

(No Model.)

J. D. PERKINS & G. GANDERTON.
COMBINED LATCH AND LOCK.

No. 463,796.

Patented Nov. 24, 1891.

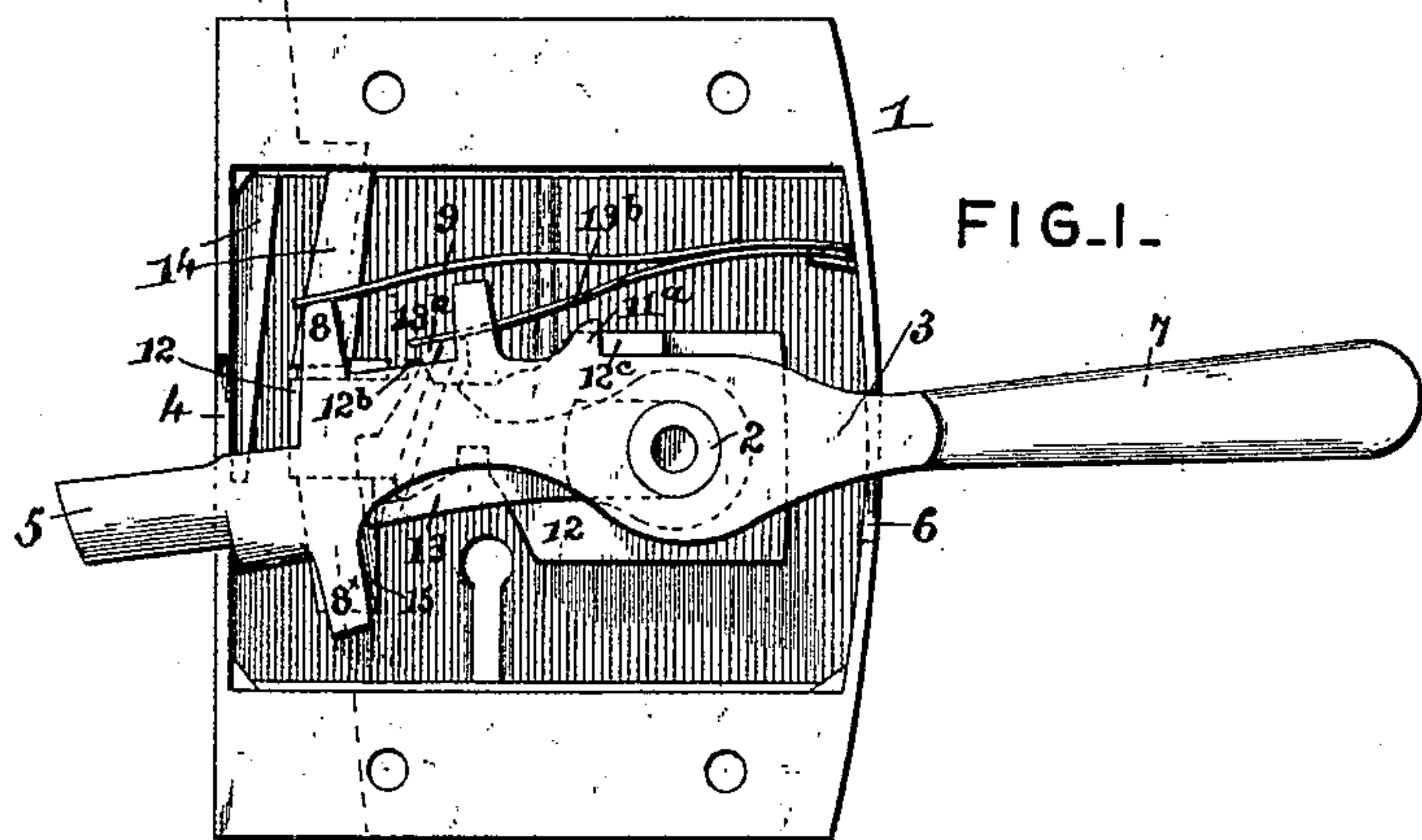


FIG. 2.

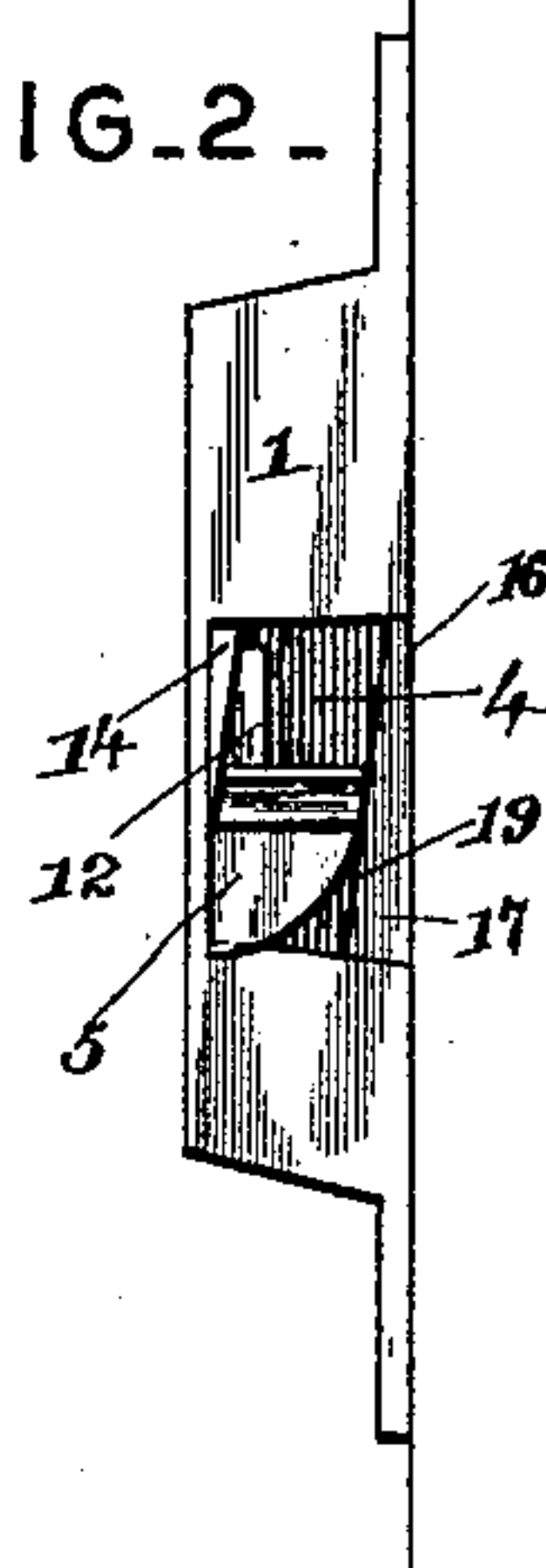


FIG. 1.

FIG. 3.

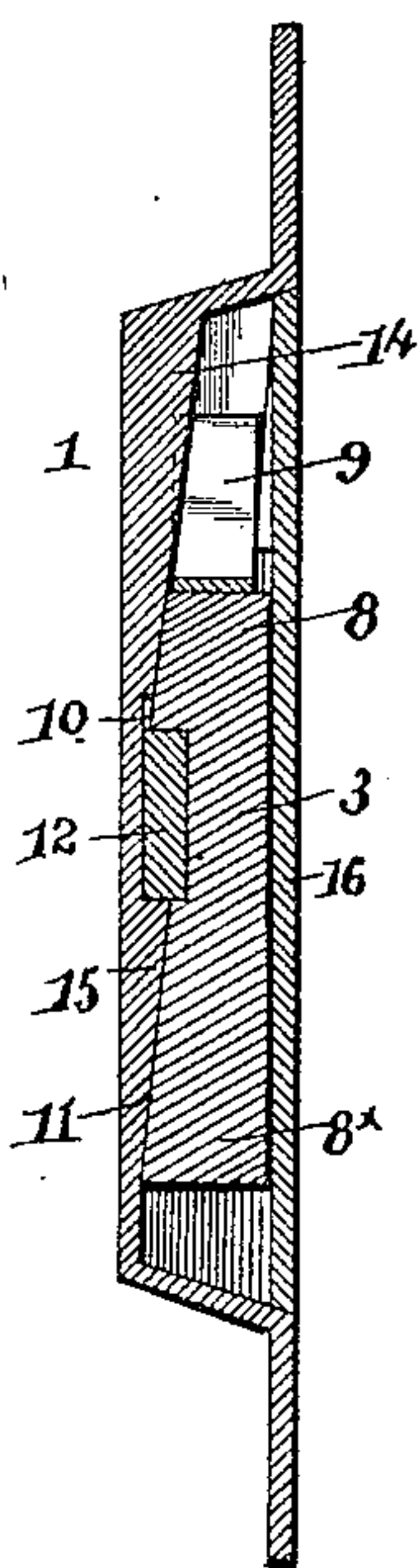


FIG. 4.

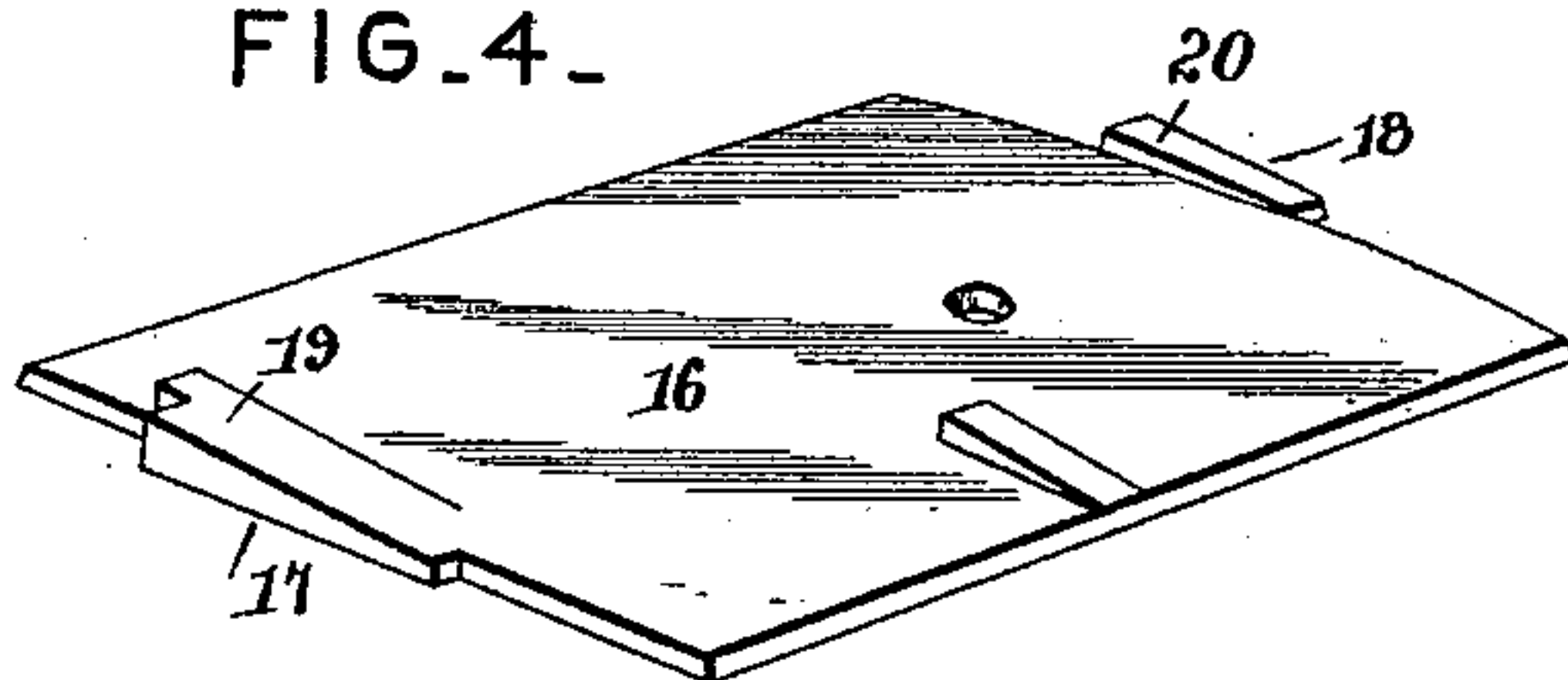


FIG. 5.

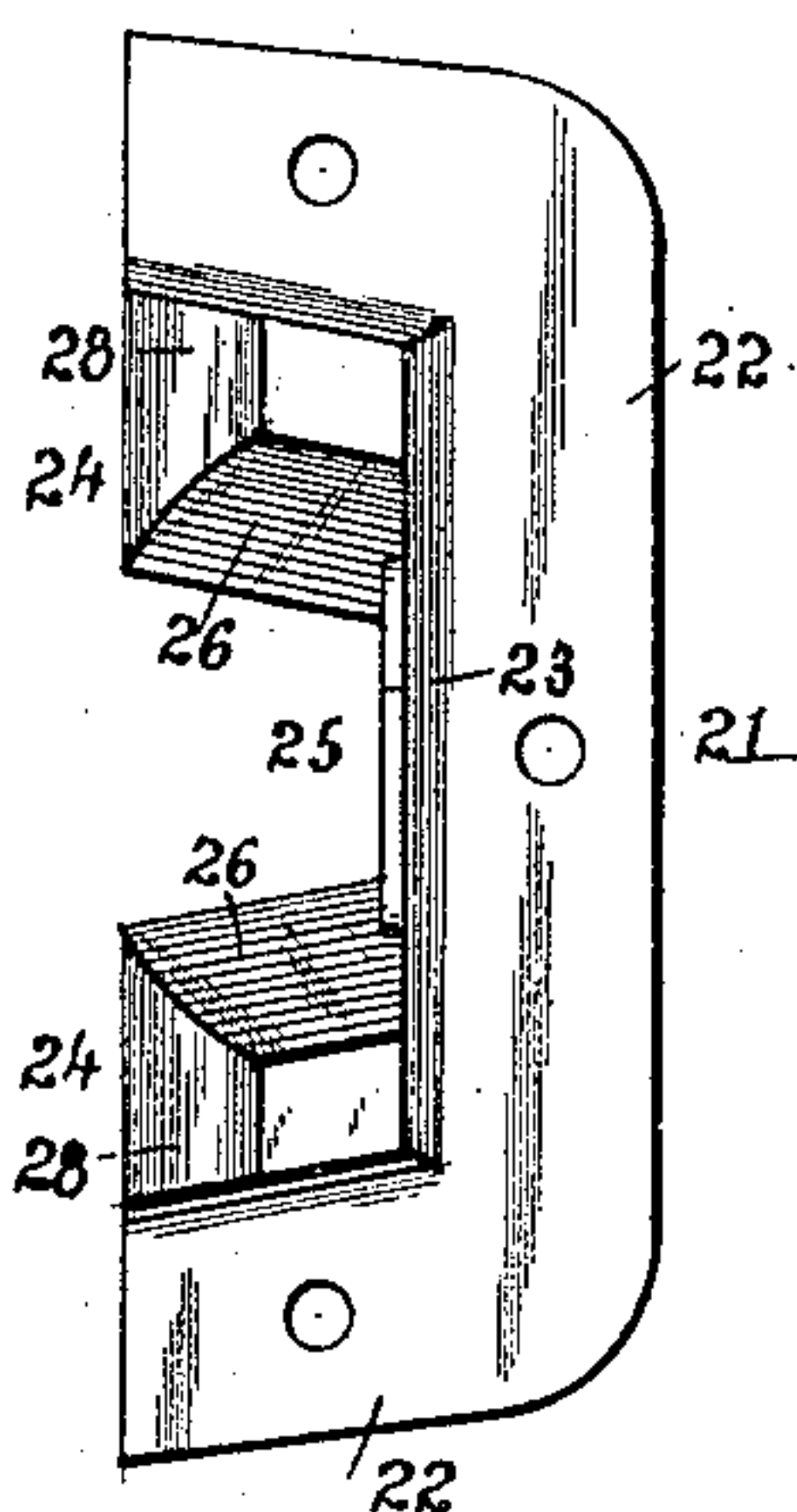


FIG. 6.

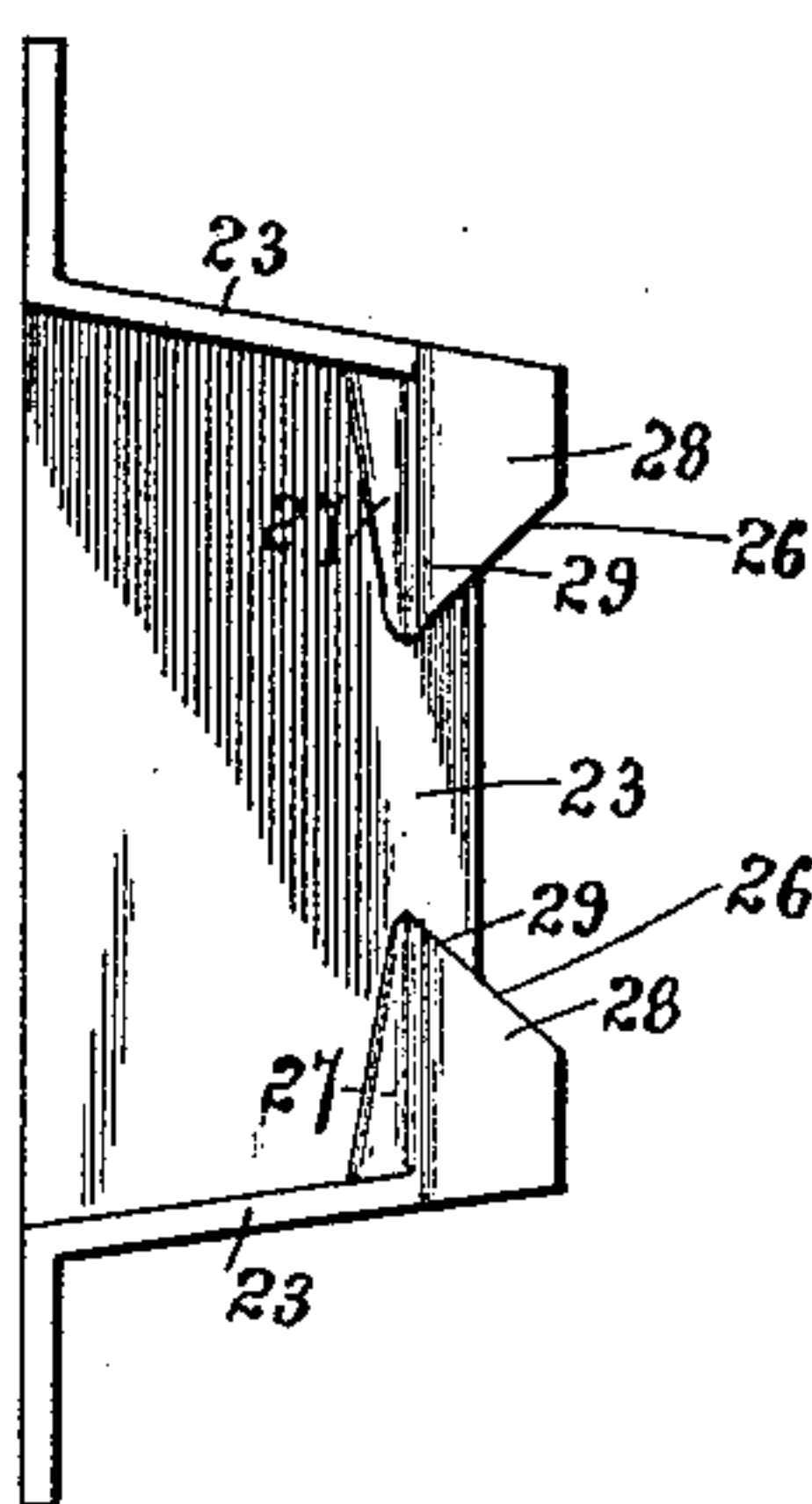
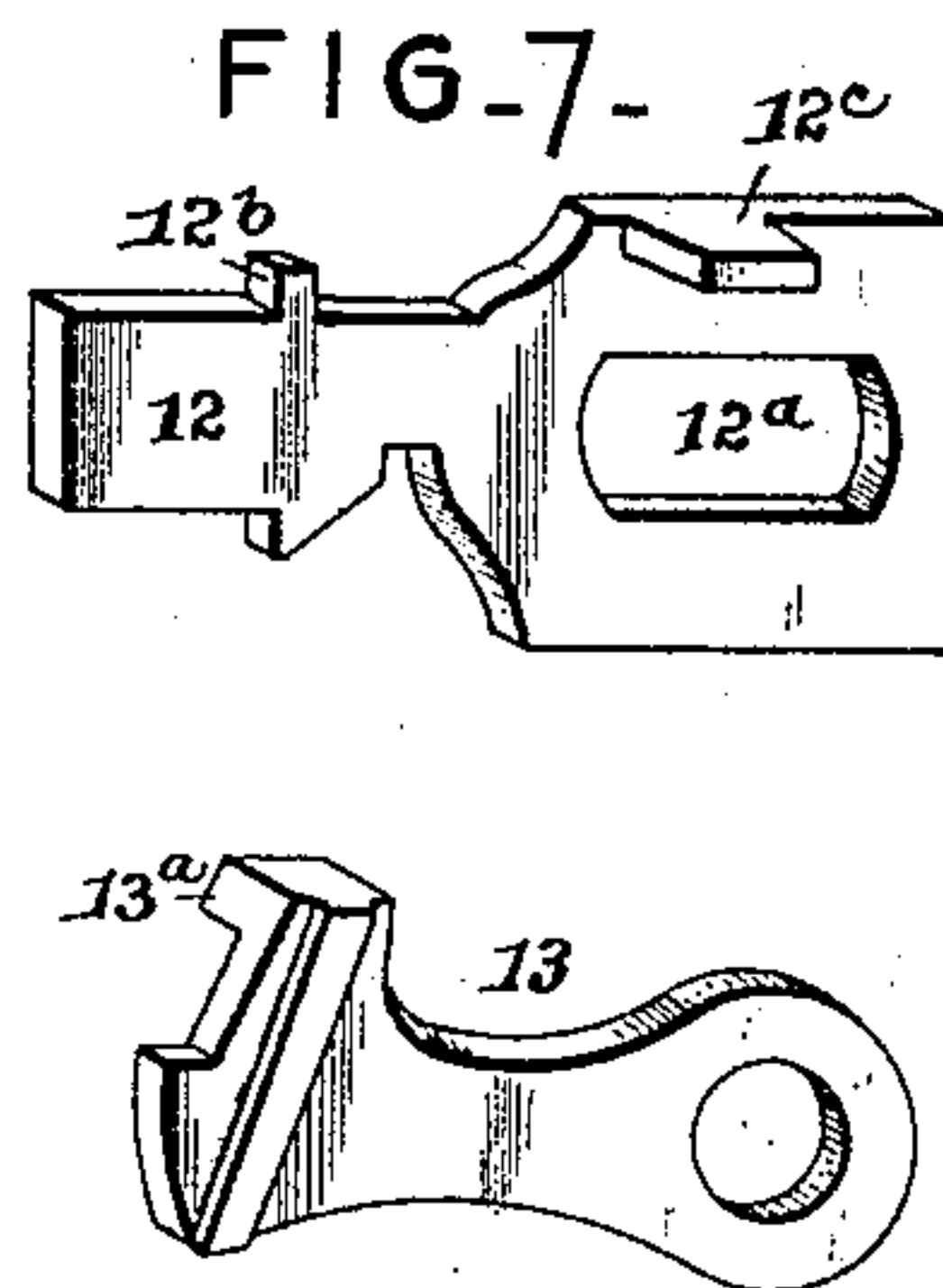


FIG. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN D. PERKINS AND GEORGE GANDERTON, OF KENTON, OHIO; SAID
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COMBINED LATCH AND LOCK.

SPECIFICATION forming part of Letters Patent No. 463,796, dated November 24, 1891.

Application filed July 23, 1891. Serial No. 400,483. (No model.)

To all whom it may concern:

Be it known that we, JOHN D. PERKINS and GEORGE GANDERTON, citizens of the United States, residing at Kenton, in the county of Hardin and State of Ohio, have invented a new and useful Lock, of which the following is a specification.

Our invention relates to improvements in combined locks and latches, and it has for its object to provide a lock and latch that is especially designed for use on refrigerator-doors, the primary purpose of the same being to force the door firmly against the jamb, which result insures a comparatively air-tight joint between the same and the door; and to this end the invention consists in a pivoted latch and lock combined, seated within a casing constructed in the novel manner herein-after more fully described, illustrated in the accompanying drawings, and specifically pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a back view of a lock and casing constructed in accordance with our invention. Fig. 2 is an end view of the same. Fig. 3 is a vertical section on the line $x x$ of Fig. 1. Fig. 4 is a plan view of the back plate. Fig. 5 is a front view of a keeper or lock-strike used in connection with this lock. Fig. 6 is a side elevation of the same. Fig. 7 is a detail in perspective of the locking-bolt and actuating-tumbler.

Referring to the accompanying drawings, the main casing 1, in which is seated the lock, is constructed of the ordinary material and in the ordinary manner, and is provided with the usual rectangular recessed portion. Pivoted and mounted upon the stud 2 projecting up from said casing is the lever-latch 3, one end of which projects through the front slot 4 of the casing 1 and forms the latch end 5 of the same, while the opposite end protrudes through the opening or recess 6 in the opposite end of the casing and terminates in a handle portion 7, by means of which the lever is operated. The lever or pivoted latch 3 is provided near its latch end just within the slot 4 in the casing, within which the said end plays, with the vertical offsets or flanges 8 and 8^x, against the upper of which the leaf-

spring 9 abuts and holds the latch end of said lever at the lower end or bottom of the slot 4, through which it protrudes, and thus when said latch is raised up either by the hand or by violently throwing the door closed to engage the keeper, after entrance within the keeper, the tension of the spring immediately throws the same down within the keeper. The upper flange or offset 8 is provided with an inward projection 10, while the lower flange 8^x on the opposite side of the lever is provided with an enlarged inclined portion 11, between which and said inward projection a space is formed, through which the sliding bolt 12 is designed to pass and lock the latch when desired. The lever or latch 3 is further provided with the squared shoulder or offset 11^a, which is also engaged by the locking-bolt 12, as will be described. The said bolt 12 is provided with a slot 12^a, working over the said stud, and is further provided with the lug 12^b and the inwardly-projecting stud 12^c, which, when the bolt is slid forward, is designed to take behind the square shoulder or offset 11^a, located on the top of said lever-latch, and thus provides a double lock for said latch with the terminal of the sliding bolt which enters between said inwardly-projecting offsets or flanges 8 and 8^x. The bolt 12 is controlled and operated by the spring-actuated tumbler 13, mounted over the same and between the lever-latch, an ordinary winged key being used to control the same. The said tumbler is provided with an inwardly-projecting pin or stud 13^a, which is designed to be pressed normally by the leaf-spring 13^b behind either side of the lug 12^b on said sliding bolt and lock the same either in its locked or unlocked position until the same is released from engagement with said lug on the sliding bolt by the wing of the key raising said tumbler up against the tension of its retaining-spring 13^b. The inner face of the casing 1 is provided with beveled inclines 14, projecting within the casing and directly beneath the inward projection of the upper offset or flange 8 on the pivoted lever and the latch end 5 of the same, and up which, when the latch is raised, the said projection and latch end of the bolt travels and throws the latch end 5 in and

away from the keeper, in order that the latch may be easily thrown out of engagement with the same. A similar incline 15 protrudes within the casing and bears under the enlarged inclined portion 11 of the opposite flange 8^x and corresponds in incline and pitch to the beveled incline 14, being parallel with the same, and thus steadies and effects the object of both inclines. The rear face of the casing 1 is inclosed by the ordinary back plate or cap 16, which is provided with the opposite squared projections 17 and 18, taking into the opposite openings in the ends of the main casing, through which the latch end and handle portion of the pivoted latch project, respectively. Both of these projecting ends are provided on their under sides with the beveled inclines 19 and 20, which project within said openings and bear against the back portion of both the latch end and handle of the pivoted latch, the said beveled portion of course being inclined in the opposite direction to the inclines projecting up within the casing, and thus providing by this construction parallel inclines, which form an incline way through which and in which the pivoted lever is designed to work. This construction causes the latch when raised to move away from the catch or strike toward the jamb of the door, thereby securing an easy exit or release from the catch or strike; but, on the other hand, when the lever is released it forces the latch down the inclined way and into the strike and out from the jamb, thereby pressing the door closely and firmly against the jamb and securing a tight and compact joint.

In connection with this lock is used the keeper 21, which is so constructed as to render itself available for use either on right or left hand doors, and besides being adapted to receive the latch of a perpendicularly-operating lock, as described, may also be used equally as well with horizontally, the same result being always in view—that is, to assist in throwing and keeping the door pressed firmly against the jamb. This strike is therefore of a double reversible type that adapts it for the various positions contemplated. The keeper or strike 21 consists of the flange bottom 22, that secures the same to the jamb or casing of the door, and of the raised sides and ends 23, which throw the keeper off a sufficient distance from the casing or jamb to accommodate the latch used. At the upper meeting ends of the projecting end and wall forming the strike the same terminates in the crowns or heads 24, between which is formed the space 25 for the entrance of the perpendicular latch. Said crowns or heads are provided with the straight inclines 26, inclining toward each other and up which the latch end of the pivoted lever rides and is guided within the strike and behind the shoulder formed by the crown. On the inner faces of said crowns or heads and within the strike is

formed the rounded inclined projections 27, over which the latch rides when it drops behind the shoulder of said crown or head, the said rounded incline serving the same function as the inclined ways within the lock-case, and acting conjointly with the action of the said lock-inclines the door is pressed more firmly against the jamb, this construction of keeper materially assisting to effect this object. At right angles to the inclines 26 the rounded inclines 28 are formed, which are designed to accommodate a horizontal latch, and are provided at their lower ends with a rounded portion 29, which serves to throw the latch easily behind the crown or head and over the said rounded incline, projecting up from the inner face of the strike, and thus accomplishes with a horizontal latch the same objects as with the perpendicular.

The construction and operation of my invention are thought to be apparent from the foregoing without further description.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination, with a spring-actuated pivoted latch, of the casing and back plate provided with oppositely-inclined portions forming an inclined way between which said latch moves, substantially as and for the purpose herein set forth.

2. In a combined lock and latch, a pivoted lever-latch provided with opposite offsets or flanges, the upper of which is provided with an inward projection and the lower with an enlarged inclined portion, locking means for said latch, a casing having beveled inclined projections located directly beneath said offsets or flanges on said lever, and a back plate provided with oppositely-inclined beveled portions bearing against the upper sides of said pivoted latch, forming with the casing inclines an inclined way in which the said pivoted latch operates, substantially as and for the purposes set forth.

3. In a lock and latch, the combination, with a spring-actuated pivoted latch located within a casing having an inclined latchway, of the double reversible keeper or strike provided with opposite identical crowns or heads having the straight bevels or inclines, the rounded bevels or inclines right-angularly disposed to said straight inclines and terminating in rounded edges, and the rounded inclined projections located on the under sides of said crowns or heads and within the strike, substantially as and for the purpose herein set forth.

4. A double reversible keeper or strike having the opposite identical crowns or heads, each of which is provided with the front straight bevels or inclines, the lateral rounded bevels or inclines right-angularly disposed to said straight inclines and terminating in rounded edges, and the rounded inclined projections located on the inner sides of said

crowns or heads and within the keeper or strike, substantially as and for the purpose herein set forth.

5 In a combined lock and latch, the combination, with the casing having an integral stud, of a pivoted spring-actuated lever-latch provided with opposite offsets or flanges and a squared shoulder near its handle end, a
10 provided with a locking-lug and an inwardly-projecting stud, said lock-bolt passing between said opposite flanges or offsets and the inwardly-projecting stud thereof engaging

said squared shoulder on said lever, and a spring-actuated tumbler pivoted on said stud 15 over said bolt and provided with a locking pin or lug adapted to engage said locking-lug of said lock-bolt, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses. 20

JOHN D. PERKINS.

GEORGE GANDERTON.

Witnesses:

M. L. WALKER,
JOHN H. GARY.