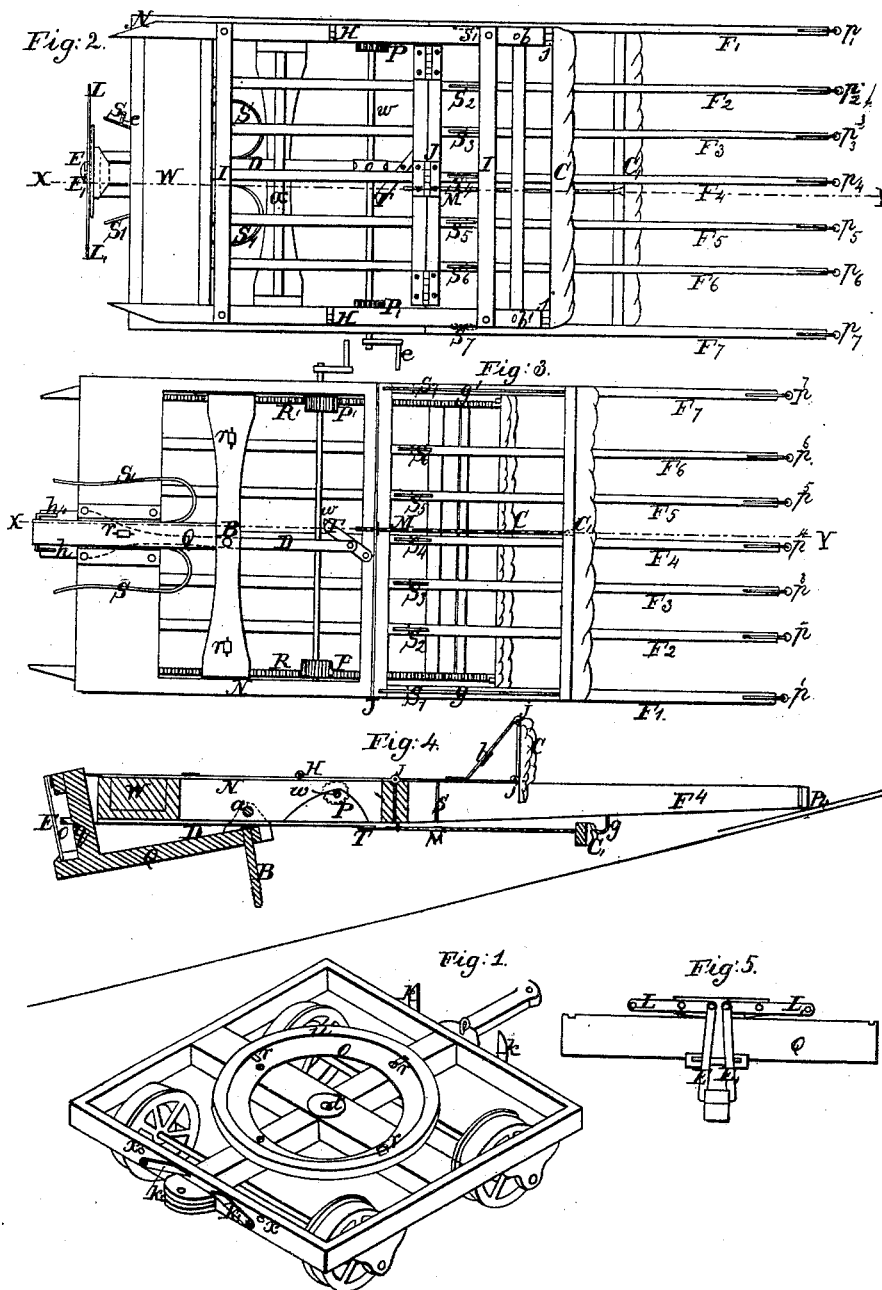


L. MONTGILION.
RAILROAD LIFE PRESERVER.

No. 6,113.

Patented Feb. 13, 1849.



UNITED STATES PATENT OFFICE.

LOUIS MONTGILION, OF ELKRIDGE LANDING, MARYLAND.

APPARATUS FOR REMOVING ANIMALS FROM RAILROADS.

Specification of Letters Patent No. 6,113, dated February 13, 1849.

To all whom it may concern:

Be it known that I, LOUIS MONTGILION, of ElkrIDGE Landing, county of Anne Arundel, and State of Maryland, have invented a new and useful Machine for Preventing the Destruction of Life on Railroads, and which I denominate a "Railroad Life-Preserver;" and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1, is a perspective view of the car which carries the life preserver; Fig. 2, a top view of the operative part of the machine; Fig. 3, a view of the same from beneath; Fig. 4, a longitudinal section through the line $\bar{X} \bar{Y}$ (Figs. 2 and 3); and Fig. 5 is a rear view showing the levers and catches which are employed in operating the directing springs hereafter described.

The ordinary apparatus placed in front of locomotives for the purpose of clearing the track of animals and other obstacles is so constructed and used as to be almost certainly destructive of life or limb to every animal with which it comes in contact. Should the animal be fortunate enough to escape the piercing action of the formidable points of the so called "cow-catcher," its legs may most probably be left dragging between the spears or among the cross bars of the machine, and thus become broken or otherwise mutilated, whereby protracted torture is substituted for instant death.

It is the object of my invention to obviate this destructive action of the common cow-catcher while attaining all the good results of the same in clearing the track of living or other obstacles.

My life preserver contemplates not only the prevention of the destructive effects of locomotives as now used, but also the speedy removal from the track, of such objects as the machine may chance to encounter.

My invention provides for placing the machinery in a compact form for stowage at depots and stations.

The machine instead of being united permanently to a locomotive, is placed on a separate four wheeled truck Fig. 1, coupled to the front of the engine in the ordinary way. The machinery turns horizontally about a bolt-hole d , in the center of the circular plate O , on which rest three or more rollers represented by r, r, r , Figs. 1 and 3.

This renders the machine capable of operating alternately in both directions without the necessity of going upon a turntable to reverse its position. Around the outer periphery of the circular plate O a flanch u may be turned up, and again turned down toward the center horizontally to form with the base of the plate a retaining groove within which may traverse the outwardly projecting axes of the friction rollers r, r, r , Fig. 3.

The bolt B Figs. 4 and 3 which enters the hole d Fig. 1, passes first through the joint of a frame piece Q (Figs. 3, 4 and 5), having the form of a T —the cap or head piece of which constitutes a horizontal axis of motion a , for the main frame of the machine which carries the projecting points or fingers of the life preserver, F_1, F_2, F_3 , &c. By means of its motion about this latter axis, the points p_1, p_2, p_3 , &c., of the fingers, are depressed to the level of the track as seen at p_4 Fig. 4 where $v v$ represents the level of the railroad;—or they are elevated to a horizontal position when striking and lifting up an obstacle encountered on the track.

Instead of points, the fingers of my machine are terminated with vertical rollers, formed of a soft and elastic substance such as cork covered with leather, gum elastic, or similar materials. The purpose of these is to avoid wounding men and other animals while the fingers pass between their limbs. When thus coming between the fingers, the legs of the animal will immediately be struck by the cushion C_1 hung on two longitudinal sliding guide rods g, g' , (Figs. 3 and 4). This cushion carries at its center a light rod or bar M , which whenever pushed back, strikes the end of a lever T , (Figs. 2, 3 and 4), and carries backward the latching bar D , which had previously by its cross head and latch o resting in the notch g kept elevated the heavy weight W placed in the rear part of the movable or oscillating frame N . The descent of this weight raises the ends of the fingers F_1, F_2 , taking the animal up out of reach of the ground.

Above the oscillating frame N and fingers F, F , is placed the buffing cushion C , (Figs. 2 and 4,) made of elastic materials and attached by hinges to an iron frame I the side pieces of which have rack teeth R , on their under sides which are taken hold of by

pinions P, P, on a shaft *w*, crossing the frame N, which shaft is turned either by hand spikes or a crank *e*. The purpose of the cushion C is to break the shock given to an animal by being caught on the life preserver, and of the rack and pinion motion to draw back the cushion when the fingers, by their hinged joint J are to be turned backward over the frame N while the machine is placed in depot. The hinged frame has two joints *j j*, immediately back of the cushion C and also braces *b, b*, which when an object has been received upon the preserver are capable of being driven forward by the crank *e* and pinion P so as to force the said object off and discharge it clear of the track. When the fingers are to be folded over the truck as above stated the frame I and cushion C are folded flat by drawing back the braces *b, b*.

As the object about to be encountered on a railroad is sometimes observed near one side of the track it may be desirable in certain cases to direct the fingers of the life preserver to the right or left according to the position of such object. For this purpose there are placed on each end of the traveling truck Fig. 1, a pair of check arms *k, k, k₁, k₁*, capable of being either elevated to a vertical position as seen at *k, k*, or laid down nearly in a horizontal one, as at *k₁, k₁*. When the machine is running, the check arms at the rear end of the truck are set vertical and those at the front are laid down in order not to impede the horizontal revolving motion of the frame immediately above them. The purpose of the two elevated check arms is, by receiving an impulse from one or the other of the two springs S or, S, (Figs. 2 and 3) to give a sudden change of direction to the fingers to the right or left, so as to arrest an animal near one side of the track. In the meantime the check arm, not struck by the spring, will check the motion produced by the latter and limit the horizontal motion within the required extent. The check arms are kept from revolving too far by the check pins *x x*. The springs S, S₁, are when prepared for action pressed inward and held by the latches *h, h₁*, operated on by the bars E, E₁, and the levers L, L₁, Fig. 5, or any similar mechanical device under the control of the engineer. The depression of the lever L lets off the spring S. The hinges H H₁, (Figs. 2 and 4,) allow the rear portion of the rack frame I which carries the cushion C to be folded forward after the cushion itself has been drawn back so as to allow the fingers of the life preserver to be turned back upon the frame N as above described. In the rear part of the fingers are inserted vertical plate springs *s₁, s₂, s₃, &c.* intended to afford a slight vibratory motion to the points and lighten in

some measure the shock given by the roller points *p₁, p₇*.

What I claim as my invention and desire to secure by Letters Patent is,—

1. The manner of avoiding destructive violence to the limbs and bodies of animals by terminating the fingers of my machine with elastic rollers, rendering the fingers capable of a limited vibration to suit the action of those rollers and placing above the fingers a movable elastic cushion or buffer to receive the direct action of the animal which may be thrown upon the fingers substantially as herein set forth.

2. I also claim making the front part or fingers of an oscillating life preserver to rise by the act of encountering an animal on a railroad, in such manner as to lift the animal from its feet, clear of the track, whereby the life and limbs of the animal are preserved and the danger of throwing the train from the track is avoided, substantially as herein set forth.

3. I also claim the arrangement of machinery herein described composed of the cushion C, the sliding rods *g, g*, the thrusting bar M, the trigger T, the latch *o* and the notch *q*, combined and acting to produce the effect of elevating the fingers of the rail road life preserver when encountering an animal on the road substantially as herein set forth.

4. I also claim the arrangements whereby the fingers of a life preserver are while in motion made to receive at pleasure a limited horizontal deviation from their ordinary line of direction in order to arrest an animal near one side of the track the same being effected substantially as herein set forth.

5. I also claim in combination with the T-shaped frame, and weighted oscillating frame of my life preserver the jointed fingers, folding backward, and the jointed rack frame and cushion withdrawn and folding forward to produce a compact stowage when in depot in the manner substantially as herein set forth.

6. I also claim, the jointed, revolving and elastic life preserver herein described combined with a pivot-truck having a circular bearing for friction rollers, and also having check arms for producing and limiting the horizontal motion of the fingers substantially in the manner herein set forth, not intending by these claims to limit myself to the exact arrangement of parts herein described but to vary the same at pleasure while I attain the same ends by means substantially the same.

LOUIS MONTGILION.

Witnesses:

WALTER R. JOHNSON,
A. STEINWEHR.