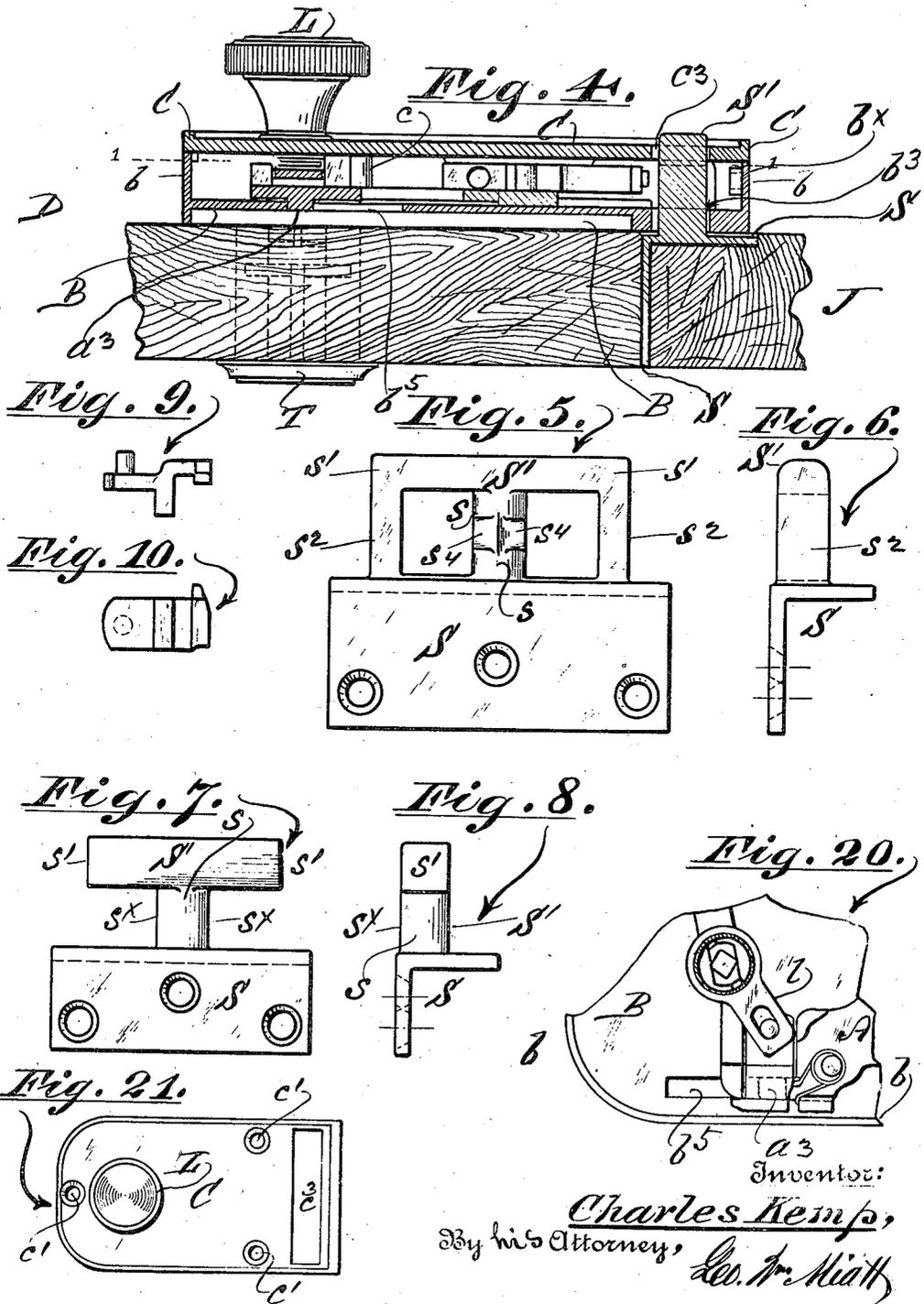


Jan. 2, 1923.

1,440,782

C. KEMP.
Lock,
FILED MAY 11, 1922.

3 SHEETS-SHEET 2



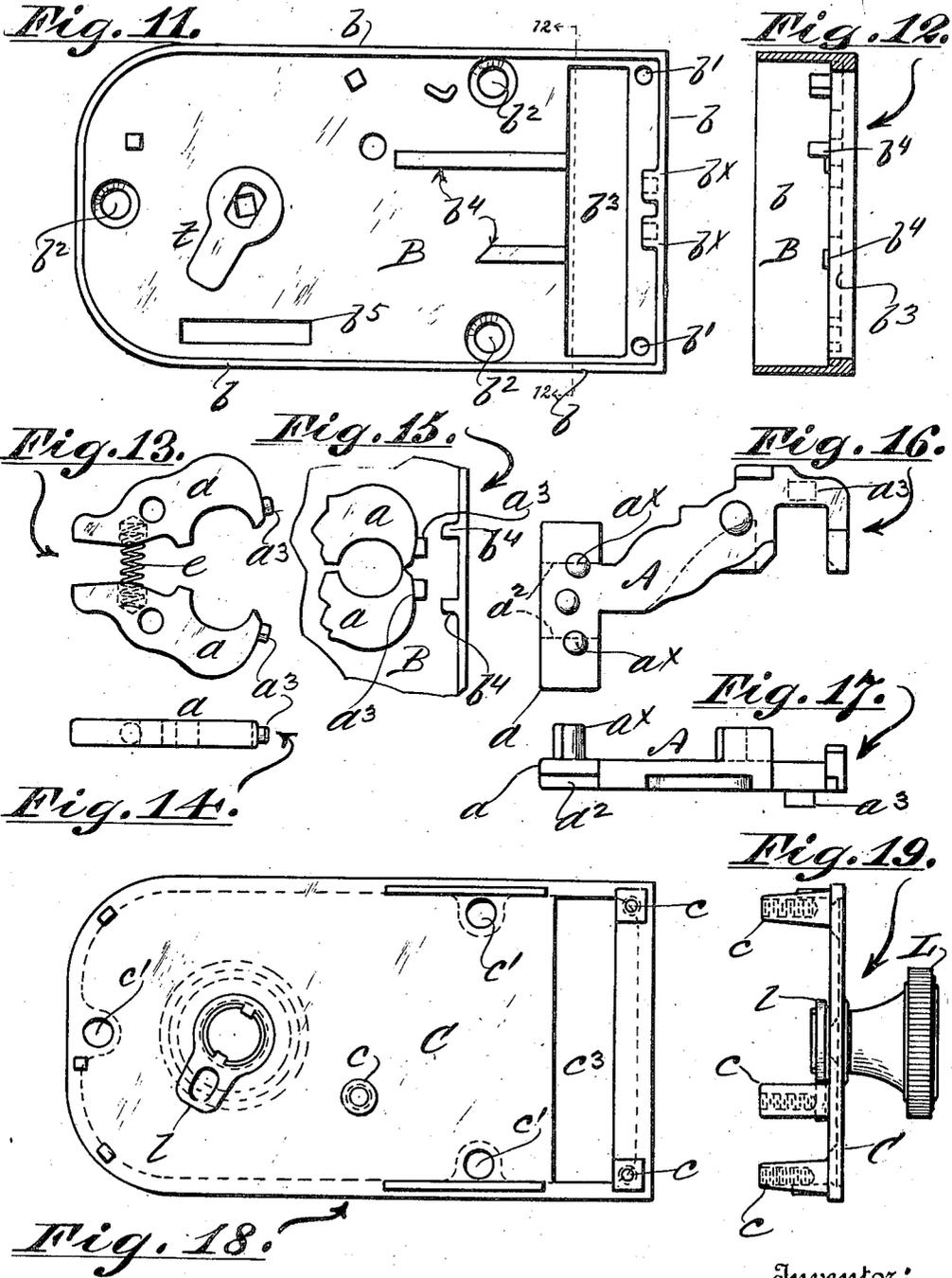
Inventor:
Charles Kemp,
By his Attorney,
Geo. W. Mott,

Jan. 2, 1923.

C. KEMP.
Lock,
FILED MAY 11, 1922.

1,440,782

3 SHEETS-SHEET 3



Inventor:
Charles Kemp,
By his Attorneys,
Geo. W. Math

UNITED STATES PATENT OFFICE.

CHARLES KEMP, OF NEW YORK, N. Y.

LOCK.

Application filed May 11, 1922. Serial No. 560,129.

To all whom it may concern:

Be it known that I, CHARLES KEMP, a citizen of the United States, and a resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Locks, of which the following is a specification:

My improvements relate to locks for doors and other analogous closures, and are designed to attain a simple, inexpensive, but substantial burglar proof jamb staple lock of few parts, in which the operative mechanism is effectually protected and concealed in locked position,—the invention consisting in specific construction, combination and arrangement of parts and appurtenances herein described and claimed, and a distinctive feature being the automatic bolt jaws used in conjunction with a jamb staple having cam surfaces for contactual engagement with said bolt jaws, substantially in the manner and for the purposes hereinafter fully set forth.

In the accompanying drawings I exemplify a practical embodiment of the essential features of my improvements in a door jamb lock of simple construction, although I do not limit myself to the identical form of component parts shown, since various modifications and equivalent mechanical expedients may be resorted to in detail with like result, and without departing from the spirit and intent of my invention in this respect.

With this understanding

Fig. 1, represents a vertical sectional elevation taken upon plane of line 1—1, Fig. 4, and showing an interior view of the lock casing, with the bolt thrown and its spring jaws in engagement with the jamb staple:

Fig. 2, is a like view, showing the position of the parts when the bolt and its spring jaws are retracted:

Fig. 3, is an elevation of the side of the bolt slide adjacent to base plate of the casing:

Fig. 4, is a sectional elevation of the lock taken upon the general plane of the zigzag line 4—4 indicated on Fig. 2, and showing the operative parts in the same relative positions as in said Fig. 2:

Fig. 5, is a face view of one form of jamb staple plate:

Fig. 6, is an end elevation thereof, taken at right angles to Fig. 5:

Fig. 7, is a face view of another form of

jamb staple plate adapted for use in conjunction with my automatic jaw bolt:

Fig. 8, is an end elevation thereof, taken at right angles to Fig. 7:

Figs. 9 and 10 are detail views, taken at right angles to each other, of the tumbler-actuated cam arm coupling piece:

Fig. 11, is an inner side elevation of the casing:

Fig. 12, is a sectional view thereof, taken upon plane of line 12—12, Fig. 11:

Fig. 13, is a detail view of the twin automatic jaws of the lock bolt:

Fig. 14, is an edge view thereof, taken on a plane at right angles to Fig. 13:

Fig. 15, is a diagrammatic detail illustrating the relation of the contactual shoulders on the automatic jaws of the bolt to those on the casing:

Fig. 16, is an elevation of the side of the slide bolt opposite to that shown in Fig. 3:

Fig. 17, is an edge view of said bolt taken at right angles to Fig. 16:

Fig. 18, is an elevation of the inner side of the casing cover plate: and

Fig. 19, is an edge view thereof taken at right angles to Fig. 18.

Fig. 20, is a detached detail view of a portion of Fig. 1, illustrating the function of the latch thrust arm.

Fig. 21, is an outside view of the cover plate, on a reduced scale.

The casing of the operative parts of my improved lock consists of the base plate B formed with the enclosing side walls b, b and the cover plate C, which is secured to said base plate B, by means of screws, the heads of which bear upon the sides of the chamfered holes b', b', b' , in the base plate B, and the threaded shanks of which engage with female threads in the screw posts c, c, c , on the inner side of the cover plate C. The lock, as a unitary structure is secured to the inner side of the door D, or other closure to be protected, by attaching screws passing through the screw holes c', c', c' , in the cover plate C, (see Fig. 21) and through coincidental screw holes b^2, b^2, b^2 , in the base plate B, in a manner well known in the art.

The staple plate S, is secured to the jamb J, of the door in the usual manner, and is integral with the staple or keeper S, known technically as the "striker." The base plate B, is formed with a transverse slot b^3 , and the cover plate C, with a coincidental trans-

verse slot c^3 for the accommodation of the striker S, the outer portion of which protrudes through both, as shown in Fig. 4 when the door D is closed. By this construction the casing of the lock is utilized to the fullest extent to reinforce the striker S, and sustain it against lateral pressure and stress during use, the cover C, functioning in this respect as well as the base plate B.

The staple or striker S, is formed with a central post s , having lateral cross extensions s' , s' , as shown more particularly in Figs. 5, 7 and 8. These lateral extensions s' , s' , in the preferred form shown in Figs. 1, 2 and 5, of the drawings, are united integrally at their outer extremities with the staple plate S, by side posts s^2 , s^2 , as shown more particularly in said Fig. 5, whereas in the modification shown in Figs. 7 and 8 these side posts are omitted. In either case the medial portion s^x , of the central post s , is cam shaped in cross section for a purpose hereinafter set forth. Thus in Figs. 7 and 8, said medial portion s^x , of the central post s , is cylindrical, or circular in cross section whereas in Figs. 1, 2 and 5 the cross section of said medial portion s^x of the post s , is square, the angles thereof presenting inclined plane surfaces as related to the central alignment of the spring jaws a , a , pivotally mounted on the head a' of the bolt slide A, as shown more particularly in Figs. 1 and 2. The same effect of cam surface is attained in the modification shown in Figs. 7 and 8 by the circular cross section of said medial portion s^x of the post s .

The head a' , of the bolt slide A, on the side thereof next the base plate B, is formed with parallel shoulders a^2 , a^2 , which rest between and engage with parallel ways b^4 , b^4 , on the inner side of the base plate B and the tail of said bolt slide A, is formed with a lug a^3 , which rests and travels in a slot b^5 , formed in said base plate B,—the parallel sides of said slot b^5 acting in conjunction with the parallel ways b^4 , b^4 , to maintain the alignment of said bolt slide A.

The bolt spring jaws a , a , are fulcrumed on the studs a^x , a^x , on the bolt head a' , and have an expansion spring e , interposed between their rear arms, their frontal jaws being concavely recessed to accommodate the medial cam portion s^x of the staple or striker post s , as shown more particularly in Fig. 1, of the drawings. Said expansion spring e tends constantly to close the jaws a , a , but allows them to yield when their forward edges or tips encounter the medial cam surfaces s^x of the striker post s , during either the forward or retractile movement of the bolt slide A. In other words, the engagement with, or release from, the striker S is automatic in so far as said spring jaws a , a , are concerned.

The nibs of the spring jaws a , a , are

formed with protuberant shoulders a^3 , a^3 , for engagement, when the bolt A, is thrust forward, with shoulders b^x , b^x , formed for the purpose on the inner front side wall of the base plate B, as shown in Fig. 1, of the drawing, thereby preventing the spreading apart of said spring jaws a , a , while the parts are in locked relation. In other words, said jaws a , a , cannot be tampered with nor opened up by extraneous means, other than the latch knob L, or a key inserted in the tumbler cylinder T, in a manner well known in the art.

It will be seen that the main novelty and distinctive feature of the present invention consists in the provision of the automatically actuating spring jaws a , a , in conjunction with a striker post s , forming duplex cam surfaces reversed as related to each other so as to spread the said spring jaws apart when the bolt slide A, is moved in either direction; incidental features in connection therewith being the reinforcing shoulders b^x , b^x , on the lock casing, for engagement with corresponding shoulders a^3 , a^3 , on the tips of said spring jaws, for the purpose of sustaining the latter in locked position; and the protrusion of the striker S, through both plates of the lock casing so as to reinforce and sustain said striker and the jamb staple plate S, against lateral stress and displacement.

Hence, while I herein show and describe suitable mechanism for moving the bolt slide A, in either or both directions, by means of a latch knob L, and thrust arm l , or a key tumbler thrust arm t , in a manner well known in the art, I do not wish to limit myself in this respect, the same being shown incidentally as part of a lock of this type.

By my invention I attain, practically, a jimmy proof lock of few parts and simple construction and operation, especially adapted to the protection of dwellings or in fact any enclosure to be safe-guarded against burglars, or unlawful entry.

What I claim as my invention and desire to secure by Letters Patent is,

1. In lock mechanism of the character designated, the combination of a lock casing, a jamb staple formed with a striker post having reversed duplex cam surfaces, a slidable bolt member and means for actuating the same in opposite directions, and spring jaws pivotally mounted on said slidable bolt member and adapted to automatically engage with and release themselves from said cam striker post, substantially in the manner and for the purpose set forth.

2. In lock mechanism of the character designated, the combination of a lock casing having plates with slots, a jamb staple formed with a striker post having reversed duplex cam surfaces, a slidable bolt member and means for actuating the same in oppo-

70

75

80

85

90

95

100

105

110

115

120

125

130

site directions, and spring jaws pivotally mounted on said slidable bolt member and adapted to automatically engage with and release themselves from said cam striker post, the latter extending protuberantly through said slots formed for the purpose in both plates of the lock casing substantially in the manner and for the purpose described.

10 3. In lock mechanism of the character designated, the combination of a lock casing having plates with slots, a jamb staple formed with a striker post having reversed duplex cam surfaces, a slidable bolt member
15 and means for actuating the same in opposite directions, and spring jaws pivotally mounted on said slidable bolt member and adapted to automatically engage with and release themselves from said cam striker
20 post, the latter being formed with transverse arms which extend protuberantly through said slots formed for the purpose in

both plates of the lock casing, substantially in the manner and for the purpose described.

4. In lock mechanism of the character designated, the combination of a lock casing with reinforcing shoulders, a jamb staple formed with a striker post having reversed duplex cam surfaces, a slidable bolt member and means for actuating the same in opposite directions, and spring jaws pivotally mounted on said slidable bolt member and adapted to automatically engage with and release themselves from said cam striker post, said spring jaws being formed with
35 shoulders adjacent to their opposed tips for engagement with said reinforcing shoulders on the lock casing, substantially in the manner and for the purpose set forth.

CHARLES KEMP.

Witnesses:

MARGARET HANSTEIN,
LILLIA MIATT CARTER.