Dec. 30, 1924. 1,521,572

S. HAMMER ET AL

LATCH

Filed March 4, 1920

Fig:1.

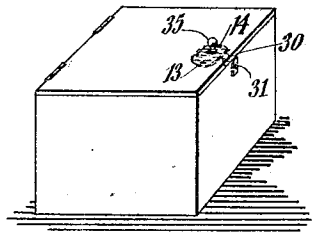


Fig:2.

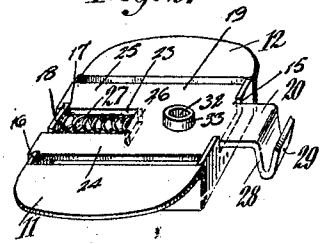


Fig:3.

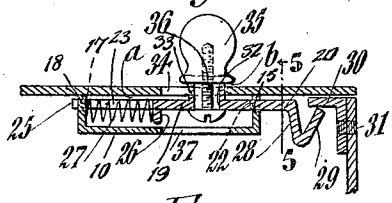


Fig:4.

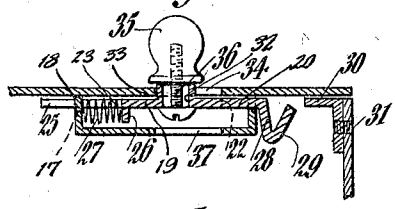


Fig:5.

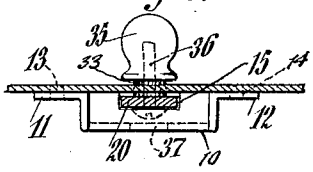


Fig:6.

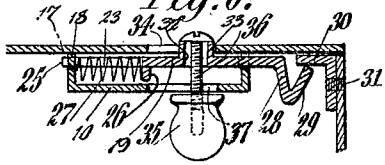


Fig:7.

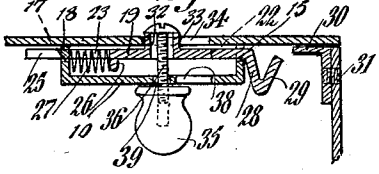


Fig:8.

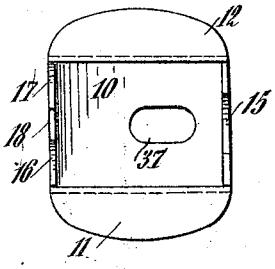


Fig:9.

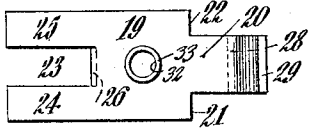


Fig:10.

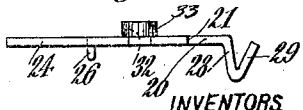
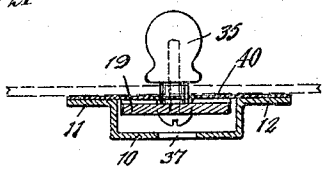


Fig:11.



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ATTORNEY

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UNITED STATES PATENT OFFICE.

SAM HAMMER, OF NEW YORK, AND DAVID POSTAL, OF BROOKLYN, NEW YORK, ASSIGNORS TO UNITED METAL BOX COMPANY, INC., OF LONG ISLAND CITY, NEW YORK, A CORPORATION OF NEW YORK.

LATCH.

Application filed March 4, 1920. Serial No. 363,138.

To all whom it may concern:

Be it known that we, SAM HAMMER, a citizen of Russia, and resident of the borough of the Bronx, county of the Bronx, city and State of New York, and DAVID POSTAL, a citizen of the United States, and resident of the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Latches, of which the following is a specification.

The present invention relates to improvements in latches, and while the invention is capable of general application, it is particularly intended for use upon the covers of metal boxes, as for instance, electric cut-out boxes, medicine cabinets, etc. A primary object of the invention is to provide such a latch which will be of simple and durable construction and will not readily get out of order, and which may be assembled and attached with great facility, economy and requiring very little time. We propose to provide a latch which may be economically stamped to shape having but few simple parts, and will not require drilling or tapping of screw threads, both of which operations are expensive and time consuming. The latch is especially intended to be placed interiorly of the box, the operating handle being exteriorly, and with this in view, we propose to provide a latch of very flat construction, so that the space within the box will not be obstructed to any great extent.

A further object is to provide a latch which will be free of pivotal parts, and which may be welded in place upon the cover or other supporting structure to the end that after attachment, the box may be painted and the paint will not interfere with the operation of the latch.

A still further object is to provide an improved handle construction which will enable the same to be readily removed when shipping so that the cover of the box will be substantially flat to permit of stacking of the boxes one upon the other, and which, when desired, may be placed in reversed position interiorly of the box and so secured as to lock the latch in inoperative position. It is also proposed to provide a latch which may be conveniently operated when the handle is removed.

With these and other objects in view, embodiments of our invention are shown in the accompanying drawings, and these embodiments will be hereinafter more fully described with reference thereto, and the invention will be finally pointed out in the claims.

In the accompanying drawings,

Fig. 1 is a perspective view of a box provided with an embodiment of our improved latch;

Fig. 2 is a perspective view of the latch removed and with the handle detached;

Fig. 3 is a longitudinal sectional view through the latch and associated parts of the box and with the latch projected;

Fig. 4 is a similar view showing the latch bolt retracted;

Fig. 5 is a front end view of the latch partly in section, along the line 5—5 of Fig. 3;

Fig. 6 shows the handle in reversed position interiorly of the box;

Fig. 7 shows a modified form of construction with the handle in reversed position interiorly of the box and adapted to positively lock the bolt retracted;

Fig. 8 is a top plan view of the casing;

Fig. 9 is a top plan view of the bolt;

Fig. 10 is a side view of the bolt; and

Fig. 11 is a transverse vertical sectional view of a modified form of construction in which a permanent cover plate is provided upon the latch to retain the parts together when provided as a detached unit from the box cover.

Similar reference characters indicate corresponding parts throughout the several figures of the drawings.

Referring to the drawings, the latch according to the present embodiment of our invention, comprises a casing preferably stamped from sheet metal, and consisting of a flat rectangular base 10 having upturned longitudinal and end sides, the longitudinal sides being bent into laterally extending ears 11 and 12, having their upper surfaces flat and in the same lateral plane and slightly above the upper edges of the ends of the casing to insure the flat snug engagement of the ears with the inner surface of the cover, and to which they are adapted to be secured after the assembling of the bolt, to be presently referred to, by electric spot welds 13 and 14.

In the front end of the casing there is provided an intermediate rectangular shaped recess or cut-out 15, while in the rear end there are provided end recesses or cut-outs 16 and 17 of corresponding depth to the recesses 15 and disposed at each side of an intermediate guide portion 18.

The bolt 19 is formed of sheet metal stamped to shape, is narrower than the interior width of the casing, and in thickness is slightly less than the depth of the recesses 15, 16 and 17. At its forward end it is provided with a forwardly extending neck portion 20 adapted to slidably engage the recess 15, shoulders 21 and 22 at each side thereof abutting the front end of the casing interiorly, while at its rear end there is provided a longitudinal slot 23 embracing the guide portion 18, the leg portions 24 and 25 at each side thereof slidably engaging the recesses 16 and 17. At the base of the slot 23 there is formed a downwardly turned lug or abutment 26, between which and the portion 18, there is disposed a coil spring 27 supported against longitudinal collapse by the sides of the slot and adapted to yieldingly retain the bolt projected with its shoulders 21 and 22 abutted by the front end of the casing.

The forward end of the bolt is bent vertically downwardly as at 28, and in an inclined direction upwardly as at 29 to form a beveled nose terminating below the upper surface of the bolt and adapted in the projected position to engage beneath the angular catch or striker 30 provided upon the front of the box and preferably secured by an electric spot weld as at 31. During closing, the inclined under surface of the nose 29 engages the catch, camming the bolt back, being projected into latching relation with the catch when the cover is fully closed.

The bolt is provided between the neck 20 and the slot 23 with a shouldered aperture 32, the shoulder 33 being in the form of an upstanding annulus preferably formed from the metal punched up from the aperture during stamping. The shoulder extends through a slot 34 formed in the cover, and terminates slightly above the upper surface of the cover where it supports the knob or handle 35 secured by a screw 36 extending upwardly through the aperture 32, its head being larger in diameter than the aperture and engaging the under side of the bolt. The screw is inserted through a slot 37 formed in the casing and which is of suitable size to permit of the insertion of a screw driver to tighten or remove the screw.

The space *a* between the upper surface of the bolt and the inner side of the cover, and the space *b* beneath the knob, permit of free and unobstructed movement of the bolt. The base of the knob may be such size as substantially to cover the slot 34 in the cover so that when the box is closed only the knob will be seen, presenting a very neat appearance.

When shipping the boxes, it is desirable that they be free of obstructions such for instance as the knob so that they may be conveniently stacked one upon the other. To this end, the knob and its retaining screw may be readily removed, in which case the slight projection of the shoulder will permit of operation of the bolt with the finger, and if desired, the knob may be reversed in position as shown in Fig. 6. When so reversed, it may be utilized as a locking means to hold the bolt retracted by simply moving the bolt to retracted position, and tightening the knob against the casing.

In Fig. 7, we have illustrated a slightly modified form of construction in which the casing is provided with two holes 38 and 39, the first being relatively large and in register with the aperture 32 in the projected position, and the latter of smaller diameter and in register with the said aperture in its retracted position. The hole 38 permits of insertion and removal of the screw 36 in fastening and removing the knob in its normal position, while the hole 39 is for the purpose of insertion of the screw inverted and in the retracted position of the bolt, the knob being screwed thereon and thereby retaining the bolt positively in its retracted position.

In Fig. 11, we have shown a further modified form in which the casing is provided with a cover plate 40 secured to the ears 11 and 12 by welding or other suitable means, and retains the parts together when the latch is furnished as a unit detached from the cover of the box.

It will be understood that the latch may be secured to the cover of the box by screws if desired, and when spot welding apparatus is not available. With our improvements, a latch is provided accomplishing with efficiency the objects desired and which is simple in construction, convenient to assemble and economical to manufacture.

We have illustrated and described preferred and satisfactory embodiments of our invention, but it is obvious that changes may be made therein within the spirit and scope thereof as defined in the appended claims.

We claim:

1. A latch comprising a casing of substantially flat construction secured beneath the lid of a box or the like having a slot in communication with the casing, a bolt slidably mounted in the casing and cooperating with a catch on the box, means to yieldingly project the bolt, said casing having a slot in its base coinciding with the slot in the cover, said bolt having a boss projecting out through the slot in the cover, and a two part

separable operating member reversibly associated with said bolt and secured to said boss and in one position through the boss and the slots in said lid and the base of the casing.

2. An improved latch for slotted box lids and the like comprising a sheet metal casing of substantially flat construction composed of a base and integral side and end walls of relatively shallow depth bent upwardly from the base and having portions adapted to lie against and be secured to the inner face of the lid, said front and rear walls having guide slots therein, a bolt slidable in said guide slots, spring means within the casing for normally projecting the bolt, said bolt also having a hollow boss extending out through and sliding in the slot in the lid, the base of the casing having a slot in registry with the lid slot, a reversible knob for operating the latch bolt, and a fastening member for the knob in one position to pass through the slot in the lid, the hollow boss, and the slot in the base of the casing.

3. A latch comprising a casing adapted to be secured to an apertured cover of a receptacle or the like, said casing being provided with an opening extending in registry with the aperture in the cover and said casing provided with a guide, a bolt disposed in the casing and slidably mounted in the guide and having an open ended passage in registry both with the aperture in the cover and the opening in said casing, and a two-part operating member having one part thereon adapted to extend through the aperture of the cover, the passage of the bolt and the opening in the casing, said two-part operating member adapted to secure the bolt in adjusted position.

4. A latch comprising a casing adapted to be secured to an apertured cover of a receptacle or the like, said casing provided with an opening extending in registry with the aperture in the cover and having a guide therein, a bolt slidably disposed in the guide in said casing, resilient means in the casing acting on said bolt and normally tending to project the same, said bolt having an open ended passage extending transversely therethrough and movable with the bolt and being at all times in registry with the aperture in the cover and the opening in said casing, and a reversible operating member adapted to lie in one position through the aperture in the cover, the passage in said bolt and the opening in the casing and to be tightened against the casing to hold the bolt in an adjusted position against the influence of said resilient means.

In testimony that we claim the foregoing as our invention, we have signed our names hereunder.

SAM HAMMER.
DAVID POSTAL.