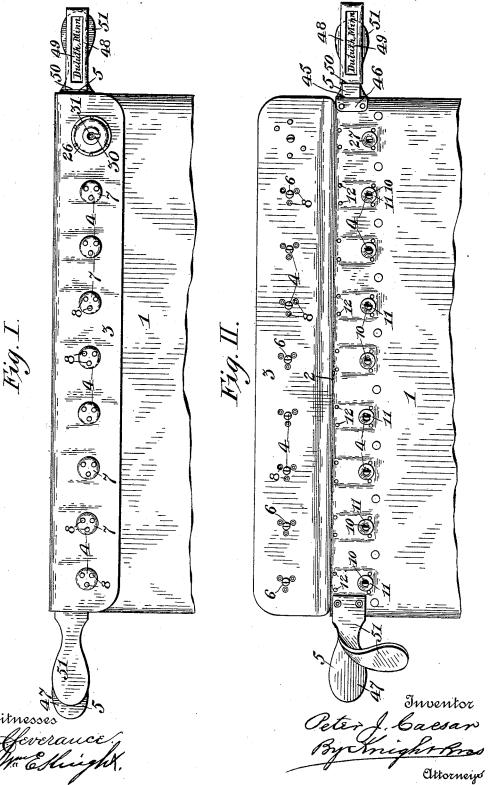
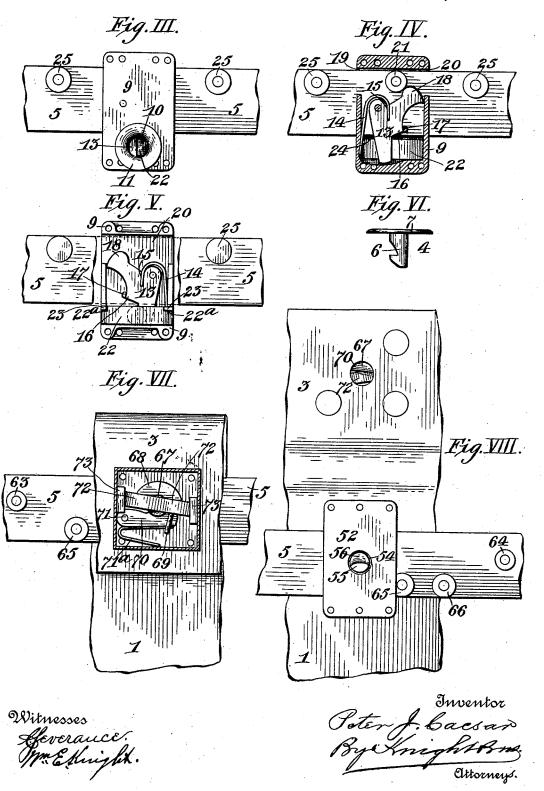
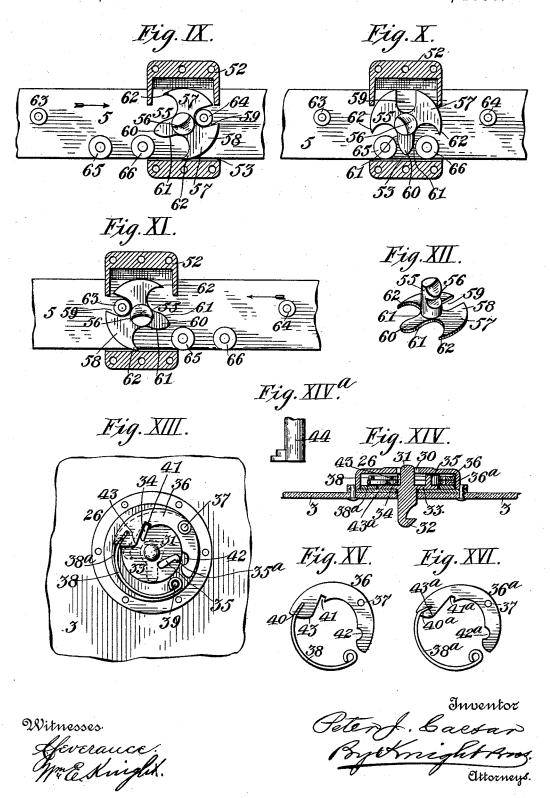
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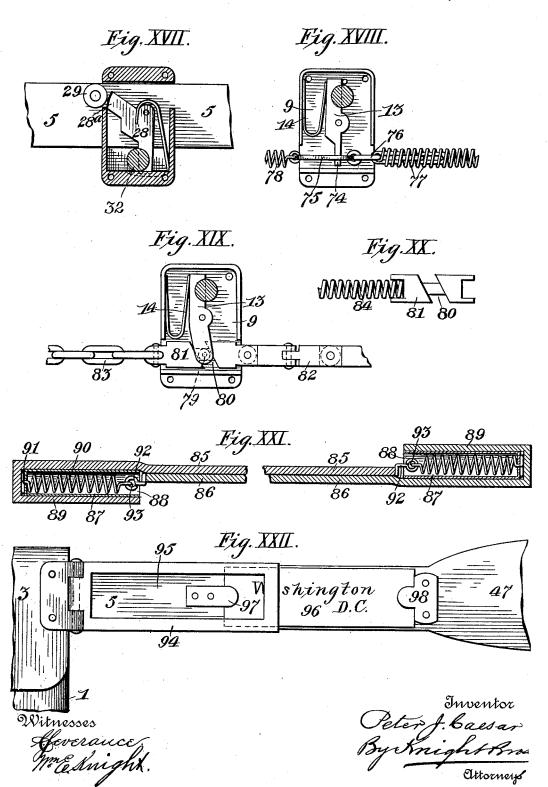
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No. 494,119.



## UNITED STATES PATENT OFFICE.

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#### MAIL-BAG.

SPECIFICATION forming part of Letters Patent No. 494,119, dated March 28, 1893.

Application filed February 20, 1892. Serial No. 422,306. (No model.)

To all whom it may concern:

Be it known that I, Peter J. Caesar, a citizen of the United States, residing at Duluth, St. Louis county, Minnesota, have invented certain new and useful Improvements in Mail-Bags; and I do hereby declare that the following specification, taken in connection with the accompanying drawings, is a full, clear, and exact description of my improvements, such as will enable those skilled in the art to make and use the same.

My invention relates to improved means for securely fastening the mouths of mail bags, and is an improvement in that class of devices in which a series of fastening devices is under the control of a movable strap or chain which is adapted to be locked in position by a main controlling lock.

My invention consists first in certain improvements in the spring locks or fastening devices for securely fastening the flap of the mail bag over the mouth.

My invention consists secondly of improvements in the construction of the main controlling lock.

My invention consists thirdly of new forms of straps and chains for actuating the fasten-

My invention consists, lastly, of improve-30 ments in address plate attachments which are particularly valuable in combination with my improved locking devices.

I will first describe my improvements with reference to the accompanying drawings and 35 then more particularly point out in the claims

what I deem as new therein.

In said drawings:—Figure I is a front elevation of a portion of a mail bag with my improvements applied thereto, and showing the closing flap folded over and locked in place. Fig. II is a similar view the flap in open position. Fig. III is an enlarged front view of one of the spring locks and a section of the controlling strap. Fig. IV is a similar view with the front plate broken away to show the internal construction of the lock. Fig. V is a bottom view of the same, with the bottom plate removed and a portion of the strap broken away. Fig. VI is a side elevation of one of the upper members or locking bolts. Fig. VII is a front elevation of a section of mail bag provided with a modified form of

lock the closing flap being represented in closed position, the front plate being broken away. Fig. VIII is a similar view represent- 55 ing the flap opened. Figs. IX, X, and XI, are top views of the rotary bolt mechanism shown in Fig. VIII, the top plate being removed and the operation of the bolt being represented. Fig. XII is a perspective view of 63 the rotary bolt and its operating cam base. Fig. XIII is a front view of the upper member of the main controlling lock, the front plate being removed to show the internal construction. Fig. XIV is a sectional view of the 65 same. Fig. XIV<sup>a</sup> is a detail view of the key. Figs. XV and XVI are detail views of the spring tumblers. Fig. XVII is a view similar to Fig. IV of the lower portion of the main controlling lock. Fig. XVIII is a similar 70 view to Fig. IV of the same form of spring lock, showing the use of modified forms of chains for actuating them. Fig. XIX is a similar view showing further modifications of actuating chains, and Fig. XX is a further 75 modification in which a heavy coil spring is employed. Fig. XXI is a transverse sectional view of a bag illustrating a modified arrangement of actuating strap and operating handles. Fig. XXII is a detail view of a modi- 80 fied form of address plate holder.

Like numbers of reference indicate the same parts throughout the several views.

1 is a mail bag or pouch provided with the mouth 2 and the closing flap 3.

Arranged at short intervals along the adjacent edges of the mail bag and flap are my improved locking devices 4 under the control of a sliding strap 5, as will now be explained. Each one of the locking devices is composed 90 of two members arranged in proper relation to each other on the bag and closing flap respectively. The upper member which is secured to the closing flap consists of a bevel ended hook-shaped locking bolt 6 formed 95 with a supporting base 7; said bolt being passed through a suitable opening in the flap so as to project from the inside thereof, and secured thereto by riveting the supporting base plate 7 to the flap by means of rivets 8. 100 It is preferable to have the hooks of these locking bolts all extending in the same direc-

9 are the lower members of the locking de-

vices. Each of these lower members consists | of an oblong metallic casing having an opening 10 in its face for the reception of the locking bolt, which opening is surrounded by an internally beveled boss 11 to guide the locking bolt into its seat in the casing. When the easings are applied to the mail bags a series of holes is made in the proper places adjacent to the upper edge thereof, through 10 which holes the bosses 11 are projected and the casings riveted in place by means of rivets 12, the edge of the bag being preferably turned over onto the backs of the casings to form a smooth mouth to the bag. In each of 15 these easings is pivoted a catch or latch 13 whose forward end or nose projects across or traverses half of the opening 10 for the purpose of engaging the hook on the end of the locking bolt 6.

14 is a curved spring secured in the slit 15 in the catch 13 and engaging the side wall of the casing 9, for holding said catch in its normal position, that is with its forward nose projecting over half of the opening 10 and the shoulder 16 in engagement with the lug 17. The catch 13 has a rearwardly extending cam shoulder 18 which projects into the transverse opening through the casing for the purpose presently to be explained.

opening 17 through it, which opening is wider at its rear end 20 for the purpose of allowing the lugs on the actuating strap to pass. The strap 5 is passed through the transverse opening of all the casings, and is provided with a series of circular lugs 21 small enough to pass through the rear portion 20 of the opening 19 and adapted to engage the cam shoulder 18 of the spring catch 13 for moving said catch 40 on its pivot when it passes back and forth therein so as to release it from engagement

with the locking bolt.

22 is a flat spring supported transversely in the casing 9 across the opening 10 and the 45 nose of the spring catch 13. Said spring is cut away near its ends at 22° so as to fit between the retaining lugs 23 which hold said spring from lateral displacement, the bottom plate 24 and notched side walls of the casing 50 serving to support it vertically. When the locking bolt is pressed into its seat in the opening 10 said spring 22 gives sufficiently to allow the bolt to enter far enough for the spring catch to engage it, and when the spring 55 catch is disengaged therefrom in the manner already explained said spring 22 ejects the bolt from the lock case and causes the flap to open. The strap 5 is also provided with a series of larger lugs 25 which are too large to 60 pass through said opening 20 these lugs being for the purpose of limiting the to and fro movement of the actuating strap.

26 is the upper member and 27 the lower member of the main controlling lock, which 65 are secured to the adjacent edges of the bag and flap, preferably at the right hand side.

The lower member 27 of this lock differs from 1 lugs 34 and 35. The actuating strap 5 passes

the lower members of the auxiliary locking devices in the omission of the ejecting spring 22, and in the different formation of the rearwardly projecting heel 28° of the spring catch 28. This heel 28° is made to project farther into the transverse opening through the lock case than the cam shoulders 18 of the auxiliary devices and is not formed with cam faces 75 as in said auxiliary devices, but is adapted to engage and positively hold a lug 29 on the strap 5 so as to prevent the shifting of said strap for opening the bag.

The means for locking the spring catch 28 80 consists of the peculiar construction of the upper member 26 which will now be described. The upper member 26 consists of a circular casing having a keyhole 30 from the central circular part of which projects a hub 85 31 which is formed integral with the hookshaped locking bolt 32 projecting from the opposite side of the casing through the closing flap. 33 is a circular plate formed integral with the locking bolt 32 and the hub 31 90 and is rotatably supported in the casing 26, a central circular recess being formed therein for this purpose. Said plate has projecting from it lugs 34 and 35 which extend in the same direction as the hub 31 and are for the 95 purpose which will presently appear. 36 and 36° are semi-circular levers or tumblers pivoted near their centers 37 within said casing 26 and controlled by springs 38 and 38a secured in said casing 26 upon a pin 39 and re- 100 spectively engaging the forward ends of said tumbler levers at 40 and 40°. Said tumblers 36 and 36° are also formed with internal notches 41, 41a, and 42, 42a, the notches 41, and 41a, of which are adapted to engage said lug 105 34 when it is in its locked position. The forward ends of the tumbler levers 36 and 36a are formed with inwardly projecting curved cam faces 43 and 43a, extending into the path of the key 44, whereby said tumblers will be 110 rocked on their pivot by the movement of the key, and the locking bolt 32 rotated to disengage the projecting heel 28a of the spring catch 28 to allow the strap 5 to be shifted to the right for unlocking the auxiliary locking 115 devices, in the manner presently to be explained. The cam face 43 on the tumbler 36 extends farther out into the path of the key than the cam face 43° of the tumbler 36° to correspond to the stepped engaging face of 120 the key, and as both of said tumblers engage the lug 31 and prevent the rotation of the locking bolt 32, it is obvious that said locking bolt cannot be rotated unless both of said tumblers are operated simultaneously. The 125 lug 35 has a hook end 35" adapted to engage the cam faces of the tumbler levers and prevent the locking bolt from being rotated too far. This lug also serves to return the locking bolt to its normal position as will pres- 130 ently appear. The notches 42 and 42 in the tumbler levers are for preventing interference between the tumblers and the

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through all of the lock casings 9 and the lower member 27 of the main controlling lock, and has its ends projecting from the sides of the bags through openings 45, which 5 openings are preferably strengthened by means of bent metal plates or bushings 46 which are perforated to allow the passage of the strap. The projecting ends of the strap are formed with suitable handles 47, 48, for to convenience of operation. The handle 48 on the right hand end of the strap is preferably formed of an oblong metal casing riveted to the end of the strap and provided with a plate spring extending through it and an ob-15 long opening 49 cut in its face. This metal casing is adapted to receive the address card from its inner end through the opening 50, the spring serving to hold the card in place. As the opening for the passage of the ad-20 dress card is at the inner end of the casing, which end is close up to the bushing 46 when the strap is pulled to the left and the bag is in locked position, it is obvious that the card cannot be removed and changed after 25 the bag is locked but that it is necessary to insert the card before closing the bag. I also provide handles 51 riveted to the opposite sides of the bag adjacent to the handles of the actuating strap, which serve the purpose 30 of holding the bag when the strap is shifted

from one position to the other. The operation of the improvements as above described is substantially as follows:-When it is desired to lock the bag the address card 35 is inserted in the casing 48 and the actuating strap 5 pulled to the left as far as it will go. At this point in the operation it will be observed that the hooks of all of the auxiliary locking bolts 6 extend to the left, while the hook 40 of the main locking bolt 32 extends to the right, and that the spring catches 13 and 28 extend from the corresponding sides of the openings 10 to engage said hooks when the locking bolts are pressed down into position. 45 The flap is then folded over and all of the locking bolts pressed into position so as to be engaged by their respective spring catches when it will be found that the bag is securely

locked and cannot be opened without the aid
50 of the key 44, because the auxiliary spring
locking devices cannot be disengaged without
moving the actuating strap 5 and said actuating strap is securely held against movement by the heel 28° of the spring catch 28
55 which engages the lug 29. It may be observed

which engages the lug 29. It may be observed that the lug 29 could slip over the heel 28° and allow the strap to be pulled to the right if it were not for the fact that the locking bolt 32 prevents its movement on its pivot,

for owing to the fact that the spring catches are pivoted so as to operate on the opposite sides of the openings 10 in the auxiliary devices, the strap would have to be moved in different directions for disengaging the aux-65 iliary devices and the main controlling lock.

When it is desired to unlock the bag, the key is inserted in the keyhole 30 and rotated on and projections 62, for rotating the bolt. The

the hub 31 until it comes in contact with the cam surfaces 43 and 43°; engaging said cam surfaces, the tumblers 36 and 36° are rocked 7° out of engagement with the lug 34 so that the key can come in contact with said lug 34 and move it to the right, said lug rotating the locking bolt 32. It will be observed that the tumbler levers 36 and 36° are cut away 75 sufficiently adjacent to their pivot to allow the lug 34 and key 44 to pass. The key 44, carrying with it the lug 34 and locking bolt 32, will rotate to the right until the lug 34 comes opposite to the notch 42 in the oppo-80 site end of said lever 36, at which point the hook end 35° of the lug 35 comes in contact with and engages the cam faces of the tumblers and prevents the further rotation of the bolt 32. This action has reversed the posi- 85 tion of the locking bolt 32 so that its hook end extends to the left, its plain side having engaged the nose of the spring catch 28 and moved said catch on its pivot against the action of its spring so as to remove the project- 90 ing heel 28a from the path of the lug 29. The actuating strap 5 is now unrestrained and it can be pulled to the right which will disengage the spring catches 13 from the locking bolts 6 and allow the springs 22 to eject the 95 bolts from the lock cases and cause the flap to open. In the reverse movement of the upper member of the main controlling lock for placing the main locking bolt in position for locking the bag, the key moves around to 100 the left into engagement with the cam surface 43 and lug 35, by means of which engagement with said lug 35 the parts are re-

turned to their normal position. I will now proceed to describe the modifi- 105 cations illustrated in Figs. VII to XX inclusive. And first with reference to Figs. VII to XII inclusive, it will be observed that the arrangement is slightly changed, and that I have provided a rotary locking bolt formed 110 with a cam base under the control of the actuating strap, operating in conjunction with a spring catch carried by the closing flap. In this form 52 is a series of oblong metallic casings formed with transverse openings 53 115 through them and circular openings 54 in their faces through which extend the rotary locking bolts 55 provided with the bevel hook ends 56 and a cam base 57. These casings are arranged at intervals adjacent 120 to the upper edge of the mail bag proper. The cam base 57 is formed with a circular portion 58 in the center of which is a notch 59, and a diametrically opposite double faced lug or cam 60 formed with the curved cam 125 surfaces 61 joining the circular portion 58 and forming the projections 62. The actuating strap 5 for controlling the rotary bolt 55 is formed with the circular lugs 63 and 64 which are adapted to engage in the notch 59 130 for limiting its to and fro movement, and larger circular lugs 65 and 66 operating in conjunction with the cam 60, cam surfaces 61

spring catch devices, which are very similar in construction to the spring catches employed in the preferred form, are arranged at intervals on the upper side of the closing flap in proper relation to the rotary locking bolt. The casing of this spring catch device is riveted to the closing flap and formed with a central opening 67 adapted to receive the locking bolt, a circular opening being also cut to through the closing flap. 68 is a semi-circular boss surrounding the upper half of the opening 67 and having a guide arm 69 projecting therefrom. 70 is a spring catch pivoted at 71 to the casing 66 and adapted to 15 traverse one half of the opening 67 and engage the hook 56 on the locking bolt 55, said spring catch operating under and being held from vertical movement by said guide arm 69. 71° is a spring actuating said pivoted 20 catch 70, and  $7\overline{2}$  is the plate spring extending across the opening 67 and held in the arms 73extending up from the plate 66 and adapted to eject the bolt from the opening 67.

Figs. XIII, XIV, XV, XVI and XVII illus-25 trate the construction of the main controlling lock which has been already described. This main controlling lock is also employed in connection with my modified forms of locking de-

vices.

In Fig. XVIII I have shown a spring catch 30 13 having a contracted end 74 engaging an oblong link 75 of a chain 76, by means of which said eatch is actuated. A strong spiral spring 77 may be provided surrounding the 35 chain 76 to prevent a sharp instrument being inserted through the bag into engagement with the chain and actuating the spring locks. On the left of said figure I have represented a strong spiral spring 78 which is connected 40 directly to the link 75 to take the place of the chain 76.

In Fig. XIX the spring catch 13 is provided with an anti-friction roller 79, extending at right angles to its rear end and engaging in 45 a cam slot 80 formed in the rotatable link or pin 81 which is supported so as to rotate in the transverse opening through the casing. 82 is a chain attached to the right hand end of said link 81, and 83 is another form of 50 chain attached to the opposite end of said link, by means of one form of which chains the link 81 is rotated for disengaging the spring eatch from the locking bolt. In Fig. XX I have represented a strong spiral spring 55 84 for operating said link 81.

In Fig. XXI I have shown a modified arrangement of the actuating strap and an improved form of operating handles. In this arrangement I employ preferably two straps 60 85, 86, to one end of each of which is riveted a cylindrical metallic shell 87 with its inner end 88 open. These metallic shells are preferably covered with leather 89 which is either glued or riveted thereto. 90 is a spiral spring 65 supported in each of said metallic shells and

therein. 92 is a wire staple riveted to the opposite end of each of the straps 85 and 86 and provided with an eye 93 into which the op- 70 posite or outer end of the spiral spring 90 is attached. By this means it will be observed that the opposite ends of the straps 85, and 86 are provided with suitable operating handles, and that the adjacent ends of said straps 75 are attached together through the medium of the spiral springs. One of said straps is securely riveted to the mail bag while the other strap is provided with the actuating lugs for controlling the spring catches. Or if pre-80 ferred a single strap can be employed as in the preferred form of my invention in which case the strap 86 will represent a section of the mail bag, the parts being connected in the same manner. It will be observed that 85 with this form of the improved actuating strap, the strap is allowed to be pulled to the right for actuating the locking devices, and the spiral springs will return it to its normal or left hand position, when the parts will be 90 in readiness for locking the bag without the necessity of pulling the strap to the left.

In Fig. XXII I have shown a modified arrangement of address plate attachment. 94 is a metallic frame hinged to the upper right 95 hand corner of the mail bag adjacent to the opening through which the actuating strap 5 passes. Said frame is formed with the oblong opening 95 in its face for exposing the address card 96, and a passage way extend- 100 ing from end to end thereof through which the actuating strap 5 passes, the side walls being bent over to the rear to retain said strap in place. 97 and 98 are spring lugs riveted to the strap 5 a sufficient distance 105 apart to receive between them the address eard 96, and at a sufficient distance from the right hand end of the strap to carry said address card into place in the frame 94 when the strap is pulled to the left in position for lock- 110 ing the bag. It will be observed that with this form of address card attachment it is also necessary to insert the card before locking the bag, and it is impossible to remove the card before unlocking the bag.

Having thus described my invention and the manner of carrying the same into practice, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In combination with a mail bag and its closing flap; a series of locking devices each composed of two co-operating members which are arranged respectively on the adjacent parts of the bag and flap, one of said mem- 125 bers consisting of a locking bolt, and the other of said members consisting of a spring catch adapted to engage said locking bolt; a suitable cam on each of one set of said members adapted to actuate them and re- 130 lease the bolts from the spring catches; and an actuating strap provided with a series of having its outer end 91 securely fastened lugs adapted to engage all of said cams for

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releasing all of said locking devices simultaneously; substantially as and in the manner set forth.

2. In combination with a mail bag and its 5 closing flap, a series of locking bolts, a series of metallic casings having openings in their faces to receive said bolts, and transverse openings through their sides, to receive an actuating strap or chain, spring catches pivotally supported in said casings and having their engaging noses traversing the openings in the faces for engaging the locking bolts, and their cam shoulders traversing the transverse openings, and a strap or chain passing through all of said transverse openings and engaging the cam shoulders of said catches for actuating them, substantially as and for the purpose set forth.

3. In combination with a mail bag and its closing flap, a series of locking bolts, a series of pivoted spring catches adapted to engage said bolts and formed with cam shoulders, and an actuating strap provided with a series of lugs adapted to engage said cam shoulders for actuating the spring catches and disengaging them from the locking bolts, sub-

stantially as set forth.

4. In combination with a mail bag and its closing flap, a series of locking bolts, a series of spring catches adapted to engage said bolts and formed with cam shoulders, an actuating strap provided with a series of lugs adapted to engage said cam shoulders for actuating the spring catches, and a main control-ling lock adapted to engage said actuating strap and hold it when the bag is closed, sub-

stantially as herein set forth.

5. In combination with a mail bag and its closing flap, a series of locking bolts, a series 40 of metallic casings having openings in their faces to receive said bolts, and transverse openings through their sides to admit the passage of an actuating strap, spring catches pivotally supported in said casings and having 45 their engaging noses traversing the openings in the faces of said casings for engaging said locking bolts, and formed with cam shoulders extending into the transverse openings, an actuating strap passing through all of said 50 transverse openings and provided with lugs which are adapted to engage said cam shoulders for actuating said catches, substantially as set forth.

6. In combination with a mail bag and its closing flap, a series of locking bolts, a series of metallic casings having openings in their faces to receive said bolts, transverse openings through said casings adapted to receive an actuating strap, spring catches pivotally supported in said casings and formed with cam shoulders, an actuating strap passing through said transverse openings and provided with lugs which are adapted to engage the shoulders of said catches, and lugs on said strap adapted to engage the sides of said casings for limiting its movement, substantially as set forth.

7. In combination with a mail bag and its closing flap, a series of locking bolts, a series of pivoted spring catches adapted to engage 7° said bolts and formed with cam shoulders, an actuating strap provided with lugs adapted to engage the shoulders of said catches for actuating them, a main controlling lock, and a lug on said actuating strap engaged by said 75 controlling lock, whereby all of the locking devices can be locked in engaged position,

substantially as set forth.

8. In combination with a mail bag and its closing flap, a series of locking bolts, a series of pivoted spring catches adapted to engage said bolts, an actuating strap engaging said catches for actuating them, a main controlling lock provided with a pivoted latch which is formed with a rearwardly extending locking heel, a lug on the actuating strap adapted to be engaged by said locking heel, and means for operating said main lock, substantially as

set forth. 9. In combination with a mail bag and its 90 closing flap, a series of locking bolts, a series of pivoted spring catches adapted to engage said bolts and to move in the same direction for disengaging all of them, a main locking bolt, a main pivoted spring catch having a 95 projecting heel and adapted to engage said main locking bolt and to move in a direction opposite to the direction of movement of the auxiliary spring catches for disengaging said main locking bolt, and an actuating strap 100 provided with lugs for operating said auxiliary spring catches, and a locking lug adapted to be engaged by the heel of said main spring catch, substantially as set forth.

10. In combination with a mail bag and its closing flap, a series of auxiliary locking devices, a main controlling lock, and an actuating strap adapted to release said auxiliary locking devices and engaged by said main controlling lock for preventing its movement; said main controlling lock consisting essentially of a spring catch, a rotatable locking bolt adapted to be engaged by said catch, lugs formed integral with said locking bolt, and curved spring actuated tumblers adapted to regage one of said lugs, and formed with cam

faces, substantially as set forth.

11. In combination with a mail bag and its closing flap, a series of locking devices, a longitudinally movable strap adapted to actuate said locking devices, and an address plate attachment secured to one end of said strap and formed with an opening at its inner end for the passage of the address card, whereby said card can be inserted when the bag is open and the strap is in its outer position and will be locked in place when the bag is locked and the strap is in its inner position, substantially as set forth.

12. In combination with a mail bag and its 130 closing flap, a series of locking devices, an actuating strap passing through and controlling said locking devices, an address plate hinged to the edge of said mail bag and adapted

to have said strap passed therethrough, spring lugs on said strap adapted to receive an address card, and an opening in the address plate, substantially as set forth.

13. In combination with a mail bag and its

5 13. In combination with a mail bag and its closing flap, a series of locking devices, an actuating strap passing through and adapted to control all of said locking devices, a hollow cylindrical casing secured to the edge of the mail bag, a similar hollow easing secured to

the opposite end of the actuating strap, and spiral springs seated in said hollow casings and connected respectively to the end of the actuating strap and the edge of the mail bag, substantially as set forth.

PETER J. CAESAR.

Witnesses:

CHAS. P. GUNERIUS, D. J. SINCLAIR.