P. F. AUGENBRAUN.

COMBINED DEAD LOCK AND LATCH.

APPLICATION FILED AUG. 12, 1909.

975,013. Patented Nov. 8, 1910.

Fig. 1.

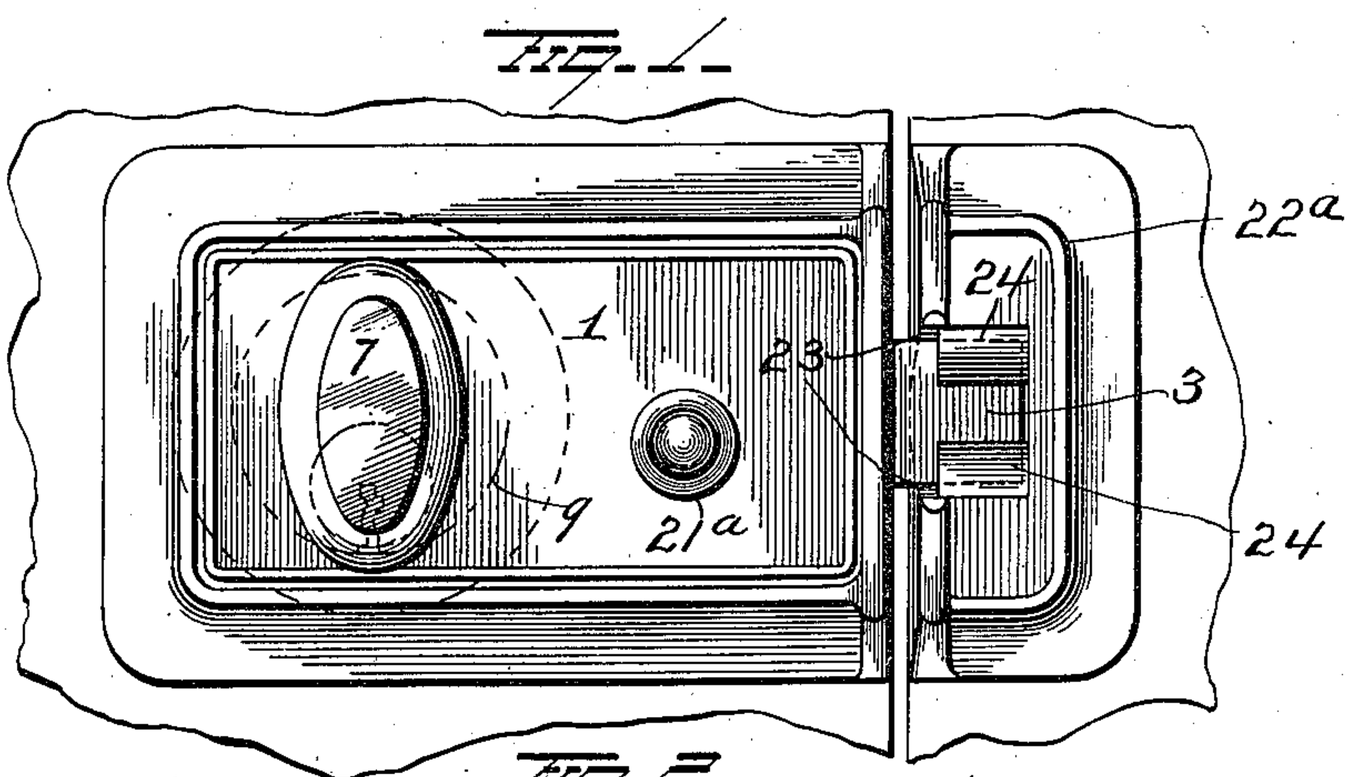


Fig. 2.

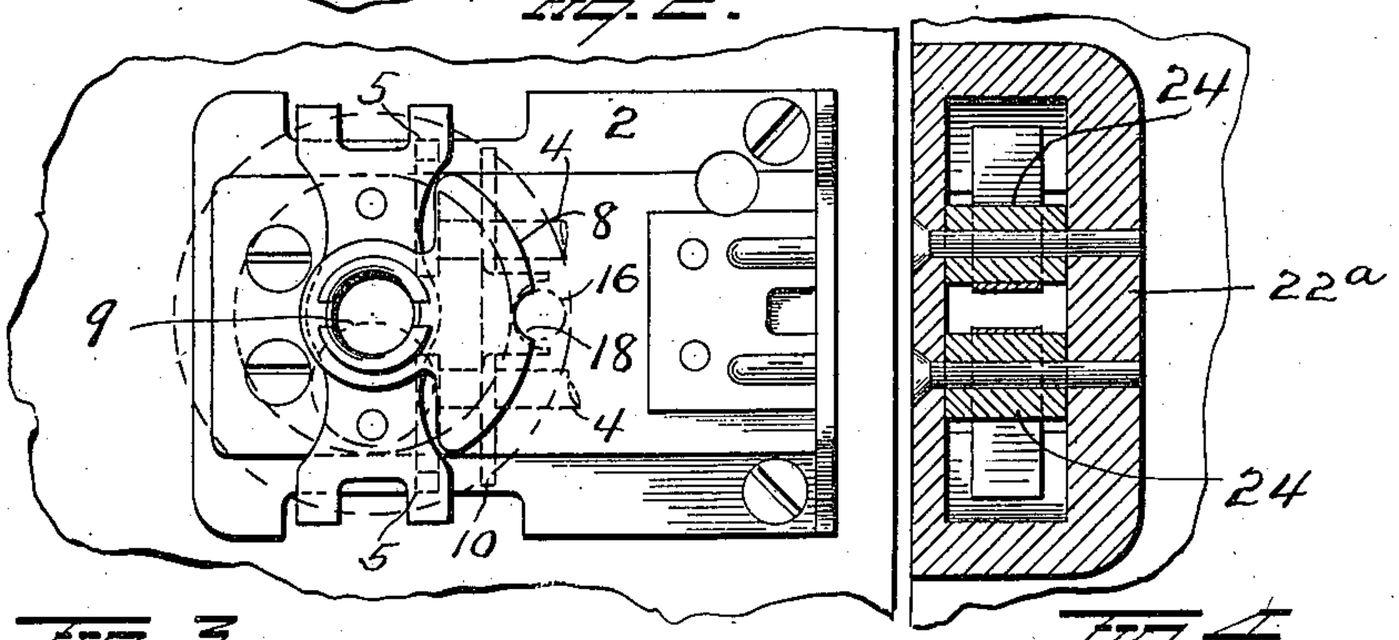


Fig. 3.

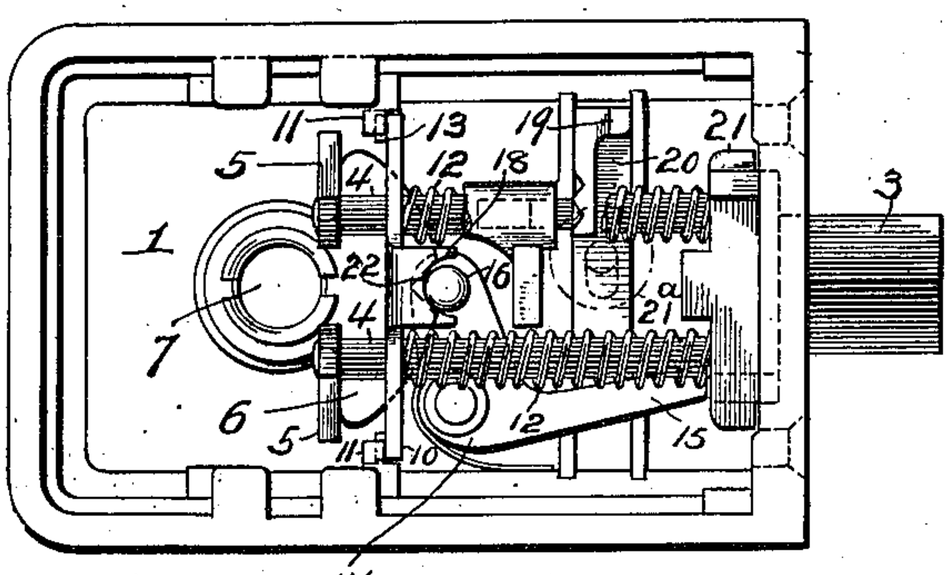


Fig. 4.

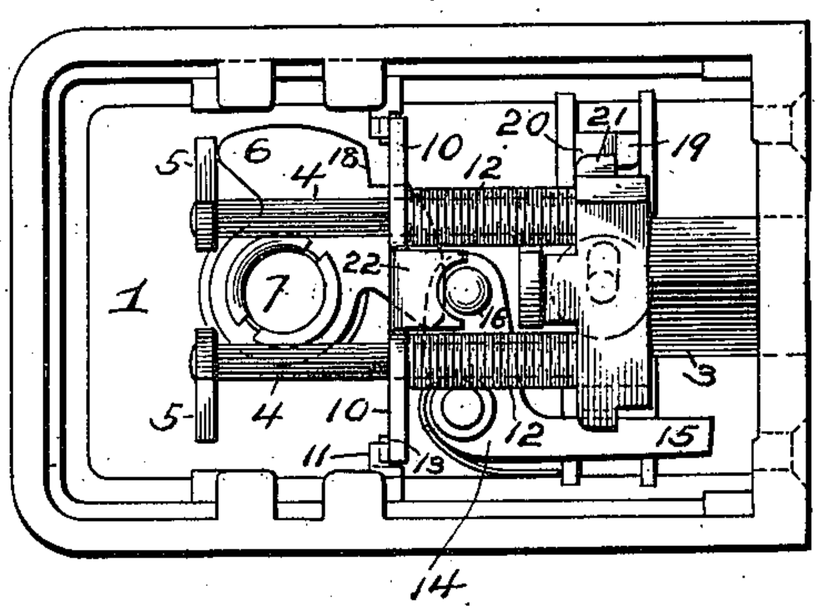


Fig. 5.

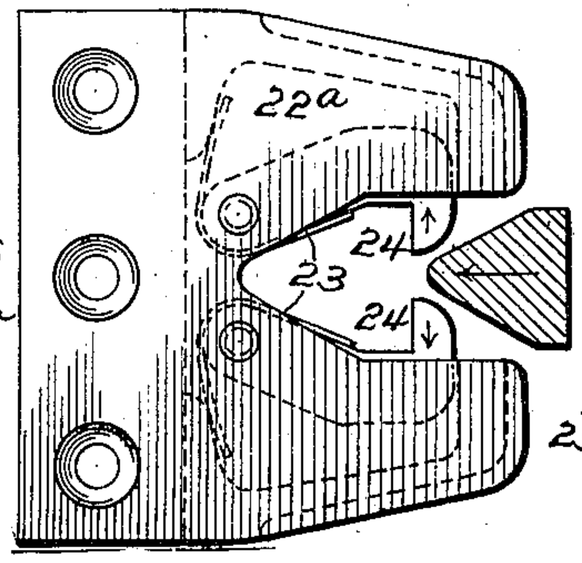
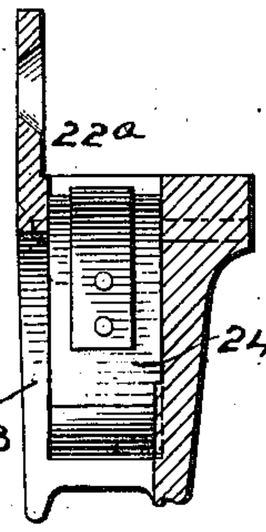


Fig. 6.



WITNESSES

E. J. Nottingham

E. J. Nottingham

INVENTOR

P. F. Augenbraun.

By H. A. Seymour.

Attorney

UNITED STATES PATENT OFFICE.

PETER F. AUGENBRAUN, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE & TOWNE MANUFACTURING COMPANY, OF STAMFORD, CONNECTICUT.

COMBINED DEAD LOCK AND LATCH.

975,013. Specification of Letters Patent. Patented Nov. 8, 1910.

Application filed August 12, 1909. Serial No. 512,609.

To all whom it may concern:

Be it known that I, PETER F. AUGENBRAUN, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Combined Dead Locks and Latches; 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 an improvement in combined dead lock and latch, the object being to provide a lock in which the bolt will be automatically projected when released, and which when projected, will always be deadlocked.

A further object is to provide a lock with a bolt deadlocked when projected, and a yielding strike which will yield under the pressure of the projected bolt and allow the door to close.

With these objects in view my invention consists in the parts and combinations of parts as will be more fully described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the lock applied to a door, and also the strike plate or keeper. Fig. 2 is a view of the removable face plate and a section of the keeper. Fig. 3 is a view of the lock with the face plate removed and the bolt projected; Fig. 4 is a similar view showing the bolt retracted by the thumb piece slide, and Figs. 5 and 6 are views of the yielding strike.

1 represents the latch casing, and 2 the removable face plate of same. The casing 1 is provided at one end with an opening for the bolt 3, which latter, in the present instance, is made V-shape in cross section, with the apex toward the strike plate.

Secured to the rear end of the bolt, and projecting rearwardly within the casing are the parallel rods or stems 4 each of which is provided at its rear end with a head 5 projecting on both sides of the stems 4, and engaged on one side by the roll back 6 on the stem of knob 7, and on the other side by the roll back 8 journaled in the removable face or back plate 2, and actuated by a Yale & Towne key cylinder lock 9 secured to the door and connected in the usual manner with the roll back 8. The two stems 4 are located centrally with relation to the thickness of the casing, and pass through the cross head 10 which latter rests against the shoulders 11 integral with the lock casing, and is held against said shoulders by the bolt projecting springs 12, which embrace both stems 4, and bear at their front ends against the rear end of the bolt, and at their rear ends against the cross head. The cross head is held against sliding movement on the shoulders by the lugs 13, bent out from the cross head, and resting in slots formed in the shoulders 11.

The dead locking lever 14, which is in the form of a bell crank, is pivoted to a stud projecting from the inner side of the lock casing, to one side of the center of the latter, with its longer arm 15 projecting forwardly toward the bolt, and its shorter arm projecting inwardly and provided with a pin 16. A spring 17, tends to normally hold the free end of the longer arm 15 of the dead locking lever 14, in the path of movement of the bolt and thus deadlock the latter, and hold the pin 16 in contact with the roll backs 6 and 8. These roll backs are each provided centrally with a recess 18 in which the pin 16 on the dead locking lever normally rests, the sides of the roll backs on the opposite sides of the recesses, forming cams, which when turned, force the pin 16 forwardly thus moving the longer arm 15 of the dead locking lever out of the path of movement of the bolt.

The bolt 3 is normally in its projected or locking position but may be held retracted by the lug 19 on the slide 20 engaging a laterally projecting ear 21 on the side of the bolt, the slide 20, being actuated by the thumb piece 21ª, on the inner side of the lock casing, hence is only accessible at the inner side of the door. The cross head 10 is provided with one or more, in the present instance two, forwardly projecting flanges 22 concaved at their front edges to form a seat or abutment for the pin 16 on the bell crank lever, thus limiting the rearward movement of the latter.

From the foregoing it will be seen that by turning the knob at the inner side, or by the use of a key at the outer side of the door, the roll back so turned will first shift the dead locking lever out of the path of the bolt, and the end of the roll back then coming in contact with a head 5 on one of the stems 4, will retract the bolt. Upon the release of the knob or key, the bolt projecting springs will

immediately restore the bolt to its projected position and the roll back to its normal position, while the spring controlling the dead locking lever will cause the latter to assume its dead locking position. Hence when the bolt is projected it is always dead-locked, and as the bolt cannot yield any under external end pressure against same, it follows that in order to close the door with the bolt projected, a yielding strike plate or keeper 22 must be employed. This strike plate or keeper comprises a housing the outer and side faces of which are slotted to receive the bolt, the slot 23 in the side face being of V-shape to conform to the shape of the bolt. Mounted within the housing immediately in rear of the opening in its outer face, are the two hook-shaped spring pressed keepers 24, the hooked ends of which are adapted to overlap the bolt and hold the door in its closed position. The free ends of the hooks are rounded and slightly separated, and as the door is moved to its closed position, the apex of the V-shaped bolt entering between the hooks, forces them apart, and after the bolt passes the hooked ends, the latter close in front of the bolt and hold the door in its closed position. To open the door, the bolt must be retracted by either the knob or the key, and when the bolt is projected it is always dead-locked, and can never under any conditions be pushed back by a pressure on its end.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention hence I would have it understood that I do not wish to confine myself to the exact construction and arrangement of parts shown and described, but,

Having fully described my invention what I claim as new and desire to secure by Letters Patent, is:—

1. In a combined dead lock and latch, the combination with a bolt, a spring for automatically projecting same, means for retracting the bolt, a deadlocking lever always deadlocking the bolt when the latter is projected, and means connecting said lever and the bolt retracting means whereby when the retracting means are actuated, the deadlocking lever will be moved to release the bolt, of a strike having a part adapted to yield and allow the projected bolt to pass when closing the door, and adapted to engage the bolt and lock the door in closed position.

2. In a combined dead lock and latch, the combination with a bolt, a spring for automatically projecting same, and means for retracting the bolt, of a lever always dead locking the bolt when the latter is projected, means connecting said lever and the bolt retracting means whereby when the retracting means are actuated the dead locking lever will be moved to release the bolt, and means actuated from the inner side of the door for holding the bolt in its retracted position.

3. In a combined dead lock and latch, the combination with a spring actuated bolt, a lever always deadlocking said bolt when the latter is projected, and means for removing the deadlocking lever from the path of the bolt and for retracting the latter, of a strike plate comprising a housing and a hook shaped yielding keeper adapted to be moved out of the path of the bolt by the latter during the closing movement of the door and overhang the bolt when the door is closed.

4. In a combined dead lock and latch, the combination with a spring actuated bolt, a lever always deadlocking said bolt when the latter is projected, and means for removing the deadlocking lever from the path of the bolt and for retracting the latter, of a strike plate comprising a housing and two hook shaped yielding keepers adapted to be moved apart by the entrance of the bolt between them during the closing movement of the door and overlap the bolt when the door is closed.

5. The combination with a bolt V-shaped in cross section, means always deadlocking the bolt when the latter is projected and means for retracting the bolt, of a strike plate comprising a housing having two yielding keepers adapted to be moved apart by the bolt as the door is closed, and overhang said bolt and lock the door in its closed position while the bolt remains projected.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses:

PETER F. AUGENBRAUN.

Witnesses:

SCHUYLER MERRITT,

JOSEPH A. HORNE.