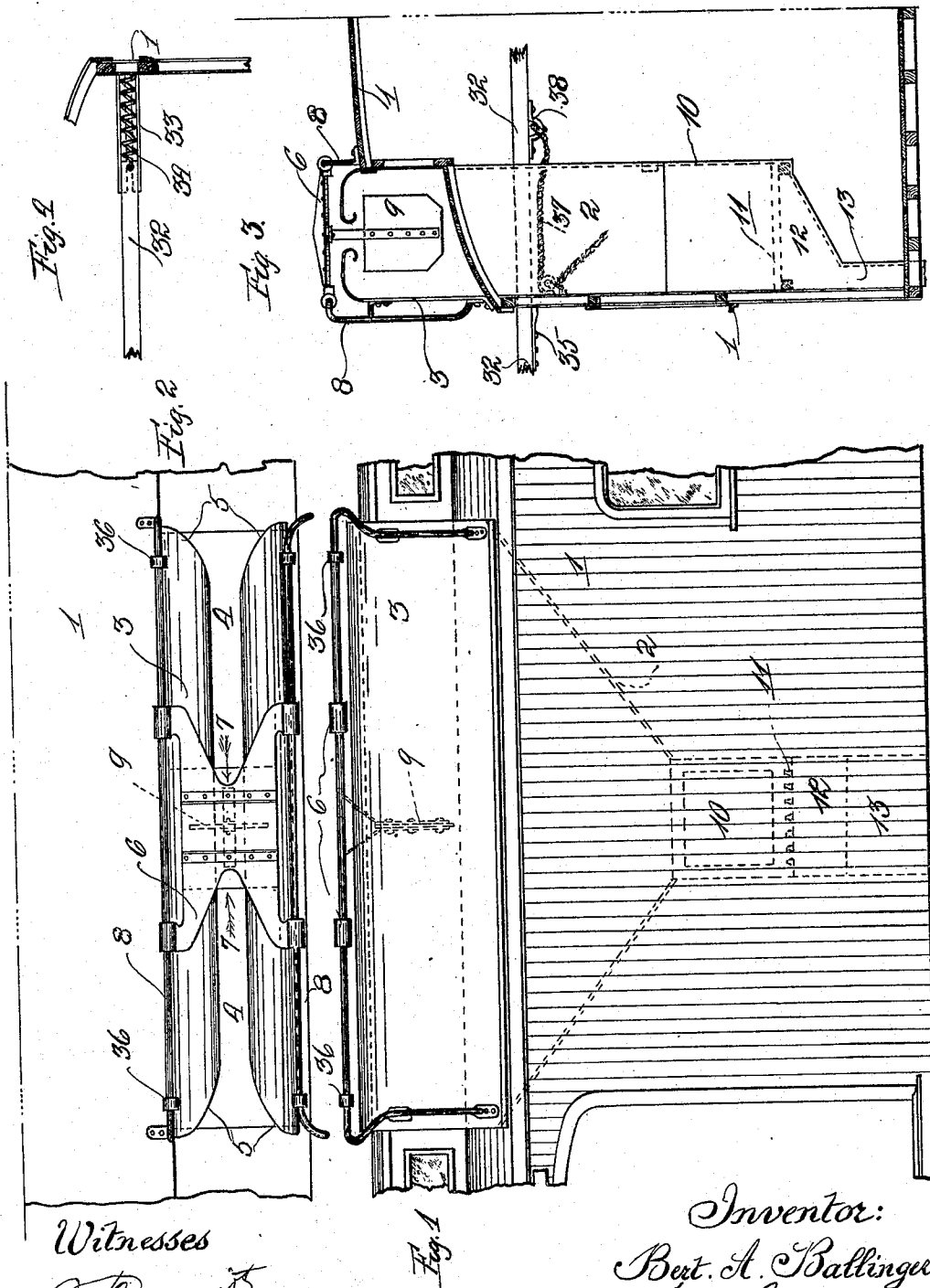


B. A. BALLINGER.
MAIL CATCHER.
APPLICATION FILED FEB. 1, 1909.

937,138.

Patented Oct. 19, 1909.

2 SHEETS—SHEET 1.



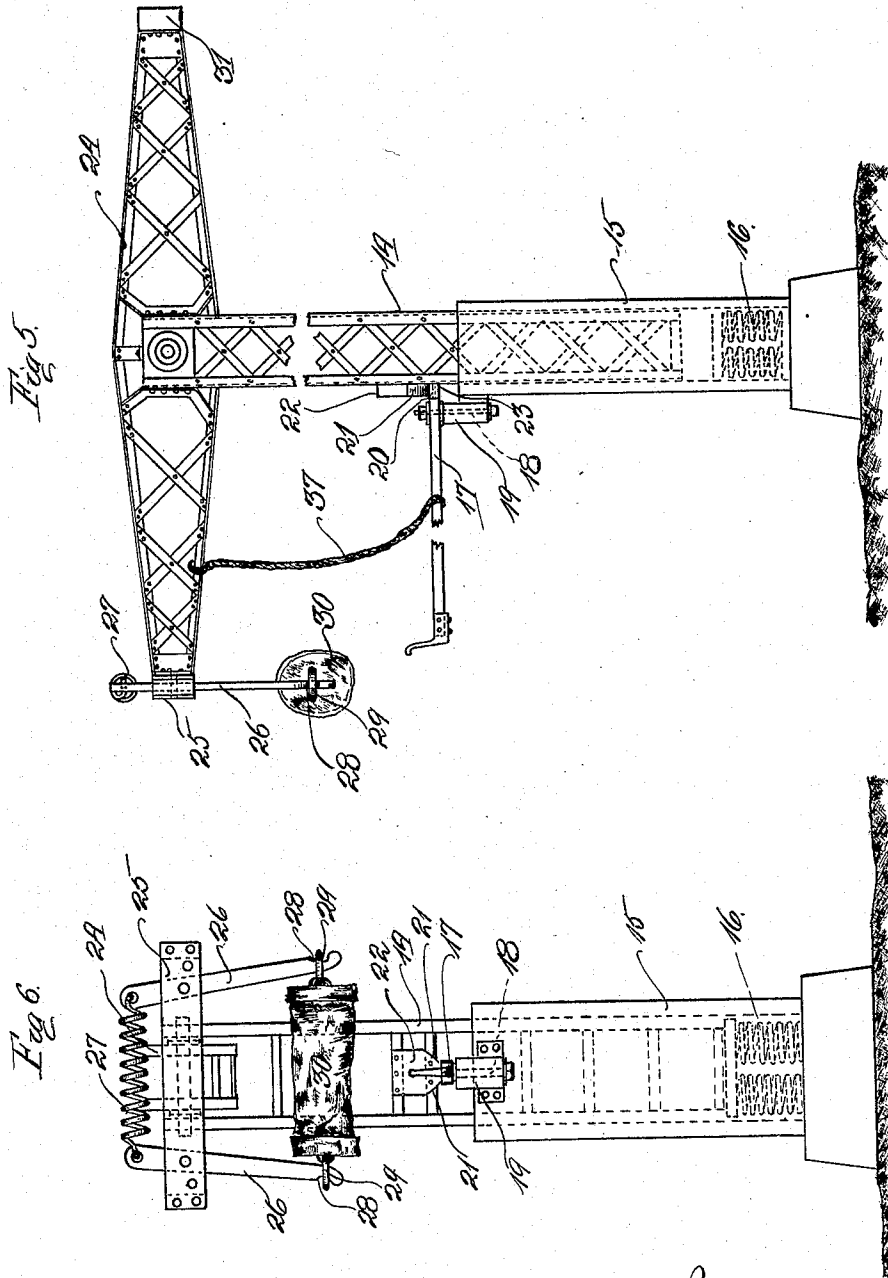
Witnesses
C. P. Rognquist
H. M. Barlow

Inventor:
Bert. A. Ballinger
by *Anton G. Hestner Jr.*
Attorney

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Witnesses
Chas. H. Thompson
H. M. Barlow

Inventor
Bert A. Ballinger
by *Anton Gloaguen* Attorney

UNITED STATES PATENT OFFICE.

BERT A. BALLINGER, OF LOS ANGELES, CALIFORNIA.

MAIL-CATCHER.

937,138.

Specification of Letters Patent.

Patented Oct. 19, 1909.

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To all whom it may concern:

Be it known that I, BERT A. BALLINGER, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Mail-Catchers, of which the following is a specification.

This invention relates to a mail-catcher for the railway mail service, and has particular reference to a means for automatically removing from a suspended point a mail bag during the transit of a mail train.

One of the objects of this invention is to provide a simple and efficient mail catcher for suspended mail bags by means of which the mail bag is delivered within the car without requiring at any time the assistance of an attendant.

Another object of this invention is to provide a novel means for suspending a mail bag whereby the same may be automatically removed from its point of suspension by a passing mail train.

With these and other objects in view, this invention consists of the features, details of construction and combination of parts as will be described in connection with the accompanying drawings and then be more specifically pointed out in the claims.

In the drawings, Figure 1, is a side elevation showing a fragment of a mail car provided with a chute, and the mail catching appliance attached thereto. Fig. 2, is a plan view showing the top of a mail car and the mail bag trap attached thereto. Fig. 3, is an end elevation showing the mail chute and the mail receiving trap in communication therewith, the car being shown in section. Fig. 4, is a side elevation of a means for suspending a mail bag to be delivered from a mail car at a station. Fig. 5, is a side elevation of the mail bag supporting crane, and Fig. 6, is a front elevation of the same.

Particular reference being had to the drawings, 1, designates a mail car body provided with a chute 2, which communicates with a trap 3, arranged on the top of said car. This trap 3, consists of a tubular body having a longitudinal slot 4, and outwardly flaring ends 5. Operating on and slidable relatively to said trap 3, is a flier 6, having V-shaped incisures 7, for the purpose to be set forth more fully hereinafter. Said flier 6, is mounted on rails 8, secured on the top of said mail car 1, and disposed on opposite

sides of said trap, and secured to and depending from said flier 6, is a flap 9, which extends within the passage way of said trap, and which is arranged to prevent the accidental escape of a mail bag, from either end of the trap 3, when the mail bag is delivered at a high velocity from a speeding car. This flap operates in the longitudinal slot 4, of the trap 3. At the side of the bottom of said chute 2, is an opening 10, from which the mail bags may be taken.

In order to preclude the accumulation of water and other foreign elements at the bottom of the chute 2, I provide at the bottom thereof a plurality of spaced, edged bars 11, and a hopper 12. Consequently when the mail bags are deposited on said bars 11, they are preserved from the moisture and rain which may have entered from the top, and the water is permitted to escape to the hopper, from which it is subsequently discharged through a drain pipe 13, provided on the bottom of the hopper. Coöperating with said trap 3, is a mail bag suspending crane or standard 14, vertically movable in a casing 15, fixed to the ground. On the bottom of said standard and also fastened to said casing are a plurality of springs 16. A lever 17, is pivoted by bolt 18, on a boss 19, which is bolted onto said casing. One end of said lever is provided with a roller 20, arranged to engage the cam faces 21 of the cam 22, secured to said standard 14. The said cam faces terminate in a flattened portion 23.

In the positions shown in Figs. 5 and 6, the lever 17, is supporting the standard 14 in its elevated position. When, however, the lever 17 is thrown to the left or to the right, or more properly, away from the flattened portion 23, the springs 16, aided by gravity, quickly withdraw the standard 14 from its elevated position, and when in such normal position, the movement of the lever toward said flattened portion causes the roller 20 to engage the cam faces 21, and elevate said standard 14, against the tension of the springs 16, until the roller rides under the cam 20, in which position it acts as a support for the standard 14. Pivoted to said standard 14, is a beam 24, having at one end a frame 25, in which are fulcrumed two arms 26, held normally pressed outwardly by a helical spring 27, fastened to said arm above said frame 25. These arms are depending and provided with notches

28, to receive the hooks 29, which are fastened to the mail bag 30. On the other end of said beam is a weight 31, designed to overbalance the said beam when the mail bag has been removed therefrom. In such instances where it may be desired to deliver the mail bag at a station, as is customary with the present system of railway mail delivery, the trap 3, aforementioned, may be rigidly placed in proximity to a passing car, and the mail bag supporting arm 26, as above described, secured to the end of a rod 32, as shown in detail in Fig. 4. This rod operates in a short sleeve 33 provided on the inside of the car 1, and is held normally withdrawn in said tube or sleeve by a spring 34. When withdrawn, by any means, the said rod is held against retraction by a lock 35 carried by the rod 32, which lock bears against the side of the car.

In operation, the standard 14, occupies the position shown in Figs. 5 and 6, and the beam 24, is at right angles to the standard. The mail bag 30 having been placed on the arms 26, and being held in place by the tension exerted by the spring 27, balances the weight 31, at the end of said beam 34. The provision of a standard capable of elevation, removes the liability of injury to the beam and standard, when it happens that the locomotive cab is on a level with the mail bag suspending arms. Thus when the cab passes beneath said mail bag, the lever 17, projecting directly in line with said cab or with means on said cab, not shown, is moved, thereby causing the roller to clear the flattened portion of the cam whereupon the standard drops. Being then in its normal position that is, in line with the slot of the trap 3, the arms carrying the mail bag, enter the said slot. When one of them comes into contact with one of the V-shaped incisures 7, of the flier 6, the flier travels along the rails 8 until it reaches the stops 36, when its travel is halted. This action causes the movement of one of said arms 26 relative to the other, and in this manner effects the release of the mail bag from one of said arms, and the removal of the same from the other arm when the flier is rapidly carried past said arm. Being thus removed from its point of suspension the mail bag falls into the chute 2. On account of the high speed attained by the railway mail trains, it may occur that the great impact of the flier 6 with the arms 26, would cause the mail bag to be thrown out of the trap 3, and to avoid this I have provided the flap 9. Immediately upon the removal of the mail bag from the suspending arms, the beam 24, by reason of the weight 31, assumes a position at an angle to the vertical axis of the standard 14. Any means for returning the said beam to its normal position at right angles to the axis of the standard 24, may be employed.

In Fig. 6, I have shown a cord or rope 37 for this purpose, and this rope may be fastened to said lever 17, so that the elevation of said standard 24, and the return of said beam may be effected simultaneously. Any means may be employed to extend the rod 32 from the car 1. In Fig. 3 I have shown one means, consisting of a rope 37 attached to a lug 38 which is fastened to the bottom of said rod. This rope is provided for the purpose of enabling the mail attendant to throw the rod in operative position from any place within the car.

What I claim, is:—

1. In combination with a mail bag supporting standard, a car provided with a chute, and slidable means on the top of said car to remove a mail bag from said standard.

2. In combination with a mail bag supporting standard, a car provided with a chute, and automatic means slidable longitudinally of the car to remove a mail bag from said standard and deposit the same in said chute.

3. In combination with a mail bag supporting standard, a car provided with a chute, a mail bag receiving body on the top of said car, and means on and movable relatively to said body to remove a mail bag from said standard.

4. In combination with a mail bag supporting standard, a car provided with a chute, a mail bag receiving body arranged on top of said car and communicating with said chute, and means slidable on said body to remove a mail bag from said standard.

5. In combination with a mail bag supporting standard, a car provided with a chute, a mail bag receiving body arranged on top of said car and communicating with said chute, said body having a slot, and slidable means operating in said slot to remove a mail bag from said standard.

6. In combination with a mail bag supporting standard, a car provided with a chute, a mail bag receiving body on top of said car and communicating with the interior thereof, said body having a longitudinal slot, and slidable means operating in said slot to remove a mail bag from said standard.

7. In combination with a crane having a mail bag supporting means, a car provided with a chute, a mail bag receiving body communicating with said chute, and means movable on said body to actuate said mail bag supporting means.

8. In combination with a crane provided with a plurality of normally outwardly pressed arms arranged to suspend a mail bag, a car provided on the top thereof with a longitudinally slotted body and communicating with the interior thereof, said body being arranged to accommodate said arms, and a member slidable on said body to oper-

ate said arms and remove a mail bag therefrom.

9. In combination with a crane having a mail bag supporting beam pivoted thereto, a car, a means on top of said car and communicating with the interior thereof to receive a mail bag, and a longitudinally movable member operating on said means to remove a mail bag from said crane.

10. A car provided with a mail bag receiving trap on the top thereof, in combination with an adjustable standard, a beam thereon provided with means to suspend a mail bag, means on said trap to automatically remove said mail bag from said suspension means, and means to raise said beam when said mail bag has been removed.

11. A standard, means to elevate said standard and hold same in its elevated position, a mail bag suspending beam on said standard, in combination with a car provided with a mail bag receiving trap, and a flier on said trap to remove said mail bag from said beam, said standard being arranged to be released to bring said mail bag in line with said trap.

12. A car provided with a mail bag receiving trap, and a flier connected therewith, in combination with a standard, means to elevate and hold elevated said standard, a beam on said standard, a mail bag suspending means on said beam, and means to operate said holding means for said standard to cause said standard to drop, thereby to bring said mail bag suspending means in line with said trap.

13. A car provided with a mail bag receiving trap, having a flier, in combination with a standard, a beam on said standard, a plurality of mail bag receiving arms on said beam, and means to cause said standard to drop whereby to bring said mail bag in line with said flier.

14. A car provided with a mail bag receiving trap, having a flier operating thereon to remove a mail bag from a suspending device, comprising an adjustable standard, a tiltable beam thereon, and a plurality of mail bag supporting arms on said beam.

15. A car provided with a mail bag receiving trap communicating with the interior of the car, said trap being provided with a flier to remove a suspended mail bag.

16. In combination with a car provided with a chute, a trap, and a flier on said trap to remove and deposit in said chute a suspended mail bag.

17. A car provided with a chute, and a trap, on the top thereof and communicating with the interior thereof, in combination

with a standard capable of being elevated, a combined elevating and locking lever for said standard when elevated, a mail bag supporting beam on said standard, means on said car to actuate said lever whereby to cause said standard to drop and bring said mail bag and the support therefor in line with said trap, and means operating on said trap to remove said mail bag from said beam.

18. In combination with a car provided with a chute, a trap on the top thereof and communicating with the interior thereof, a flier on said trap to remove a suspended mail bag, and means to prevent the escape of said mail bag from said trap.

19. In combination with a car provided with a chute, a trap provided on the top and communicating with the interior thereof, a flier on said trap to remove a suspended mail bag, and a flap connected with said flier to prevent the escape of said mail bag from said trap.

20. In combination with a mail bag supporting standard, a car provided with a chute communicating with the interior thereof, a tubular trap on the top of said car provided with a slot, rails on said car, and a means operating on said rails to remove a mail bag from said standard.

21. In combination with a mail bag supporting standard, a car provided with a chute communicating with the interior thereof, a tubular trap on the top of said car, rails on said car, and means slidable on said rails to remove a mail bag from said standard.

22. In combination with a mail bag supporting standard, a car provided with a chute communicating with the interior thereof, a tubular mail bag receiving body on the top of said car, rails disposed on opposite sides of said body, and means slidable on said rails to remove a mail bag from said standard.

23. In combination with a mail bag supporting standard, a car provided on the top thereof with a chute communicating with the interior thereof and terminating at the bottom thereof in a drain floor, a trap on the top of said car and communicating with said chute, and means operating relatively to said chute to remove a mail bag from said standard.

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

BERT A. BALLINGER.

Witnesses:

L. A. GREEN,
H. M. BARSTOW.