on the 14th day of July 1908 under No. 893,059.

The object of the invention is generally to improve and simplify the construction of the cattle guard and to so arrange the actuating mechanism that the working parts thereof are housed within the track casings.

A further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification:—Figure 1 is a perspective view of a portion of a track provided with a cattle guard constructed in accordance with our invention, showing the fan shaped guards or barriers in operative position. Fig. 2 is a transverse sectional view of the same, the platform and operating levers being shown in dotted lines in inoperative position and in full lines in operative position. Fig. 3 is a detail perspective view of a portion of one of the arms or blades showing the manner of connecting the same with the adjacent tilting lever of the depressible platform. Fig. 4 is a perspective view illustrating a modified form of the invention.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved cattle guard forming the subject matter of the present invention is designed to be applied at suitable points on a rail-way track to prevent animals from walking thereon and by way of illustration is shown in connection with a rail-way track of the ordinary construction in which 5 designates the rails, and 6 the cross ties.

Disposed on opposite sides of the rails 5 and secured in any suitable manner to the adjacent cross ties are substantially tri-angular shaped casings or housings 7 in which are pivotally mounted at 8 a plurality of arms or blades 9, which, when in the position shown in Fig. 1 of the drawing constitute a barrier for the track so as to prevent cattle and other stock from walking thereon.

The pivoted arms or blades of each set are connected by cords or chains 10, one of the blades of each set, designated as 11, being provided with spaced segmental plates 12, the free ends of which are connected by a pin 13 for the purpose hereinafter referred to.

Arranged in advance of the blades 9 is a depressible platform 14, which latter is disposed between the rails 5 and rests on the adjacent ends of suitable tilting levers 15.

The tilting levers 15 are pivotally mounted between the adjacent cross ties, indicated at 16 and are each provided at their outer ends with a horizontally disposed actuating arm 17 which extends through an opening or recess 18 in the adjacent casing 7.

Arranged within each casing are spaced brackets 19 having alined openings 20 formed therein for the reception of a vertically movable rod 21, the latter being provided with a laterally extending arm 22 having spaced slots 23 and 24 formed therein, one of which opens through the free end of the arm 22, as shown, and is arranged to receive the transverse pin of the adjacent blade 11.

Secured to the free end of each actuating arm 17 is a pin 25 which enters the slot 23 of the adjacent arm 22 and serves to elevate the rod 21 when the platform 14 is depressed.

One of the blades of each barrier is connected with the adjacent casing 7 by a chain or other flexible medium 26, the main actuating blade 11 of each barrier being provided with a laterally extending clip or finger 27 against which the remaining blades or arms of the barrier rest when said guard is moved to inoperative position.

The pin 13 slides freely within the slot 24 the walls of said slot at the mouth thereof being preferably inclined or beveled at 28 to facilitate the introduction and removal of the pin.

It will thus be seen that when an animal treads on the platform 14 and depresses the same the outer ends of the tilting levers will be moved upwardly, thus causing the pins 25

to force the rods 21 upwardly and through the medium of the pin and slot connections 13 and 24 move the blades 11 across the track, as best shown in Fig. 1 of the drawing.

When the animal leaves the platform 14 the weights 28′ will return the tilting levers 15 to normal position thus causing the pins 25 to exert a downward movement on the rods 21 and through the medium of the pin and slot connections 13 and 24 return the blades 9 and 11 to inoperative position within the casing.

In Fig. 4 of the drawings, there is illustrated a modified form of the invention in which the pivoted end of the forward blade 9′ is extended longitudinally beyond the pivot pin 29 and provided with an angularly disposed arm 30 to which is pivotally connected at 31 a link 32. The free end of the link 32 is provided with an aperture adapted to receive a pin 25′ carried by the adjacent lever 17′ so that when an upward movement is imparted to the lever 17′ the blades will be moved to operative position across the track and when a downward movement is imparted to said lever the link 32 will actuate the forward blade 9′ to move the adjacent blades to folded or inoperative position. A finger 33 is secured to and extended laterally from the forward blade 9′, said finger being adapted to engage and move the remaining blades to folded or inoperative position on the downward movement of the lever 17′.

It will thus be seen that there is provided a strong, durable and thoroughly efficient cattle guard in which the operating mechanism is housed within the track casings so as to protect the same against injury.

Having thus described the invention what is claimed is:—

1. In a cattle guard, a movable barrier, a depressible platform, an actuating arm operatively connected with the platform and provided with a terminal pin, a vertically movable rod having an arm extending laterally therefrom and operatively connected with the barrier, there being a slot formed in the arm of the rod and adapted to receive said pin.

2. In a cattle guard, a casing, a movable barrier mounted within said casing, a depressible platform, an actuating arm operatively connected with the platform, guide brackets arranged within the casing, a vertically movable rod slidably mounted in said brackets and provided with a laterally extending arm having its free end operatively connected with the barrier and provided with an elongated slot, and a pin carried by the free end of the actuating arm and arranged to enter the slot in the arm of the vertically movable rod.

3. In a cattle guard, a casing, a movable barrier arranged within the casing and comprising a plurality of flexibly connected pivotally mounted blades, one of which is provided with spaced segmental plates, a depressible platform, actuating arms operatively connected with the platform, a vertically movable rod slidably mounted within the casing and provided with a laterally extending arm having a slot formed therein and opening through the free end of said arm, a pin connecting the segmental plates and operating within said slot, and a connection between the actuating arm and the arm of the vertically movable rod.

4. In a cattle guard, a casing, a barrier mounted within the casing and including pivotally mounted flexibly connected blades, one of which is provided with terminal segmental plates, a depressible platform, actuating arms operatively connected with the platform, a rod slidably mounted in the casing and having its free end operating between the segmental plates of said blade and provided with an elongated slot, a pin connecting the segmental plates and operating within the slot, there being a second slot formed in said arm in spaced relation to the first mentioned slot, and a pin carried by the actuating arm and operating in the second slot.

5. A cattle guard including spaced casings, barriers arranged within the casings and each comprising a plurality of flexibly connected pivotally united blades, one of the blades of each barrier being provided with terminal segmental plates, a depressible platform, tilting levers having their inner ends extended beneath the platform, actuating arms secured to the outer ends of the levers and having their free ends extending through suitable openings in the adjacent casings, brackets arranged within said casings and provided with alined perforations, rods slidably mounted within the perforations of the brackets and provided with laterally extending arms arranged to operate between the segmental plates of the adjacent barrier blades and having their free ends provided with elongated slots, pins extending through the arms and operating within the adjacent slots, there being a second slot formed in each rod carrying arm, and a pin secured to the free end of each actuating arm and operating within the second slot.

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

WALLACE E. DEMENT.
ALVIN C. CRAWFORD.

Witnesses:
RUFUS A. WILSON,
JOHN C. SCOTT.