(No Model.)

J. F. MAINS.

MAIL BAG LOCK.

No. 432,756. Patented July 22, 1890.

Fig. 5.

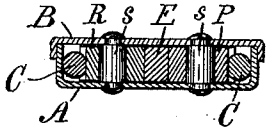


Fig. 3.

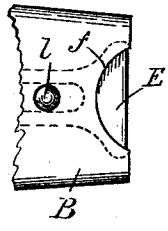


Fig. 4

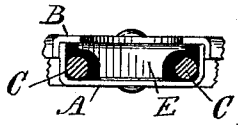


Fig. 1

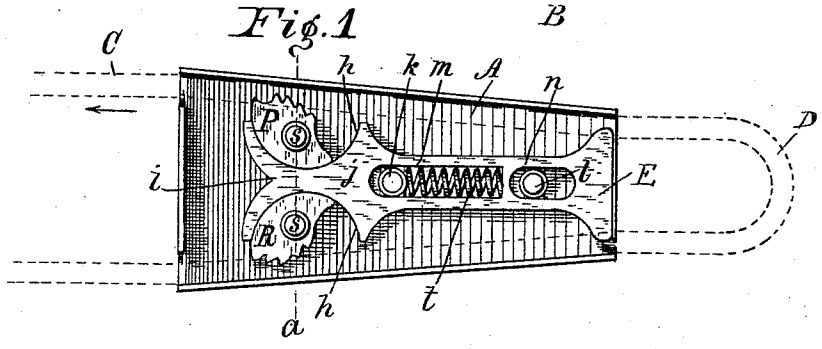
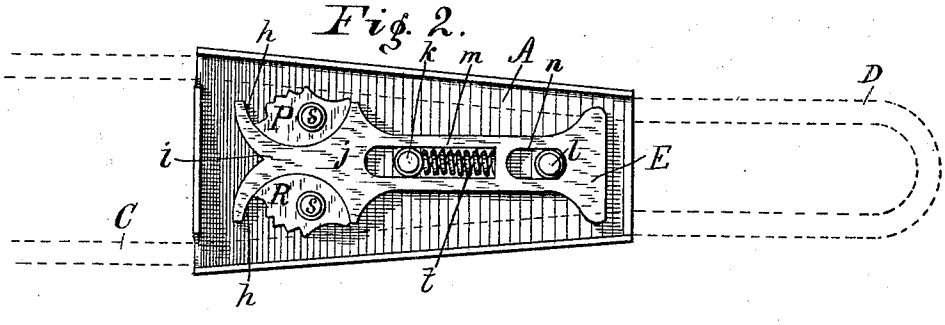


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN F. MAINS, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF THREE-FOURTHS TO BRUCE CARR, HARVEY M. LA FOLLETTE, AND EDWARD J. ROBISON, ALL OF SAME PLACE.

MAIL-BAG LOCK.

SPECIFICATION forming part of Letters Patent No. 432,756, dated July 22, 1890.

Application filed May 29, 1890. Serial No. 353,532. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. MAINS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in Mail-Bag Locks, of which the following is a specification.

My invention relates to an improvement in the mail-bag lock for which Letters Patent No. 413,624 were granted to myself and others (my assignees) October 22, 1889. The lock shown in the above-mentioned patent consists, essentially, of a metallic casing, through which the free ends of the lacing-cord of a mail-bag are threaded, a pair of dogs pivoted within the casing between the two free ends of the cord, which lie along opposite interior edges of the casing, a sliding wedge arranged between the dogs, and a cam adapted when turned by a key to force the wedge between the dogs, and thus clamp the rope ends between the faces of the dogs and the edges of the casing. In that device, when the cam is turned so as to release the wedge and dogs, the dogs fall away from the cord, and the cord may then be drawn freely through the lock in either direction, and there is no means provided for positively withdrawing the wedge or for positively withdrawing the dogs from the cord.

The objects of my present improvement are to positively control the movement of the dogs both toward and away from the rope; to hold the dogs normally in engagement with the cord, and to provide means contained entirely within the lock-case and presenting no projecting parts, whereby the pair of dogs pivoted within the case may be simultaneously released from the cord by the finger or thumb of the operator, all as hereinafter fully described.

The accompanying drawings illustrate my invention.

Figure 1 represents a plan of the interior, the top plate of the lock-case having been removed and the dogs being shown in the position of engagement with the cord. Fig. 2 reprents a like plan showing the dogs withdrawn from engagement with the cord. Fig. 3 represents a partial exterior plan. Fig. 4 represents an end elevation. Fig. 5 represents a cross-section at *a*, Fig. 1.

A and B are plates of sheet metal flanged at the edges to form a separable hollow casing, of which A is the bottom and B the top. The flanged edges of the plates are cut away at the corners to form openings, through which the ends of the cord C (shown in dotted lines) are passed, the cord lying along and in contact with the opposite inner sides of the casing. The bight D of the cord is to be understood to inclose the opening of a bag. (Not shown.)

E is a bar arranged to slide longitudinally within and along the center of the casing, and having one end exposed by cutting away a portion of the top plate at one end, as at *f*, Fig. 3. The edges of the bar E, near its inner end, are provided with a pair of opposed semicircular notches *h h*, thus forming a pair of oppositely-arranged wedges *i* and *j*, having curved working-faces and having their points toward each other. The bar E is held in place laterally by studs *k* and *l*, which pass through slots *m* and *n* in the bar, and serve also as rivets to hold the top and bottom plates together.

P and R are a pair of dogs having serrated faces adapted to engage the cord C, and curved back edges adapted to fit the surfaces of the notches *h h* of the bar E. The dogs P and R are eccentrically pivoted to the casing on opposite sides of the bar E in the notches *h h* by studs *s s*, the arrangement being such that when the bar is moved longitudinally in one direction the wedge *i* forces the longer ends and serrated faces of the dogs outward against the rope, and when the bar is moved in the opposite direction the wedge *i* is withdrawn and the wedge *j* forces the shorter ends of the dogs outward, thus withdrawing the serrated faces of the dogs from the cord. The wedge *i* is drawn forward between the dogs and held with a yielding force by means of a spiral spring *t*, arranged in the slot *m* of the bar E and resting with one end against

the stud *k*, so that the serrated faces of the dogs are forced normally outward against the cord, as seen in Fig. 1.

In operation, the bight of the cord having been passed around or laced through the mouth of the bag and the free ends passed through the lock between the edges of the casing and the serrated faces of the dogs, the cord may be easily drawn in the direction indicated by the arrow, Fig. 1, thus closing the mouth of the bag. Any attempt to draw the cord in the opposite direction is resisted by the dogs, which are thereby caused to turn on their pivots and to clamp the cord more closely. When the cord is to be released, so as to permit the opening of the bag, the operator places the end of his thumb against the exposed end of the bar E at *f*, and, pressing inward and overcoming the pressure of the spring *t*, forces the wedge *j* forward between the short ends of the dogs, thus turning the dogs on their pivots and withdrawing their serrated faces from the cord and permitting its withdrawal.

I claim as my invention—

1. In a bag-lock, the combination of the casing, the tie-cord arranged therein, two dogs having serrated faces and curved backs, said dogs being pivoted opposite each other in the casing with their serrated faces adjacent to the tie-cord, and the sliding bar mounted in the casing between the dogs and having a pair of oppositely-arranged wedges formed thereon and adapted to engage the opposite ends of the dogs, whereby the dogs are positively and simultaneously turned on their pivots in opposite directions by the reciprocating longitudinal movement of the bar, substantially as set forth.

2. In a bag-lock, the combination of the casing, the tie-cord arranged therein, two dogs having serrated faces and curved backs, said dogs being pivoted opposite each other in the casing with their serrated faces adjacent to the tie-cord, the sliding bar mounted in the casing between the dogs and having a pair of oppositely-arranged wedges formed thereon and adapted to engage the opposite ends of the dogs, and the spring arranged to force the bar longitudinally in one direction, all arranged to co-operate substantially as and for the purpose set forth.

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