

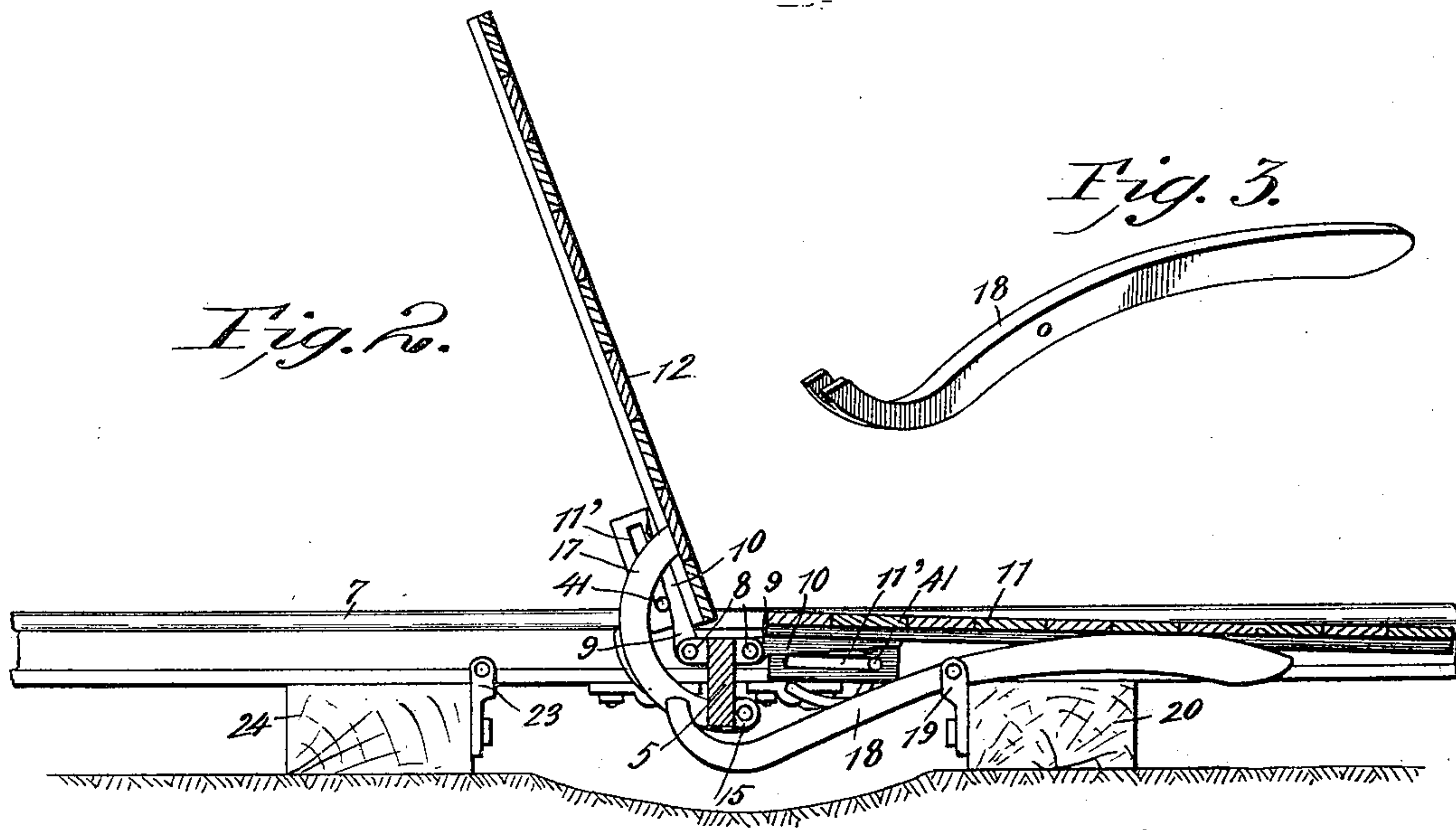
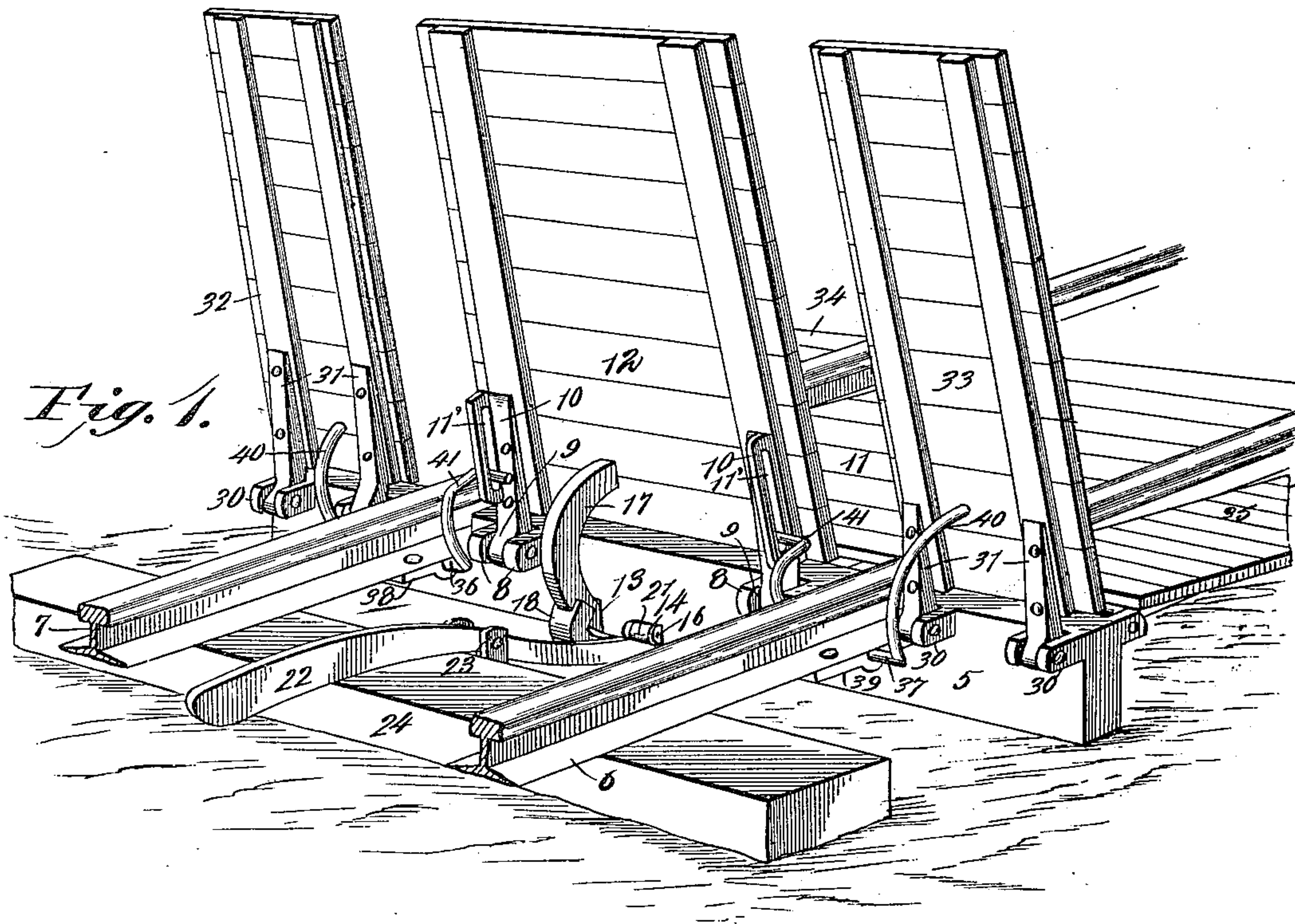
No. 667,757.

Patented Feb. 12, 1901.

W. R. ALLEN.  
CATTLE GUARD.

(Application filed Oct. 24, 1900.)

(No Model.)



Witnesses  
*L. H. Walker.*  
*Geot. Chumalee.*

*W. R. Allen,* Inventor.  
by *C. A. Snow & Co.*  
Attorneys



# UNITED STATES PATENT OFFICE.

WILLIAM R. ALLEN, OF HOQUIAM, WASHINGTON.

## CATTLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 667,757, dated February 12, 1901.

Application filed October 24, 1900. Serial No. 34,192. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM R. ALLEN, a citizen of the United States, residing at Hoquiam, in the county of Chehalis 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 in general, and more particularly to that class wherein pivoted gates are disposed and connected to be moved into erect position to obstruct a track when an animal steps upon a movable platform, one object of the invention being to provide a simple and efficient construction wherein the several gates used between and at the sides of the rails are disposed in pairs, of which one gate forms the operating-platform for the other gate of that pair, further objects and advantages of the invention being evident from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a perspective view showing a portion of a track with the guard in place and one set of gates raised. Fig. 2 is a vertical longitudinal section taken at a point between the track-rails. Fig. 3 is a detail perspective view of one of the operating-levers.

Referring now to the drawings, in the application of the present structure to a railroad a beam 5 is disposed transversely of and below the rails 6 and 7, said beam having seats formed therein to receive the rails. Adjacent to the inner faces of the rails 6 and 7 and at each side of the beam 5 are formed pairs of parallel and spaced ears 8, forming hinge members, and between each pair of ears is disposed the ear 9 of a second hinge member, the interposed ears being pivotally mounted by means of pintles engaged therewith and with the ears between which they are disposed. The second hinge members referred to and which are shown at 10 are secured to the under sides of gates 11 and 12, of which one is disposed between the track-rails at each side of the beam 5, and on these members 10 are formed longitudinal slotted flanges 11' for purposes which will be presently explained.

In the under side of the beam 5 are formed

transverse slots 13 and 14, and on the side of the beam adjacent to the gate 11 are formed ears 15, disposed at opposite sides of slot 13, while additional ears 16 are formed on the opposite face of the beam and on opposite sides of the slot 14.

Between the ears 15 is pivoted one end of an arcuate lever 17, which is passed through the slot 13 and is adapted to lie against the under side of the gate 12 and is held in this position by means of a long lever 18, which is fulcrumed between ears 19 on an adjacent tie 20, the work end of which is disposed beneath and beyond the beam 5 and is curved upwardly, this upwardly-curved end having its extremity bifurcated to form a seat to receive the arcuate lever 17, so that when the outer end of the lever 18 is depressed the free end of the lever 17 will be raised to raise the gate 12. The lever 18 engages lever 17 adjacent to the fulcrum of the latter, so that a long movement is given to the free end of lever 17 sufficient to raise the gate to the proper degree. A second arcuate lever 21 is fulcrumed between the ears 16 and is similar in every respect to the lever 17, the free end of this lever 21 being disposed against the under side of gate 11. A lever 22, similar to lever 18, engages lever 21 and is fulcrumed between ears 23 upon a tie 24. The power end of lever 18 is disposed against the under side of the gate 11, while the power end of lever 21 is disposed against the under side of gate 12, the gates being adapted to lie in a common plane below the level of the rails when the several levers are in their inactive positions. Thus it will be seen that if either gate be depressed, as by the weight of an animal standing thereon, its long lever 18 or 21 will be actuated to raise the arcuate lever connected therewith, which in turn raises the opposite gate into the position shown in the drawings.

On each of the vertical faces of the beam 5 and exterior to the track-rails are formed two spaced pairs of spaced ears 30, and between these ears are pivoted the hinge members 31, attached to supplemental gates 32, 33, 34, and 35, which are adapted to lie in the same plane with the gates 11 and 12 when the latter are in their inactive positions, gates 32 and 33 lying at one side of the beam 5 and



gates 34 and 35 lying at the opposite side of the beam.

To raise the gates 32 and 33 with the gate 12, rock-shafts 36 and 37 are disposed in bearings 38 and 39 on the under sides of the track-rails, each of these shafts having upwardly-projecting arms 40 and 41, of which the arm 40 rests against the under side of a supplemental gate, while the end of the other arm is turned laterally and engaged with the adjacent slotted flange 11'. Thus as gate 12 is raised gates 32 and 33 are raised, and when gate 12 drops gates 32 and 33 are permitted to drop. Similar shafts are disposed at the opposite side of the beam 5 and have similar connections with the slotted plates 11' of the gate 11, whereby gates 34 and 35 will be raised and lowered with gate 11. With this construction it will be seen that the gates at each side of the beam 5 act alternately as platforms to raise the opposite gates and that if either a main gate or a supplemental gate be depressed all of the gates at the opposite side of the beam will be raised.

It will be understood that in practice various modifications of the specific construction shown may be made and that any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

1. A cattle-guard comprising pivoted gates, a lever disposed in operative relation to each gate, and a supplemental lever operatively connected with each of the first-named levers and disposed for actuation by depression of the gate opposite to that gate which is to be operated.

2. A cattle-guard comprising pivoted gates, a lever disposed against the under side of each of the gates for raising it, and a supplemental lever operatively engaged with each of the first-named levers adjacent to the fulcrum thereof, the power end of each of the supple-

mental levers being disposed beneath and in contact with the opposite gate, whereby either gate will be raised when the other is depressed.

3. A cattle-guard comprising gates disposed oppositely in pairs, the gates of each opposite pair having connections for operating either by depression of the other gate, and additional connections between the corresponding gates of the several pairs for operating one from the other.

4. A cattle-guard comprising pivoted gates disposed oppositely in pairs, connections between the gates of one pair whereby when one gate of that pair is depressed the other gate of that pair will be raised, and additional connections between the corresponding gates of the several pairs whereby when one gate is depressed, the corresponding gates of all of the pairs will be depressed.

5. A cattle-guard comprising a supporting-beam, gates pivoted to the beam and lying at opposite sides thereof, connections between one gate at one side of the beam and the opposite gate at the other side of the beam for raising one gate when the other is depressed, and a rock-shaft disposed beneath each of the side edges of each of said opposite, connected gates and the side edge of the next gate on the same side of the beam, said rock-shafts having arms, one arm of each shaft having slidable connection with its respective first-named gate and the other arm resting against the under side of the said next gate on the same side of the beam, whereby, when one gate at one side of the beam is depressed, the other gates at the opposite side will be raised.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM R. ALLEN.

Witnesses:

C. F. GILBERT,  
GEO. MÉLIM.