No. 886,708. PATENTED MAY 5, 1908.

F. J. LAU & A. MELZER.

BAG FRAME LOCK OR FASTENER.

APPLICATION FILED FEB. 3, 1906. RENEWED FEB. 15, 1908.

2 SHEETS—SHEET 1.

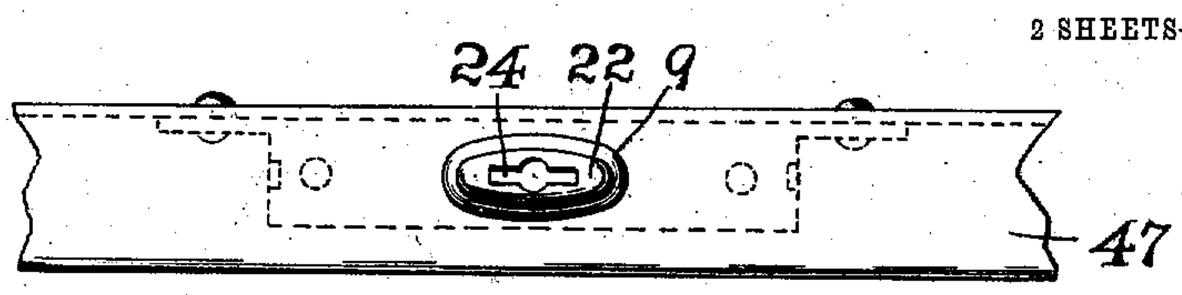
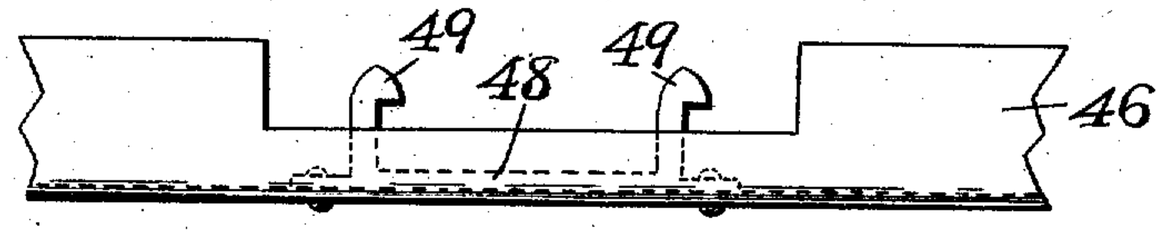


Fig 1.



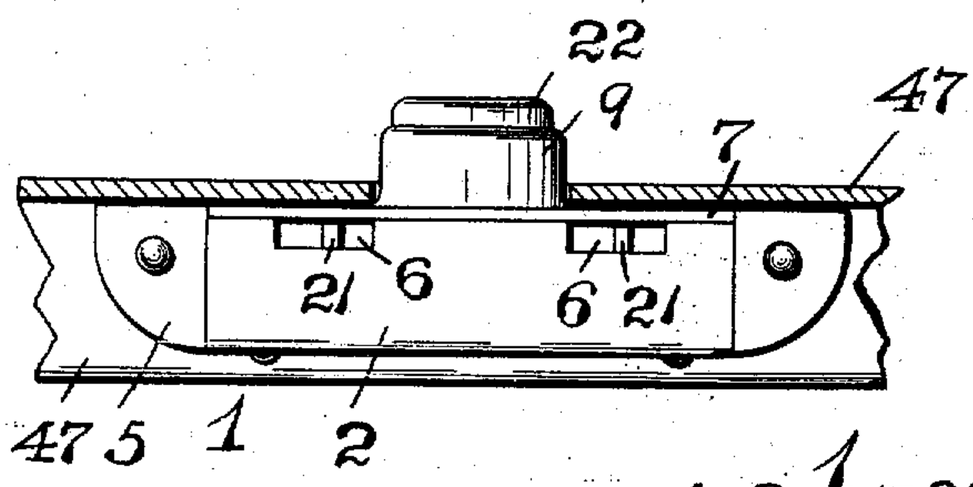


Fig 2.

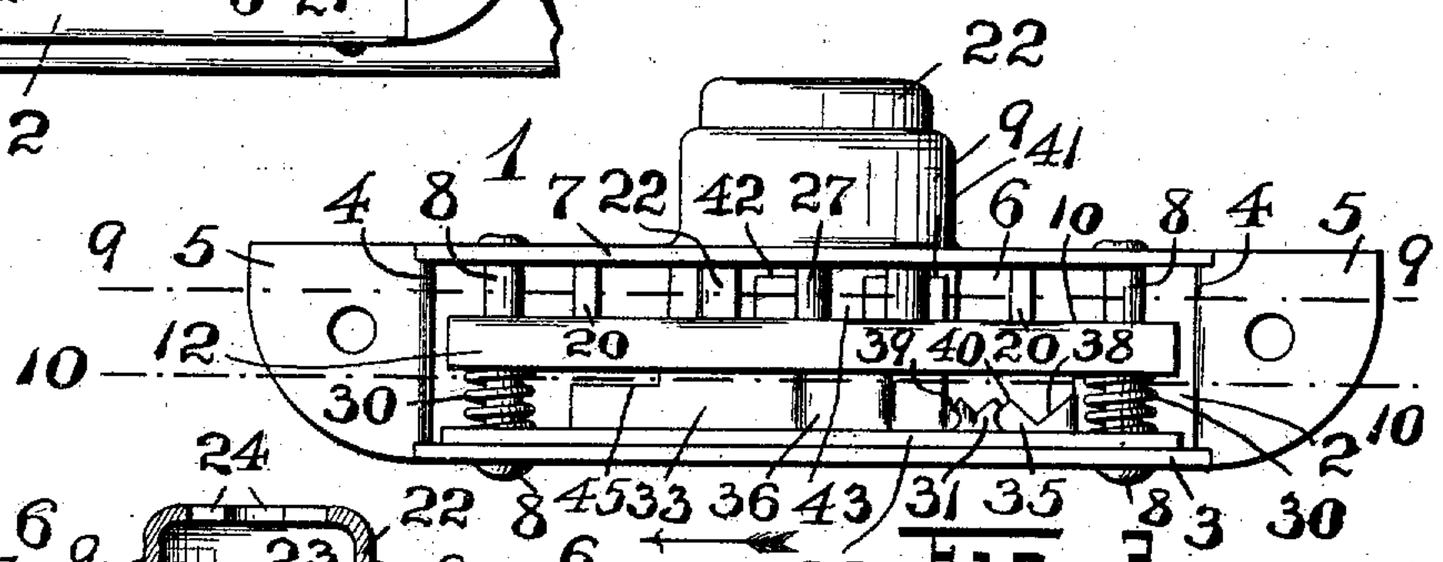


Fig 3.

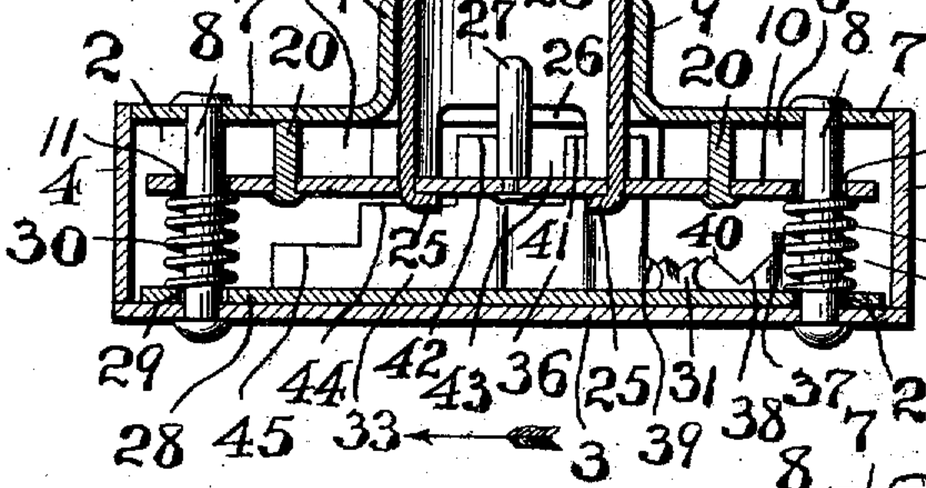


Fig 4.

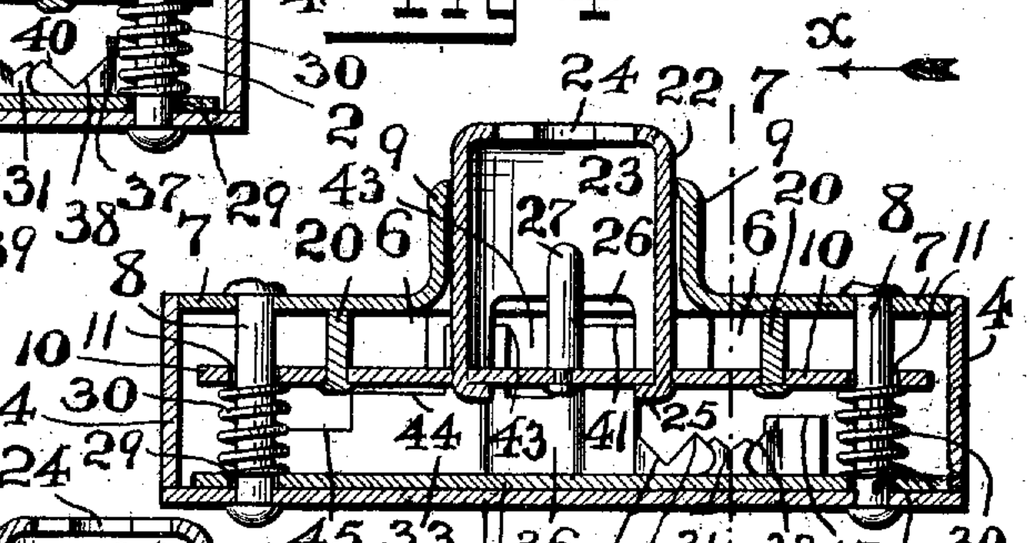
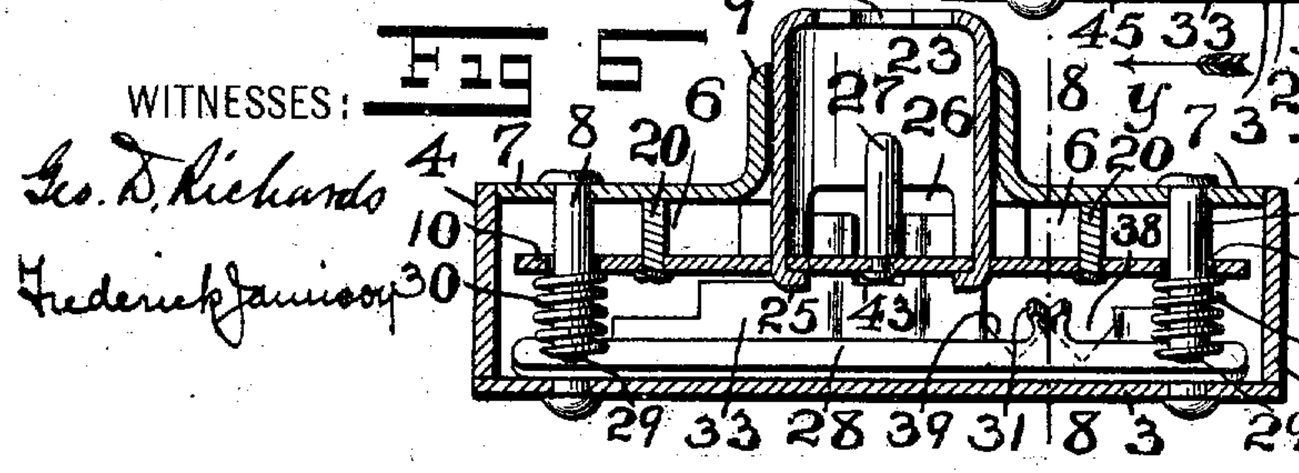


Fig 5.



WITNESSES:

Geo. D. Richards

Frederick Jamieson

INVENTORS:

Fredrick J. Lau &

August Melzer,

BY Fredc. Fraentzel

ATTORNEY

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2 SHEETS—SHEET 2.

Fig 7

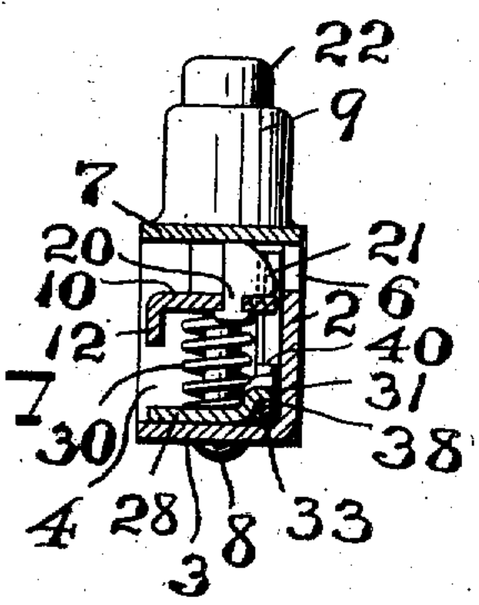


Fig 8

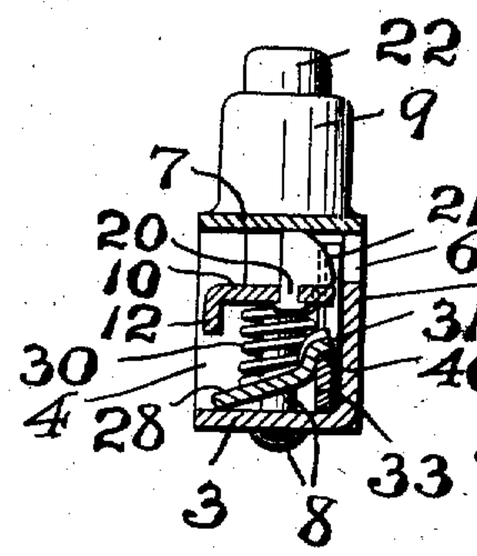


Fig. 9

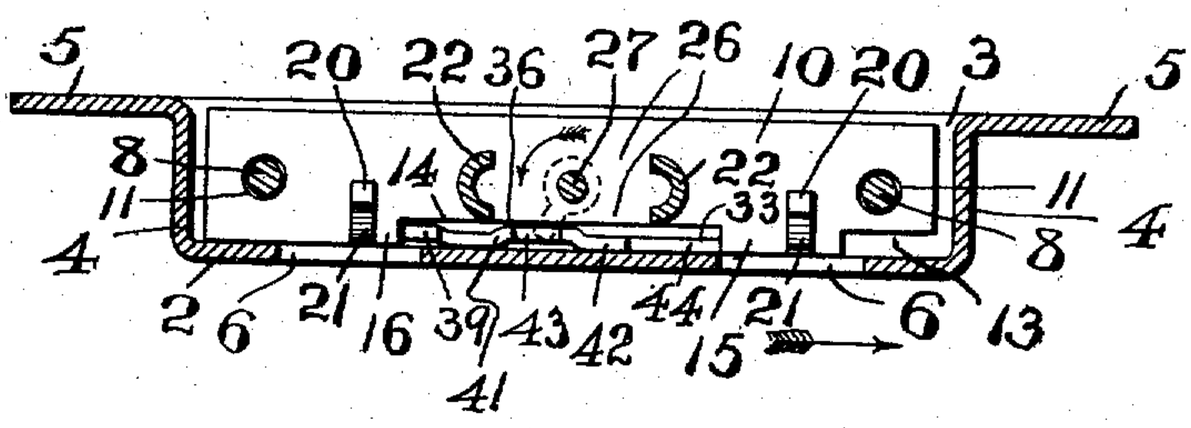


Fig 10

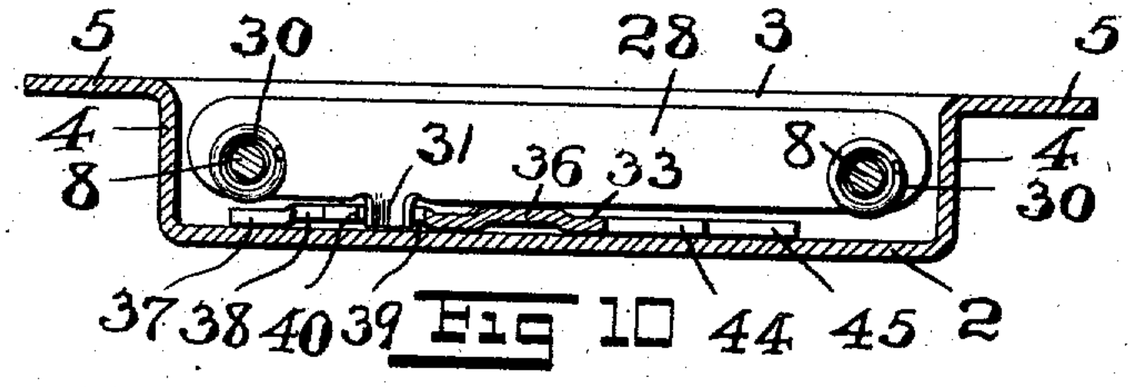


Fig 11

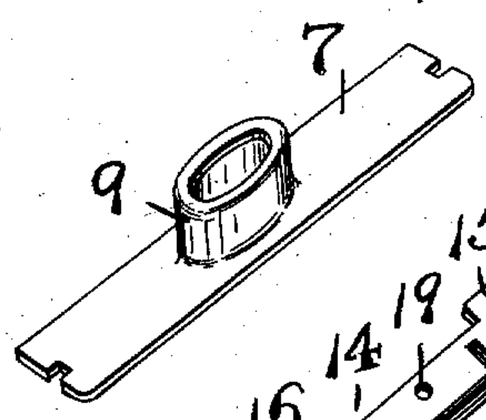


Fig 12

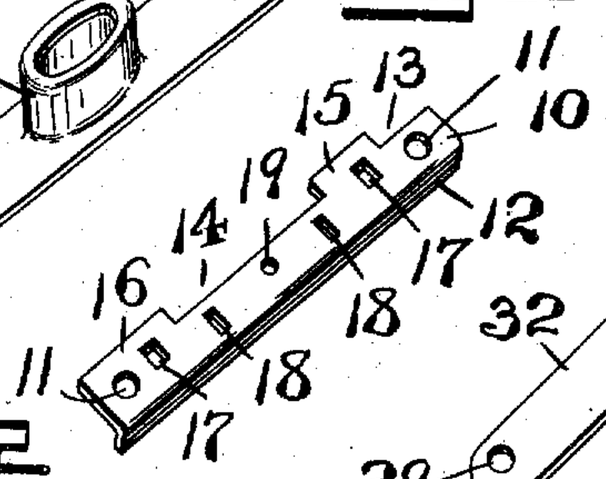


Fig 13

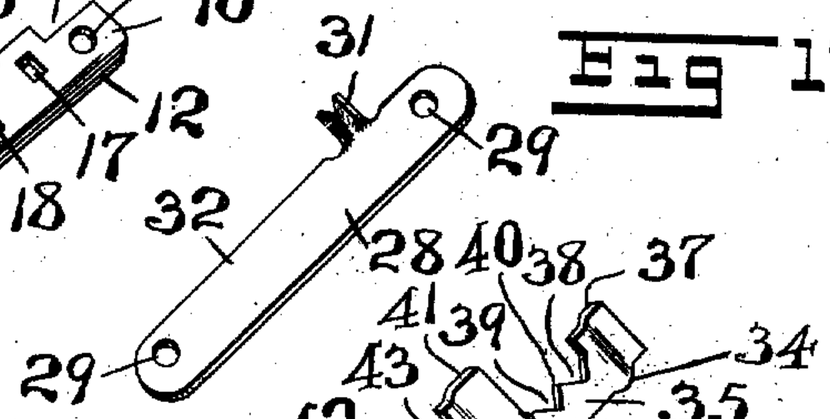
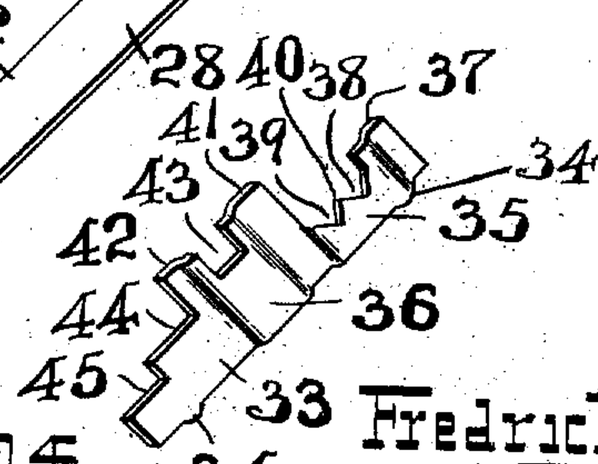


Fig 14



WITNESSES:

Geo. D. Richards

Frederick Jamison

INVENTORS:

Fredrick J. Lau &

BY August Melzer

Fredk C. Fraentzel,

ATTORNEY

UNITED STATES PATENT OFFICE.

FREDRICK J. LAU AND AUGUST MELZER, OF NEWARK, NEW JERSEY; SAID LAU ASSIGNOR TO THE R. NEUMANN HARDWARE CO., A CORPORATION OF NEW JERSEY.

BAG-FRAME LOCK OR FASTENER.

No. 886,708. Specification of Letters Patent. Patented May 5, 1908.

Application filed February 3, 1906, Serial No. 299,305. Renewed February 15, 1908. Serial No. 416,108.

To all whom it may concern:

Be it known that we, FREDRICK J. LAU and AUGUST MELZER, citizens of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bag-Frame Locks or Fasteners; and we 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention is in the nature of improvements in that class of locks or fasteners which are adapted for use, more especially, with the frame-sections for traveling and other bags; and, the invention refers, more particularly, to a novel construction of bag-frame lock or fastener, with a view of providing a simply and cheaply constructed lock of the character hereinafter more fully described, which is easily manipulated; and, the working parts of the same being reduced to a minimum, is not so likely to get out of order.

Other objects of this invention not at this time more especially mentioned will be clearly evident from the following detailed description of the same.

The invention consists, primarily, in the novel construction of lock or fastener hereinafter set forth; and, furthermore, the invention consists in the several novel arrangements and combinations of the various devices and parts, as well as in the details of the construction of the same, all of which will be more fully described in the following specification, and then finally embodied in the clauses of the claims which are appended to and which form an essential part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a top or plan view of parts of the two bag-frame sections, showing in plan in connection with the one frame-section the lock or fastener embodying the principles of this invention, and illustrating in connection with the other frame-section, a hasp-plate suitably secured in its position for engagement with the lock-mechanism; and Fig. 2 is a longitudinal vertical section of a portion of the one frame-section, and a face view of the lock. Fig. 3 is a rear face view of the lock, on an enlarged scale; and Fig. 4 is a central longitudinal vertical section of the lock-casing and its movable parts, looking toward the inner face of the front-plate of the casing, the parts being represented in their unlocked and movable relation, so as to be actuated by a depressible fingerpiece; and Fig. 5 is a similar view of the lock-casing and the mechanism therein, the parts, however, being shown in their locked or immovable relation. Fig. 6 is a longitudinal vertical section of the lock-casing and mechanism, the parts being shown in their relative positions, while moving a key-actuated lock-plate from right to left, or vice versa, and intermediate between the locked and the unlocked positions of the movable parts of the lock. Fig. 7 is a transverse vertical section, said section being taken on line 7—7 in said Fig. 5, looking in the direction of arrow X; and Fig. 8 is a similar section, taken on line 8—8 in Fig. 6, looking in the direction of the arrow Y. Fig. 9 is a horizontal section, taken on line 9—9 in Fig. 3 of the drawings; and Fig. 10 is a similar section, taken on line 10—10 in said Fig. 3, but the parts in both said Figs. 9 and 10 being shown in their reversed positions from those represented in said Fig. 3. Figs. 11, 12, 13 and 14 are perspective views of the several parts of the lock in their detached relation.

Similar characters of reference are employed in all of the said above described views, to indicate corresponding parts.

Referring now to the several figures of the drawings, the reference-character 1 indicates the complete lock or fastener, the same comprising a suitable box or casing which consists of a front face 2, a bottom 3 and ends 4, from which extend the usual perforated ears or lugs 5 for securing the box or casing in any suitable manner upon the one bag frame-section. The said front-plate or face 2 is provided with suitably disposed hasp-receiving openings 6, while the rear or back of the said casing is usually left open, as shown. The upper and open part of the said box or casing is closed by means of a plate 7, suitably secured upon the end-members 4 of the box or case, but preferably by means of a pair of pins or rivets 8, which serve as guide-posts as will hereinafter more fully appear, and which extend through the interior of the said

box or case and have their respective ends suitably secured to the said plate 7 and the bottom 3, substantially as illustrated in the several figures of the drawings. The said top-plate 7 is made with an upwardly extending and centrally disposed guide-member 9, preferably of an oblong or elliptical configuration, when viewed from the top; the said guide-member forming an integral part of the said plate 7, by being drawn or forced out of the said plate, and thereby providing a strong and perfectly rigid guide-member which cannot become dislocated, as might be the case where the said member 9 is separately made and is secured in position by means of rivets or the usual fastening lugs or ears; and, thereby at the same time providing a cumbersome fastening means which does not add to the general appearance of the lock. Movably arranged upon the said previously mentioned rivets or posts 8 is a reciprocatory lock-plate 10, formed at its respective ends with suitable holes or openings 11, through which the said rivets or posts 8 extend, as shown, the said plate 10 being preferably made with a downwardly extending reinforcing portion or rib 12 along one of its longitudinal marginal edges, and at its other longitudinal marginal edge, the said plate is made with the cut-away parts or recesses 13 and 14, and the off-sets 15 and 16. The said lock-plate 10 is also made with suitably shaped openings 17 and 18, and a centrally disposed hole or perforation 19, as clearly shown in Fig. 12 of the drawings. Two openings 17 and two openings 18 are usually provided, and in each opening 17 there is suitably secured the lower end of a hasp-lug retaining post 20, each post 20 being provided with the usually chamfered hasp-lug receiving portion 21, substantially as illustrated in Figs. 7 and 8 of the drawings. The said posts 20 are of such lengths, that when the said lock-plate 10 is in its normal initial position, at rest, the upper ends of said posts 20 will engage with the under face of the top-plate 7, as shown, and at the same time each chamfered portion 21 is vertically movably arranged back of an opening 6 in the face-plate 2 of the said box or case heretofore mentioned. Slidably arranged in the said guide-member 9, with its upper end projecting from the opening in the top of said member 9, is a corresponding formed finger-piece 22, said finger-piece being preferably made from sheet metal, so as to be provided with a chamber 23. In its top, the said finger-piece is made with a suitably shaped key-receiving opening 24, and on its lower marginal edge it is made with oppositely located clamping tongues or lugs 25 which are inserted in the openings 18 of the lock-plate 10 and then bent upon the back or lower face of said plate, substantially as illustrated in Figs. 4, 5, and 6 of the drawings. The said finger-piece 22 is also provided with oppositely located openings 26, located directly above the said lock-plate 10, and for the purposes to be presently described. Suitably secured in the hole or perforation 19 of the lock-plate 10 is the lower end of a post 27, the said post 27 extending upwardly into the chamber 23 of the finger-piece 22 and being in alinement with the central part of the key-receiving opening 24 for the reception upon said post 27 of the tubular shank of a key when the latter is inserted into and through the opening 24.

Resting upon the inner face of the bottom 3 of the lock-casing or box is a bolt-controlling-plate 28, the said plate 28 being provided at or near its opposite ends with suitable openings 29 for movably arranging the said plate upon the said rivets or post 8, as shown. Coiled springs 30 are arranged upon each rivet or post 8 upon that portion of each rivet or post between the said lock-plate 10 and the said bolt-controlling-plate 28, as illustrated. Upon one of its longitudinal marginal edges and near one of the said rivets or posts 8, the said bolt-controlling plate 28 is made with a projection or extension 31, which is preferably of a V-shaped cross-section, and is for the purposes to be presently described.

Slidably disposed between the inner surface of the front-plate or face 2 of the lock-box or case and the marginal edge 32 of the bolt-controlling plate 28 and in the recess 14 which is located between the off-sets or extensions 15 and 16 of the lock-plate 10 is a reciprocating and key-controlled bolt 33. This bolt 33 is preferably made in the shape of a plate, which is struck out of the sheet metal, and as will be seen, more especially, from an inspection of Fig. 14 of the drawings, is made with the lugs 34 upon lower straight edge so as to produce as little friction as possible and cause less filing in the construction of the bolt. Said bolt is also provided with a pair of laterally extending bent or bulging portions 35 and 36. The upper marginal edge of said bolt 33 is of a peculiar configuration, the same comprising an edged portion 37, a pair of V-shaped recesses 38 and 39, with an angularly reversed raised edge 40 between said recesses 38 and 39, a pair of raised and straight edged members or portions 41 and 42, with a recess or open portion 43 located between said members 41 and 42, and concluding finally in the lower and step-shaped marginal edge-portions 44 and 45, substantially as shown.

When the several parts hereinabove described have been assembled in their operative relations to provide the complete bag-lock or fastener, the operations of the parts briefly are as follows:—When the said several parts of mechanism are in their normal initial positions, indicated in Figs. 3 and 4 of the

drawings, and when the two frame-sections 46 and 47, see Fig. 1 of the drawings, are brought from their separated into their closed relation, the said frame-section 46 being provided with a suitable hasp-plate 48 formed with the usual hasp-lugs 49, then will the said lugs 49 enter the receiving openings 6 in the front plate or face 2 of the lock-box or case, and will push the hasp-lug retaining-posts 20 and the plate 10 in a downward direction upon the rivets or posts 8 against the action of the springs 30, until the said hasp-lugs 49 are forced behind the said retaining-posts 20. The said springs 30 are then again free to act and will return the said plate 10 and the posts 20 to their former initial positions, with the holding portion of each hasp-lug 49 located in its holding engagement with the back of a post 20. That these parts may be separated, when it is desired to open the bag frame-sections, a downward pressure upon the finger-piece 22 is all that is necessary; and, thereby the plate 10 and its retaining posts 20 are moved in a downward direction against the action of said springs 30. The downward movement of said posts 20 removes them from their holding engagement with the hasp-lugs 49, and the two bag frame-sections can now again be brought into their separated or opened relation. To lock the mechanism against movement, the bolt 33 is employed, the same being actuated by means of a key. The key is inserted in the key-receiving opening 24 of the finger-piece 22, its tubular barrel or shank being arranged upon the post 27, substantially as indicated in the dotted outline in Fig. 9 of the drawings. Then, by turning the key in the direction of the curved arrow in said figure, the bit of the said key moves out of one of the said openings 26 in the side of the finger-piece 22 and directly into the open part or recess 43 of the bolt 33, and by engagement with one of the edges which bound said recess 43, moves or slides in the directions of the arrows shown in said Figs. 9, 3 and 4. This sliding movement of the said bolt has brought edge-portions 37 and 44 of the bolt directly beneath the marginal projections 15 and 16 of the said plate 10, whereby said plate becomes fixed against any downward movement upon the rivets or posts 8, and the parts are locked. When the said bolt 33 is in the position indicated in Figs. 3, 4, 9 and 10, then the extension 31 of the bolt-controlling plate 28 rests in the V-shaped depression 39 of the bolt, the springs 30 serving to hold said plate down upon the inner face of the bottom 3 of the box, and thereby retaining said bolt 33 in an immovable position. As soon, however, as the said bolt 33 is actuated by means of the key, in the manner just described, then the said extension 31 moves over the sharp edge-portion 40 of the bolt, thus tilting the bolt-controlling-plate 28 against the action of the springs 28, as shown in Fig. 6 of the drawings. Upon passing beyond said portion 40, the springs 30 again exert their pressure, causing the projection or extension 31 to snap into the V-shaped depression or recess 38 of the bolt, and now positively retaining the said bolt against accidental movement, when the parts of the lock are in their locked relation. By again turning the key in an opposite direction the parts are again unlocked, and can be manipulated in the manner hereinabove described.

We claim:—

1. A lock comprising a casing, and guide-posts therein, a reciprocatory lock-plate movably arranged upon said posts, hasp-lug retaining posts upon said plate, a finger-piece, a bolt-controlling plate also movably arranged upon said posts, a bolt controlled by said controlling plate, and a spring between said lock-plate and said controlling-plate, substantially as and for the purposes set forth.

2. A lock comprising a casing and guide-posts therein, a reciprocatory lock-plate movably arranged upon said posts, hasp-lug retaining posts upon said plate, a finger-piece, a bolt-controlling plate also movably arranged upon said posts, a bolt controlled by said controlling-plate, and a coiled spring encircling each post between said lock-plate and said controlling-plate, substantially as and for the purposes set forth.

3. A lock comprising a casing, and guide-posts therein, a reciprocatory lock-plate movably arranged upon said posts, hasp-lug retaining posts upon said plate, a finger-piece, a bolt-controlling plate also movably arranged upon said posts, a V-shaped projection on said bolt-controlling plate, a bolt controlled by said controlling plate, said bolt being provided with V-shaped receiving depressions with which said V-shaped projection can be brought in holding engagement, and a spring between said lock-plate and said controlling-plate, substantially as and for the purposes set forth.

4. A lock comprising a casing, and guide-posts therein, a reciprocatory lock-plate movably arranged upon said posts, hasp-lug retaining-posts upon said plate, a finger-piece, a bolt-controlling plate also movably arranged upon said posts, a V-shaped projection on said plate, a bolt controlled by said controlling plate, said bolt being provided with V-shaped receiving depressions with which said V-shaped projection can be brought in holding engagement, and a coiled spring encircling each post between said lock-plate and said controlling-plate, substantially as and for the purposes set forth.

5. In a lock, the combination, with a locking mechanism, of a key-actuated bolt, comprising a sliding plate having V-shaped receiving depressions, a bolt-controlling plate

movably arranged upon said posts, and a V-shaped projection extending from said controlling plate and adapted to engage with the said V-shaped receiving depressions of said sliding plate for retaining said bolt in its various positions against movement, substantially as and for the purposes set forth.

6. A lock comprising a box or casing, and a top-plate, a chambered guide-member extending upwardly from said top-plate and forming an integral part thereof, said guide-member being provided with an opening in the top, a bolt in said box or casing, said bolt comprising a sliding plate having a key-receiving recess and being provided also with V-shaped receiving depressions, a pair of guide-posts in said box or casing, a lock-plate movably arranged on said guide-posts, springs encircling said posts and arranged to produce an upward movement of said lock-plate, hasp-lug retaining posts on said lock-plate, said retaining posts being adapted to limit the upward movement of said lock-plate, a chambered finger-piece on said lock-plate extending into said guide-member and projecting from the opening of the same, said finger-piece being provided with open portions in its opposite sides, a key-receiving and centering post on said lock-plate extending upwardly into said chambered finger-piece, and a bolt-controlling plate also movably arranged upon said guide-post, and a V-shaped projection on said bolt-controlling plate, adapted to engage with said V-shaped depression of said bolt, substantially as and for the purposes set forth.

7. A lock comprising a box or casing, and a top-plate, a chambered guide-member extending upwardly from said top-plate and forming an integral part thereof, said guide-member being provided with an opening in the top, a bolt in said box or casing, said bolt comprising a sliding plate having a key-receiving recess and being provided also with V-shaped receiving depressions, a pair of guide-posts in said box or casing, a flat lock-plate movably arranged on said guide-posts, said lock-plate having a re-inforcing rib, springs encircling said posts and arranged to produce an upward movement of said lock-plate, hasp-lug retaining posts on said lock-plate, said retaining posts being adapted to limit the upward movement of said lock-plate, a chambered finger-piece on said lock-plate extending into the said guide-member and projecting from the opening of the same, said finger-piece being provided with open portions in its opposite sides, a key-receiving and centering post on said lock-plate extending upwardly into said chambered finger-piece, and a bolt-controlling plate also movably arranged upon said guide-posts, and a V-shaped projection on said bolt-controlling plate, adapted to engage with said V-shaped depressions of said bolt, substantially as and for the purposes set forth.

In testimony, that we claim the invention set forth above we have hereunto set our hands this 1st day of February, 1906.

FREDRICK J. LAU.
AUGUST MELZER.

Witnesses:
FREDK. C. FRAENTZEL,
GEO. D. RICHARDS.