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MEANS FOR DRIVING LIVE STOCK FROM RAILROAD TRACKS.

APPLICATION FILED SEPT. 10, 1919.

1,370,252.

Patented Mar. 1, 1921.

2 SHEETS—SHEET 1.

Fig. 1.

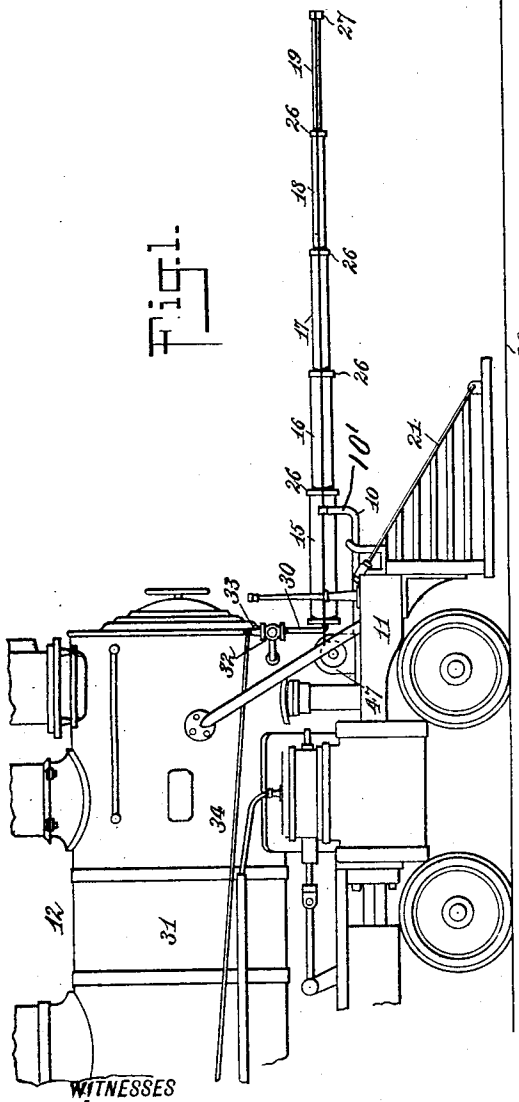
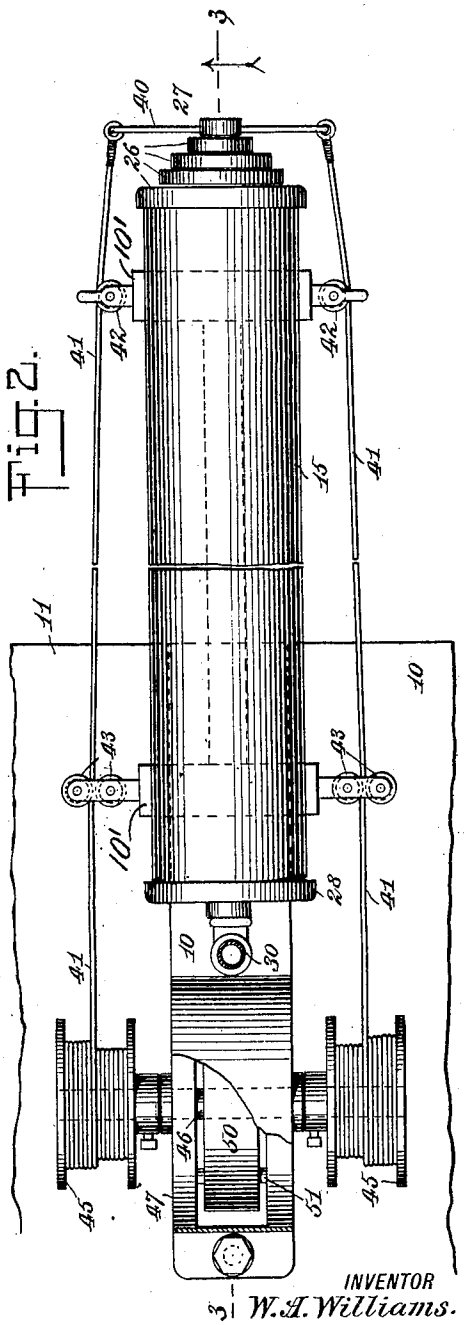


Fig. 2.



WITNESSES

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Fig. 5.

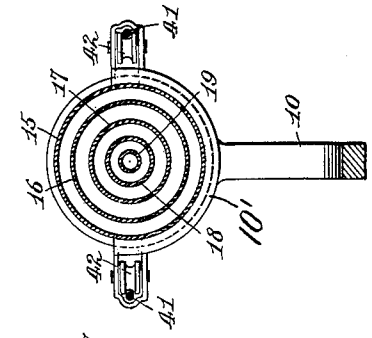


Fig. 3.

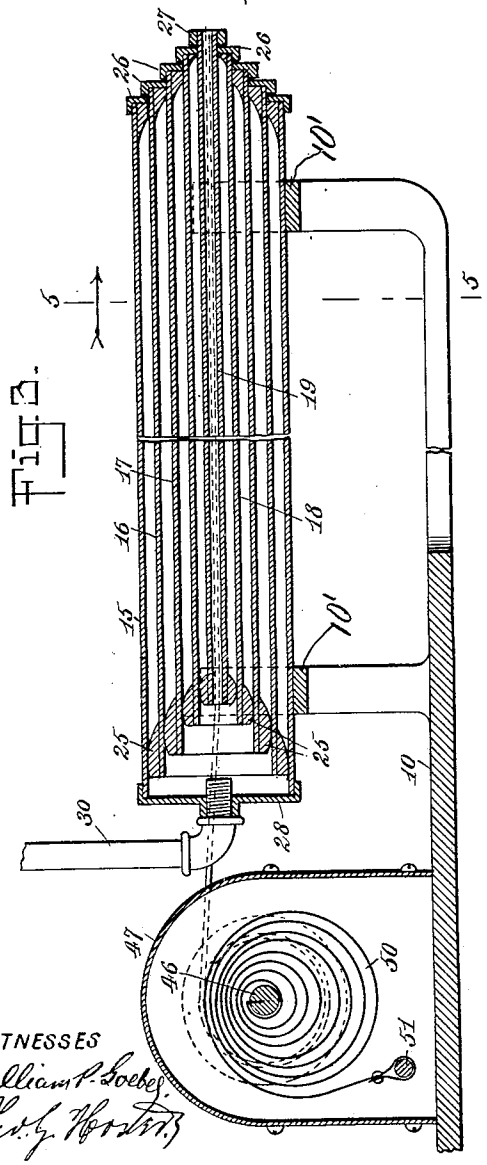
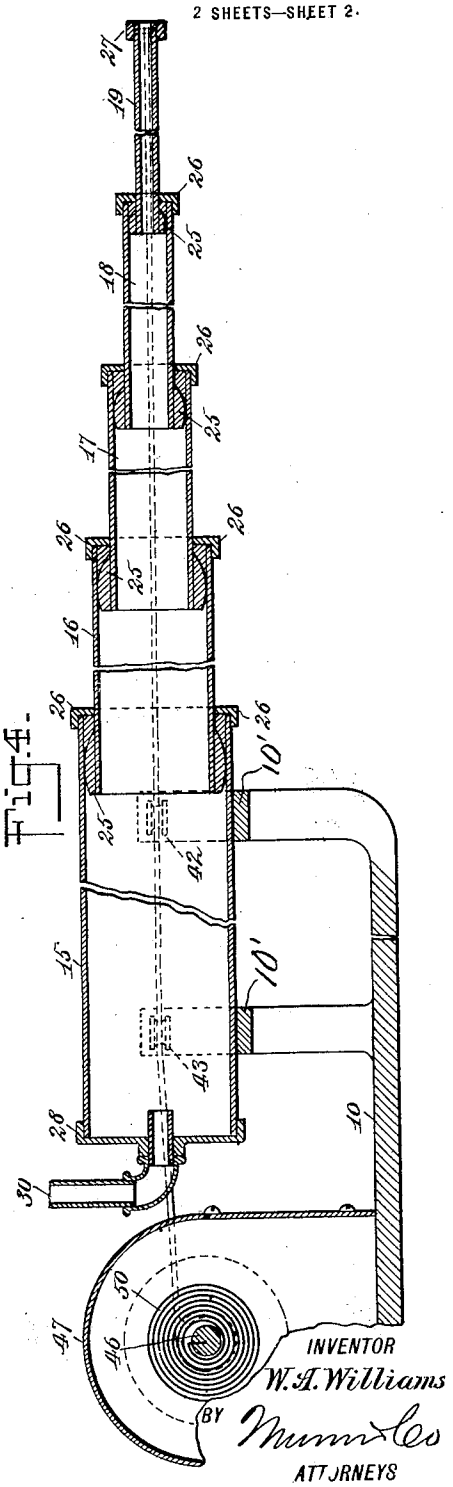


Fig. 4.



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MEANS FOR DRIVING LIVE STOCK FROM RAILROAD-TRACKS.

1,370,252. Specification of Letters Patent. Patented Mar. 1, 1921.

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To all whom it may concern:

Be it known that I, WILLIAM A. WILLIAMS, a citizen of the United States, and a resident of Florence, in the county of Florence and State of South Carolina, have invented a new and Improved Means for Driving Live Stock from Railroad-Tracks, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved means for driving cattle or other live stock from railroad tracks thus avoiding the killing of such live stock by oncoming locomotives. Another object is to permit of readily applying the means to locomotives and enabling the engineer in charge of the locomotive to utilize the means whenever the engineer spies live stock on the track. Another object is to permit of normally folding the means on the locomotive to take up very little room when not in use.

With these and other objects in view, the invention consists of certain novel features of construction as hereinafter shown and described and then particularly pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improved means, for driving live stock from a railroad track, as applied and in extended position;

Fig. 2 is an enlarged plan view of the same with the parts in folded position and a portion of the spring housing shown broken out;

Fig. 3 is a longitudinal central section of the same on the line 3—3 of Fig. 2;

Fig. 4 is a similar view of the same with the parts in extended position; and

Fig. 5 is a cross section of the same on the line 5—5 of Fig. 3.

The improved apparatus is mounted on a suitably constructed support or frame 10 attached to the front truck 11 of a locomotive 12 of any approved construction but preferably comprising a forked frame consisting of a longitudinal bottom supporting portion and yokes 10′ across the same. On the support 10 is secured the outermost tube 15 of a series of telescoping tubes 16, 17, 18 and 19, arranged lengthwise and adapted to be projected forwardly a distance above the track 20, and with the outermost tube 19 a distance forward of the cow catcher 21, as plainly indicated in Fig. 1. The rear ends of the tubes 16, 17, 18 and 19 are provided with heads 25 each slidingly fitting the inner surface of the next larger tube, and the outer ends of the tubes 15, 16, 17 and 18 are provided with bearings 26 each forming a bearing for the next smaller tube and a stop for the corresponding head 25. The bearings 26 of the tubes 15, 16, 17 and 18 also form stops to limit the return movement of the tubes, and the innermost tube 19 is provided at its outer end with a head 27 for limiting its return folding movement. The outermost tube 15 is provided at its rear end with a head 28 connected by a pipe 30 with the boiler 31 of the locomotive to allow water or steam to pass from the boiler into the rear end of the outermost tube 15 with a view to force the other tubes 16, 17, 18 and 19 outward into the extended position shown in Figs. 1 and 4 with a view to allow the water or steam to pass out of the outer end of the outermost tube 19 and in a stream a distance along the track in a forward direction to drive the cattle or other live stock off the track. It will be noticed that the stream of water and steam reaches the live stock ahead of the locomotive and consequently the live stock have sufficient time to clear the track for the passage of the oncoming locomotive without danger of striking and injuring the live stock.

The pipe 30 is provided with a valve 31 provided with an arm 32 connected by a link 33 or other means with the cab of the locomotive to permit the engineer to open the valve 31 whenever it is desired to extend the tubes 16, 17, 18 and 19 and force a stream of water and steam through the said tubes, as above explained.

In order to return the tubes 16, 17, 18 and 19 to folded or telescoping position, the following arrangement is made: On the head 27 is secured a transversely extending bar 40, to the outer end of which are secured the forward ends of ropes, cables or other flexible connections 41 extending rearwardly and passing over guide pulleys 42 and between pairs of guide pulleys 43 mounted on the forward and rearward ends of the stationary tube 15. The rear ends of the flexible connections 41 wind on drums 45 secured on a drum shaft 46 journaled in suitable bear-

ings arranged in a spring housing 47 attached to the support 10. On the shaft 46 within the housing 47 is secured the inner end of a spring 50 fastened at the outer end by a pin 51 to the housing 47, as plainly shown in Fig. 3. It will be noticed that when the tubes 16, 17, 18 and 19 are forced into extended position by the action of the steam against the heads 25 then the flexible connections 41 are unwound on the drums 45 and the spring 50 is placed under tension. When the engineer closes the valve 31 and thereby shuts off the steam pressure then the spring 50 turns the drums 45 in the reverse direction thereby winding up the flexible connections 41 and thereby exerting a pull on the outermost tube 19 which is thus caused to slide rearwardly in the tube 18, and when the head 27 strikes the bearings 26 of the tube 18 the latter is telescoped in the tube 17 and finally the latter is telescoped in the tube 16 and the latter telescoped in the fixed tube 15, that is, the several tubes 16, 17, 18 and 19 are returned to folded position within the fixed tube 15.

From the foregoing it will be seen that by the arrangement described, the engineer in charge of the locomotive can readily allow steam to pass into the tube 15 to project the several tubes 16, 17, 18 and 19 in a forward direction and to deliver a stream of water or steam ahead of the locomotive, as above explained, and with a view to drive the live stock off the track. When this has been done, the engineer shuts off the steam by closing the valve 31 to allow the spring 50 to turn the drums 45 in a reverse direction to wind up the flexible connections 41 and thus return the tubes 16, 17, 18 and 19 to folded position.

The apparatus shown and described is very simple and durable in construction and can be readily attached to a locomotive. It will further be noticed that the apparatus in its normal folded position takes up very little room on the front end of the locomotive.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. An apparatus for driving live stock from a railroad track, comprising a forked frame consisting of a longitudinal bottom supporting portion and yokes across the same, a series of telescoping tubes, of which the outer one is mounted lengthwise on said frame at the front of a locomotive, a connection connecting the rear end of the outermost tube with the boiler of the locomotive, a valve in the said connection and under the control of the engineer in charge of the locomotive to admit fluid pressure into the outermost tube to project the other tubes forwardly and to cause the fluid pressure to pass through the tubes and out of the outermost tube onto the track ahead of the locomotive, and means associated between the frame and yokes thereof, and the tubes to cause the automatic return of the latter.

2. An apparatus for driving live stock from a railroad track, comprising a forked frame consisting of a longitudinal bottom forming portion and yokes across the same, a series of telescoping tubes, of which the outer one is mounted lengthwise on said frame at the front of a locomotive, a connection connecting the rear end of the outermost tube with the boiler of the locomotive, a valve in the said connection and under the control of the engineer in charge of the locomotive to admit fluid pressure into the outermost tube to project the other tubes forwardly and to cause the fluid pressure to pass through the tubes and out of the outermost tube onto the track ahead of the locomotive, and means for automatically returning the said projected tubes to folded position within the outermost tube, including a cross bar on the outer end of the innermost tube, cables connected to the ends of the cross bar adapted to be rearwardly actuated for telescoping the tubes.

3. An apparatus for driving live stock from a railroad track, comprising a series of telescoping tubes, of which the outer one is mounted lengthwise on the front of the locomotive, a connection connecting the rear end of the outermost tube with the boiler of the locomotive, a valve in the said connection and under the control of the engineer in charge of the locomotive to admit fluid pressure into the outermost tube to project the other tubes forwardly and to cause the fluid pressure to pass through the tubes out of the outermost tube onto the track ahead of the locomotive, spring drums in the rear of the tubes, and flexible connections winding on the said drums and connected with the outer end of the innermost tube.

WILLIAM A. WILLIAMS.