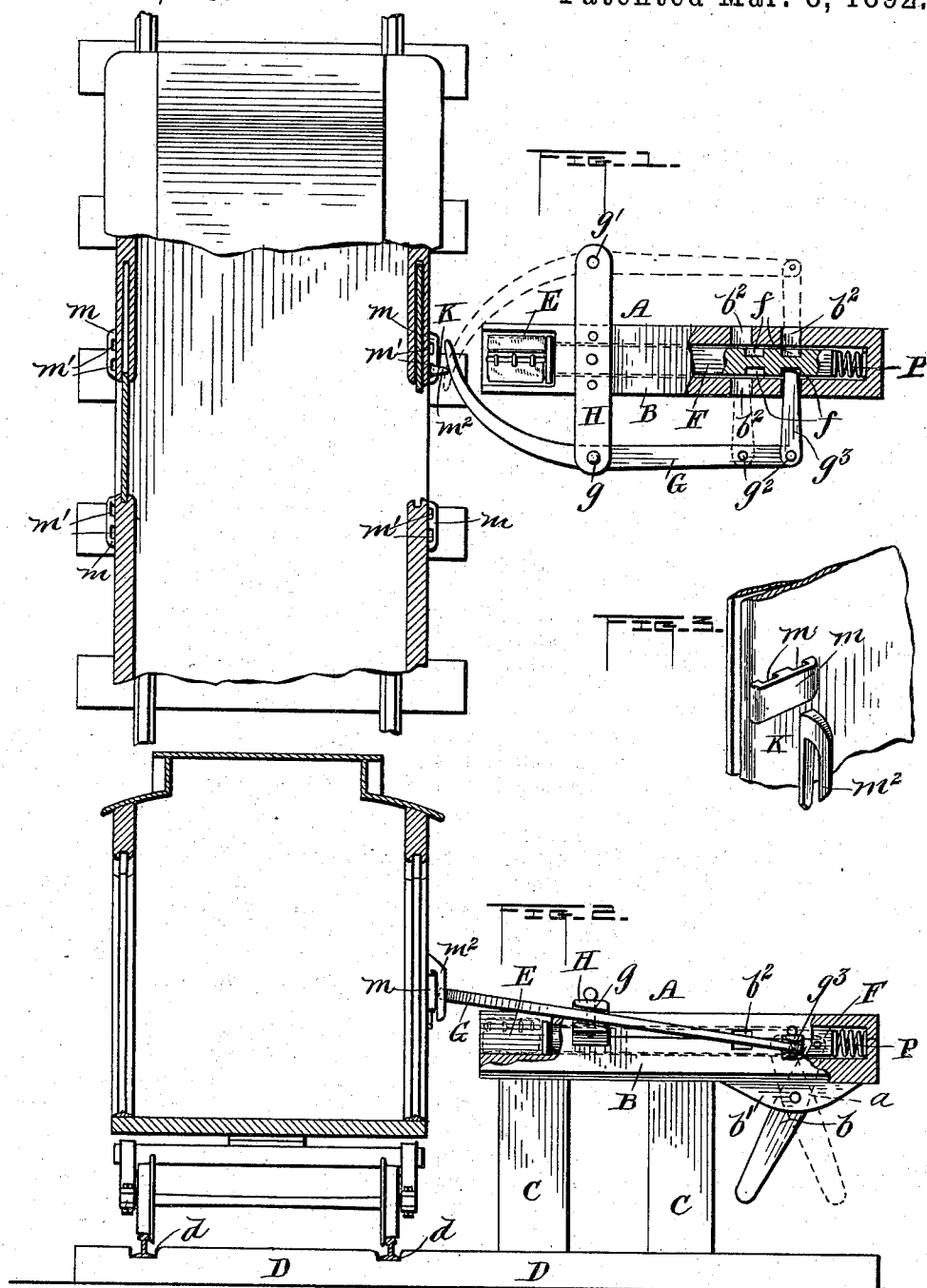


(No Model.)

J. E. MATTSON.
MAIL BAG PROJECTOR.

No. 470,645.

Patented Mar. 8, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN ERIK MATTSON, OF DULUTH, MINNESOTA.

MAIL-BAG PROJECTOR.

SPECIFICATION forming part of Letters Patent No. 470,645, dated March 8, 1892.

Application filed December 19, 1891. Serial No. 415,589. (No model.)

To all whom it may concern:

Be it known that I, JOHN ERIK MATTSON, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Mail-Bag Projectors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in mail-pouch projectors; and it consists in certain novel constructions, combinations, and arrangements of parts, as will be hereinafter described and specifically claimed.

In the accompanying drawings, Figure 1 is a top plan view of my invention working in conjunction with a mail-car, the same being shown partly in section. Fig. 2 is a vertical section of my improved mail-pouch projector working in conjunction with a mail-car, and Fig. 3 is a detail perspective view of a portion of the side of a car provided with the releasing device.

A in the drawings represents my improved mail pouch or bag projector, which is placed at the side of the track, with its front end toward the same. It consists of an elevated horizontal hollow housing or casing B, supported on posts or uprights C, and a bed-plate D, the housing being on about a plane with the door of a mail-car. The bed-plate D preferably extends under the track and is provided with notches or passages *d* to receive the rails, which latter are firmly secured to the same in any suitable manner. The casing or housing B is provided at its forward end with an open-ended receptacle E, into or upon which the mail-pouch intended to be projected into a passing car is placed. In the rear of this hollow housing or casing is a powerful coil-spring or elastic cushion, to the outer end of which is secured a sliding rod or projection F, which extends through the housing and projects into the mail-pouch receptacle E when the spring is in a released condition and is provided near its rear end with an operating handle or arm *b*, which works in a slot in the bottom of the housing and is pivoted in a downwardly-extending projection *b'*,

as shown in Fig. 2. The projector-rod is provided with notches *f*, into any one of which the rear end of a trip-lever, as G, may be inserted when it is desired to set the lever, as will be hereinafter described. The housing B is provided on its sides with openings *b*², corresponding to the number of notches in the rod F, into any one of which the pivoted end of the lever G may be inserted.

H is a transverse beam rigidly secured across the top of the housing and bifurcated at its outer ends, in either of which bifurcations the lever G may be pivoted, according to the direction in which the train is moving, as clearly shown in Fig. 1.

The horizontally-moving pivoted trip-lever G is preferably made in a curve form, as shown, and pivoted either at *g* or *g'* and extends out beyond the end of the housing, so as to come in contact with a tripping device K on the side of the car when the lever is set to project a mail-pouch into a car.

The trip-lever is provided with a series of holes *g*², preferably corresponding to the number of notches *f* in the projector-rod F, into any one of which holes a short arm *g*³ may be pivoted, the outer end of the arm being adapted to be inserted through any one of the holes *b*² into a corresponding notch *f* on the projector F.

A trip K is preferably permanently secured on each side of the mail-car door, and in this instance consists of a rectangular-shaped piece of metal or hard wood *m*, beveled on its outer corner edges and provided with openings *m'*, into which a projecting U-shaped piece *m*² is preferably removably inserted, as clearly shown in Fig. 3.

By securing a piece *m* on each side of the mail-car door and on both sides of the car and having the piece *m*² removable the latter may be readily adjusted to any desired point when it is desired to use the same, or it may be removed entirely when not in use.

By forming the trip-lever G with two or more adjustable holes *g*² and placing one end of the pivoted arm *g*³, say, in a hole nearest the rear end of the lever, and inserting the other end of the arm *g*³ through a passage *b*² nearest the rear end of the passage B and seating it in a notch *f* nearest the rear end of the rod F the spring P will be powerfully

compressed, which will adapt it for projecting very heavy mail-pouches, and by placing one end of the arm g^3 in a hole forward of the rear hole and the other end in a notch forward of the rear notch in the rod F the spring will be less compressed, and consequently better adapted for projecting lighter mail-pouches. By employing a number of adjusting holes, passages, and notches, the spring can be regulated to suit any weight of pouch.

The operation of my invention is as follows: The projector-rod F is drawn backward by the handle-lever b , thereby compressing the spring P to any desired extent, and the pivoted arm on the trip-lever G is then passed through one of the holes in the side of the housing into one of the notches f in the projector-rod, by which the rod and spring are held in a depressed condition when the hand is removed from the handle-lever. This completes the setting of the trip-lever G. The mail-pouch is then placed in or on the pouch-receptacle in front of the projector-rod, and a mail-car provided with my tripping device passing by at from twenty to sixty miles per hour will strike the curved end of the lever, and thereby withdraw the arm from its notch in the projector-rod, release the projector-rod, and shoot the mail-pouch into the open car-door.

What I claim as my invention is—

1. In a mail-bag projector, the combination of the horizontally-arranged housing B, placed on suitable supports and provided at its front end with a suitable mail-bag receptacle, as E, a sliding projector-rod F, having catch-notches, as f , a spring, as P, which operates the rod directly in line of the movement of the rod, and a pivoted trip-lever G, working in conjunction with the catch-notches on the rod F, by which the said lever is held in operative condition, whereby when the outer end of the trip-lever is struck by a passing train the same is released, substantially as and for the purpose described.

2. In a mail-bag projector, the combination of the housing B, elevated on suitable sup-

ports and provided at its front end with a mail-bag receptacle E and with side passages b^2 , a sliding projector-rod F, provided with catch-notches f , spring P, and a pivoted trip-lever G, working in conjunction with the catch-notches on the rod F and provided with adjusting-holes g^2 for regulating the tension of the spring, substantially as and for the purpose described.

3. In a mail-bag projector, the combination of the housing B, provided with a mail-bag receptacle E at its front end and side passages b^2 , a sliding projector-rod F, provided with catch-notches f , operating-spring P, and a pivoted trip-lever G, and provided at its rear end with a pivoted arm g^3 , substantially as and for the purpose described.

4. In a mail-bag projector, the combination of the housing B, provided with a mail-bag receptacle E at its front end and side passages b^2 , a sliding projector-rod F, provided with catch-notches f and operating-handle b , operating-spring P, and a pivoted trip-lever G, having adjusting-holes g^2 and provided at its rear end with a pivoted arm g^3 , the said projector working in conjunction with a trip K on the side of a car, which trip comprises in its construction a piece m , provided with openings m' and a piece, as m^2 , substantially as described.

5. In a mail-pouch projector, the combination of the housing B, provided at its front end with a mail-bag receptacle E and with passages b^2 on both sides, a sliding projector-rod F, provided with notches f on both sides the rod, operating-spring P, pivoted trip-lever G, and transverse beam H, adapted to receive the said lever at either of its ends, whereby the lever may be set with respect to the trains moving in two directions, substantially as described.

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

JOHN ERIK MATTSO.

Witnesses.

ORISSA E. W. MILLER,
J. D. MILLER.