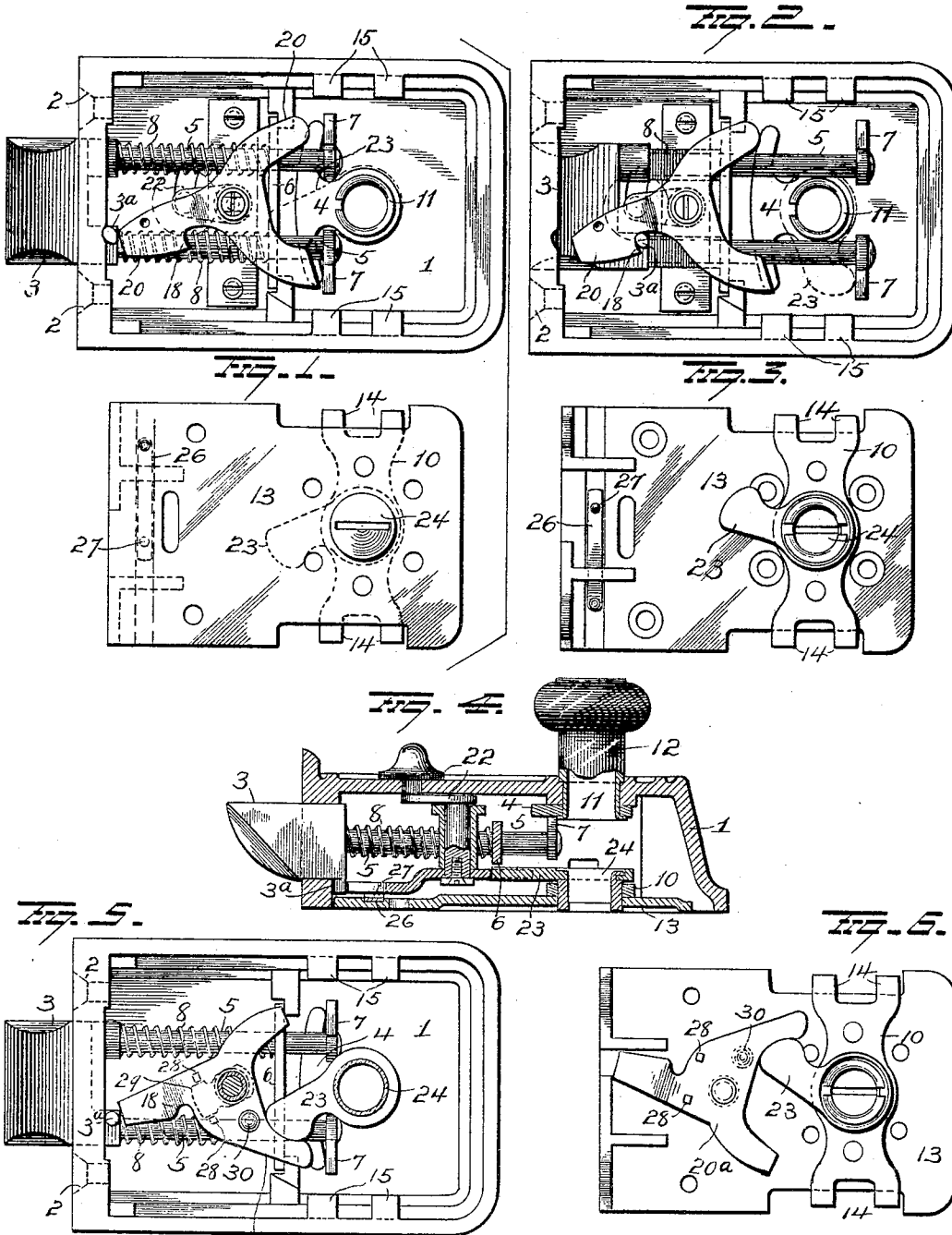


W. H. TAYLOR.
NIGHT LOCK.
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962,992.

Patented June 28, 1910.



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NIGHT-LOCK.

962,992.

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To all whom it may concern:

Be it known that I, WARREN H. TAYLOR, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Night-Locks; 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 locks, and particularly to that type in which the bolt may be deadlocked from the inside by a finger lever or button, or from the outside by the proper manipulation of the key, and which when deadlocked either from the inside or outside may be released and retracted by the proper manipulation of the key on the outside, or by the finger lever or button and knob on the inside.

My invention consists in the parts and combinations of parts and in the details of construction as will be more fully explained and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in rear elevation of the lock, the rear plate being removed showing the bolt projected and deadlocked. Fig. 2 is a similar view showing the bolt retracted. Fig. 3 is a view of the inner face of the rear plate of the lock casing showing the parts carried thereby. Fig. 4 is a view in longitudinal section through the lock and Figs. 5 and 6 are views similar to Figs. 1 and 3 of a modified construction.

1 represents the casing provided at its front end with an opening for the passage of the head of the bolt, and with threaded openings 2 for securing it to the removable face plate of the lock.

The locking mechanism comprises a spring-actuated bolt 3, a double cam or roll back, and means connecting the double cam and bolt, whereby movement of the cam in either direction, operates to retract the bolt.

The mechanism connecting the bolt and double cam 4 comprises two rods 5, each secured at one end to the bolt, passing rearwardly through the cross bar 6, and provided at their rear free ends with the wings 7, each of which rests in rear of one member of the cam 4, so that a turning movement of the cam in either direction, operates through a wing 7 and its rod 5, to retract the bolt, the latter being normally held in its project-

ed position by the springs 8, which encircle the rods 5 in advance of the cross bar 6, and bear at their ends against said bar and against the rear face of the bolt. The cam 4 is secured to the shank 11 of the knob 12, which is mounted to rotate in the lock casing. The rear or removable face plate 13 of the lock casing, is provided with holes for the passage of screws which secure it to the inner face of the door, and is also provided with a rigid cross bar 10 having parallel lugs 14 at its ends, which lugs, when the two parts of the lock are assembled engage and coöperate with lugs 15 formed on the lock case 1.

In assembling the lock, the face plate 13 is secured to the door by screws in the usual manner. The casing is then placed over the face plate with its rear lugs 14 in the plane of the space between the two lugs 15 on the face plate, and is then moved toward the face plate so as to cause the lugs to pass each other. After the lugs on the casing have passed the lugs on plate 13, the casing 1 is pushed endwise rearwardly so as to cause the lugs 15 on the face plate to overlap the lugs on the casing and the parts are then secured together by screws passing through the face plate into threaded openings in a flange on the removable plate.

The bolt 3 is provided at its inner end with the projecting lug 3^a, which latter is adapted to coact with the lever 20 which is provided at a point adjacent to its extreme front end, with hook or shoulder 18 adapted when the bolt 3 is retracted, to engage the lug 3^a on the bolt and hold the latter in its retracted position. The extreme front end of this lever 20 is also adapted to be moved to a position in rear of the lug 3^a when the bolt is projected, and thus deadlock the latter against retraction by a thin instrument introduced between the face plate of the lock and the strike plate. This lever 20 is connected to the stem of the finger lever 22 on the outer side of the case, and may be manipulated by said lever, so that when the lever is turned on its axis, the direction of its movement will be dependent on the direction of movement of the finger lever 22. The rear end of lever 20 is bifurcated as shown, and is designed to be engaged by the cam 23 carried on a sleeve 24 mounted in the removable plate 13, and connected in the usual manner by a connecting bar, with

suitable tumbler or locking mechanism of any preferred kind in the escutcheon on the outer side of the door. The cam 23 is located in advance of the wings 7 on rods 5 of the bolt, so that when turned in one direction by the key it will engage one of said wings and retract the bolt. With this construction it will be seen that the bolt may be retracted by either the inside knob 12, or by the key from the outside, and the bolt may be deadlocked, or be held in its retracted position by the stop knob or finger lever 22. By moving the latter, the lever 20 will be moved toward the lug 3^a, and if the bolt be projected, it will deadlock the latter by the engagement of the extreme end of the lever with the rear of lug 3^a, or if the bolt be retracted, the hook or shoulder 18 will be moved to a position in front of the lug 3^a and thus lock the bolt in its retracted position. The lever 20 may also be operated by the cam 23 which as before explained is actuated by the key from the outside of the door. If the door be closed and the key inserted and turned in one direction, in the present instance to the right, the cam 23 will engage one member of the bifurcated end of lever 20, and turn said lever in a direction to carry its front end to a position in rear of the lug 3^a, after which the key may be turned back to its original position and withdrawn, thus leaving the bolt deadlocked. If the bolt be deadlocked, it can be retracted from the inside, by first manipulating the finger lever 22, and then turning knob 12, or from the outside by inserting the key and turning the latter in the opposite direction from that which it was turned to deadlock the bolt, in the present instance, to the left. As the key is turned its cam 23 first engages a member of the bifurcated end of lever 20 and shifts the latter out of the path of the lug 3^a and the continued movement of the key in the same direction carries cam 23 into engagement with a wing 7 on one of the rods 5, thus retracting the bolt.

To prevent the lever 20 from accidental movement, I have provided the removable plate 13 with a spring 26 having a projection 27 which bears against the free end of lever 20, and by its frictional contact therewith prevents said lever from moving except when positively actuated as above explained.

In the construction shown in Figs. 1 to 4 inclusive, I have shown the lever 20 carried by a post integral with the casing 1. In Figs. 5 and 6, I have shown this lever 20^a mounted on the removable plate 13, and provided with shoulders 28 between which the arm 29 on the stem of the finger lever 22 rests. As this arm turns the lever will be shifted, and its hooked end carried into or out of the path of movement of the lug

3^a on the bolt. In this construction the lever 20^a also carries a spring pressed pin 30, which bears against the removable plate 13, and prevents any free or accidental movement of the lever 20^a. In other respects the construction and operation are identical with the construction first described.

With either construction it will be apparent that the bolt can be deadlocked either from the inside or outside, the mechanism being such that when one on the inside deadlocks the bolt, any one in possession of the proper key may release the deadlock and retract the bolt.

It is evident that many slight changes might be resorted to in the relative arrangement of the 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 lock, the combination with a bolt, of a pivoted lever independent of the bolt actuating means adapted to be moved into a position to deadlock the bolt when projected and also for holding it in its retracted position, a finger piece operated only from the inner side of the lock for shifting the pivoted lever to a position to deadlock the bolt or to hold the latter retracted, and key mechanism operable from the outside and adapted to shift said pivoted lever to its deadlocking position, or release it if it be deadlocked, and also for retracting the bolt.

2. In a lock, the combination with a spring actuated bolt having a projecting lug, of a pivoted lever the end of which is adapted to be moved into the path of the lug for deadlocking the bolt, and provided with a shoulder adapted to engage said lug when the bolt is retracted, means for actuating said lever from the inner side of the door, and key actuated mechanism for actuating said lever to deadlock and release the bolt and also for retracting the bolt.

3. In a lock, the combination with a bolt, of a pivoted lever adapted to be moved into a position to deadlock the bolt when projected and also for holding it in its retracted position, a finger piece operable from the inside of the door only for shifting said pivoted lever, an inside knob for retracting the bolt and outside key mechanism adapted to shift said pivoted lever to its deadlocking position, and remove it to release the bolt if the latter be deadlocked and also for retracting the bolt.

4. The combination with a casing and a spring bolt, of a deadlocking lever pivoted to the casing and having direct engagement

with the bolt, a thumb piece operable from the inner side of the door and positively engaging said lever for moving it into and out of engagement with the bolt, means on the inner side of the door and independent of the lever operating means for retracting the bolt, and mechanism actuated from the outer side of the door for moving the lever out of the path of the bolt, for retracting the bolt and for restoring said lever to its first position.

5. The combination with a spring bolt having a projecting lug, of a lever pivoted to the casing and having a shoulder near its front end adapted to engage said lug for holding the bolt retracted, means on the inner side of the door for shifting said lever, and mechanism actuated from the outside of the door for moving the lever to release the bolt, for retracting the bolt, and for restoring the lever to its first position.

6. The combination with a casing and a spring bolt having a projecting lug, of a deadlocking lever adapted to rest in the rear of said lug and in the path of movement of the latter, and provided with a shoulder adapted to engage the lug and hold the bolt retracted, mechanism on the inside of the casing for shifting said lever, and mechanism actuated from the outside of the door for moving the lever either toward or away from the lug on the bolt, for retracting the bolt and for moving the lever back to its first position.

7. The combination with a casing, a

spring actuated bolt having a projecting lug and key mechanism for actuating the bolt, of a pivoted lever bifurcated at its rear end and provided near its front end with a shoulder adapted to engage the outer face of the lug on the bolt, a thumb piece on the inner side of the lock for shifting said lever, and means actuated by the key mechanism engaging the bifurcated end of the lever for moving the front end thereof out of the path of the lug, for retracting the bolt, and for moving the lever back to a position with its front end in the path of the lug on the bolt.

8. The combination with a casing, a spring bolt provided with a projecting lug, and a removable rear plate, of a deadlocking lever pivoted to the casing and provided with a shoulder near its front end, means at the inner side of the door for shifting said lever, independent means on the inner side of the door for retracting the bolt and key actuated mechanism carried by the removable plate for actuating said lever, the said lug on the bolt adapted to engage the end of the lever or the shoulder thereon and be deadlocked or held retracted thereby, substantially as described.

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

WARREN H. TAYLOR.

Witnesses:

WILLIAM E. WESSON,
CHAS. W. GIBSON.