

J. J. MURPHY.

LOCK.

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944,685.

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Fig. 1

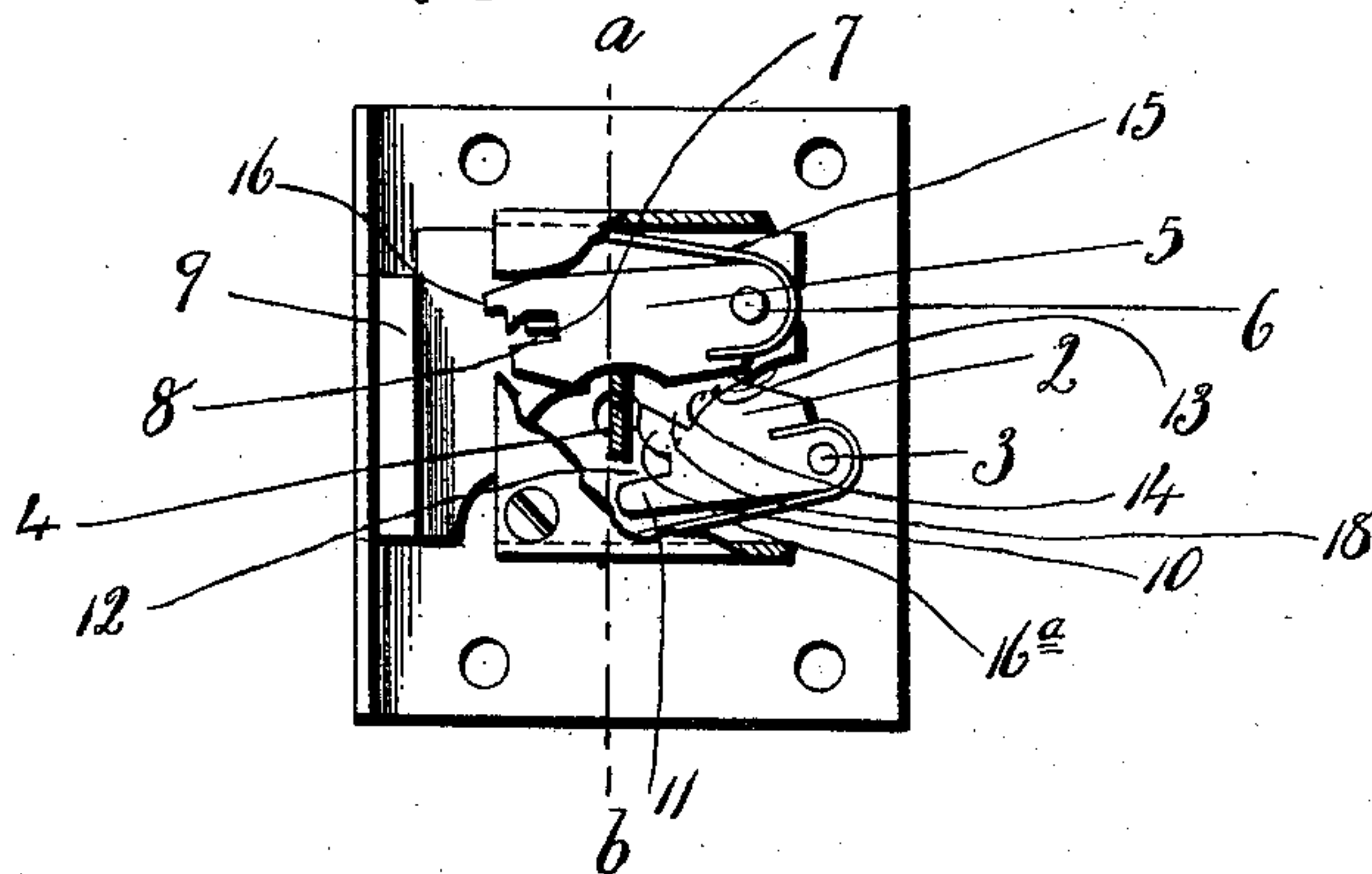


Fig. 2

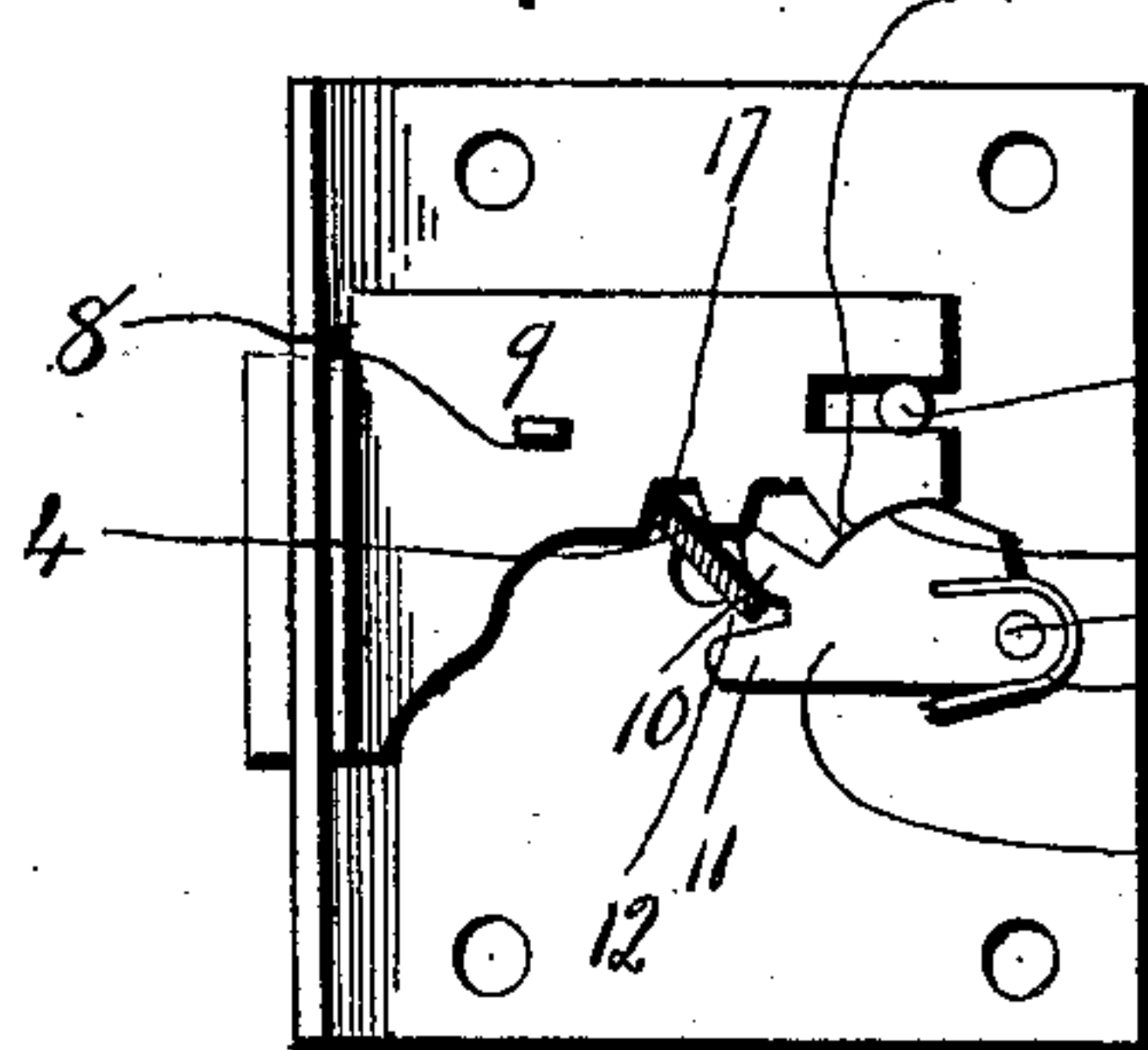


Fig. 3

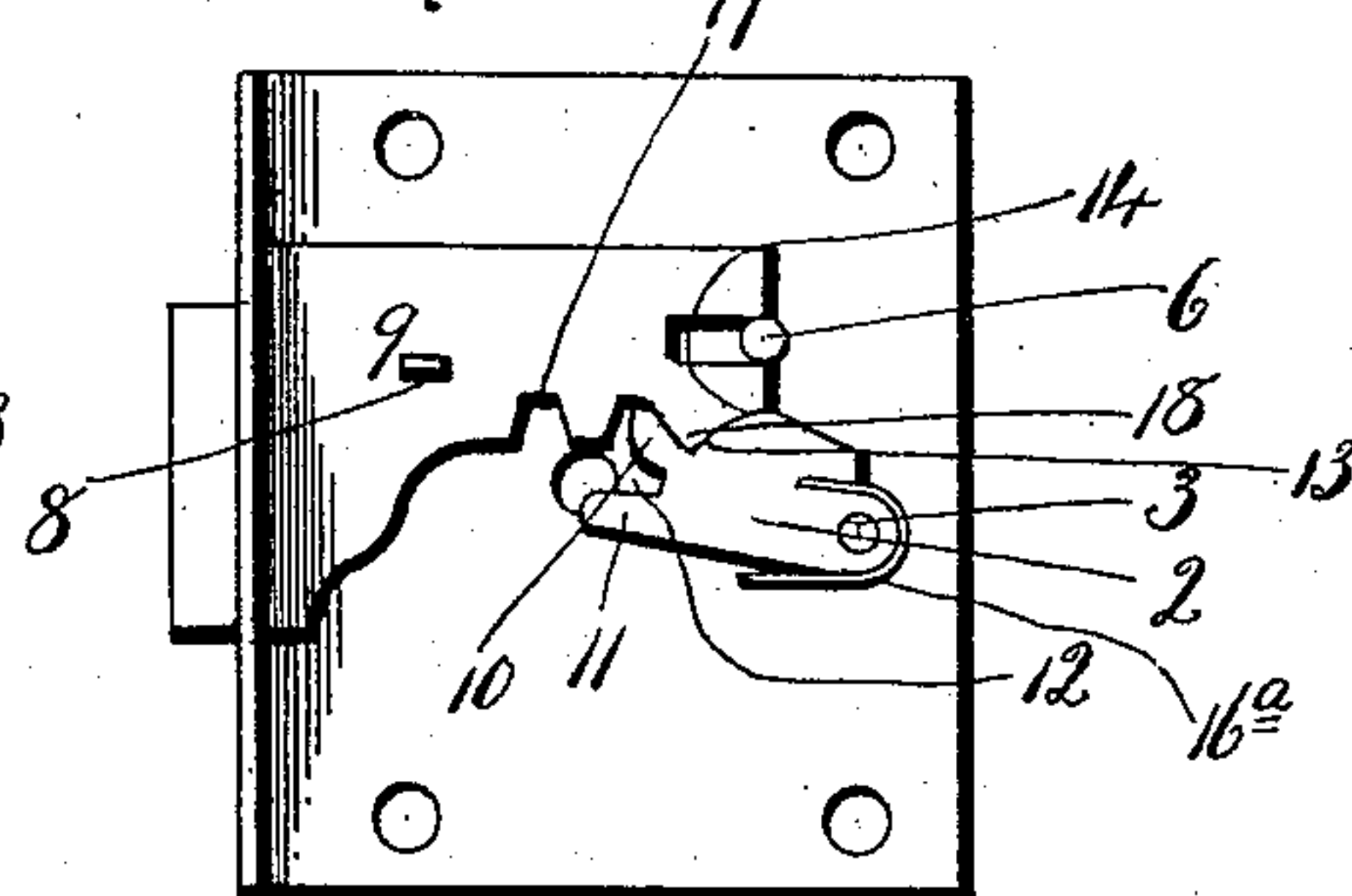
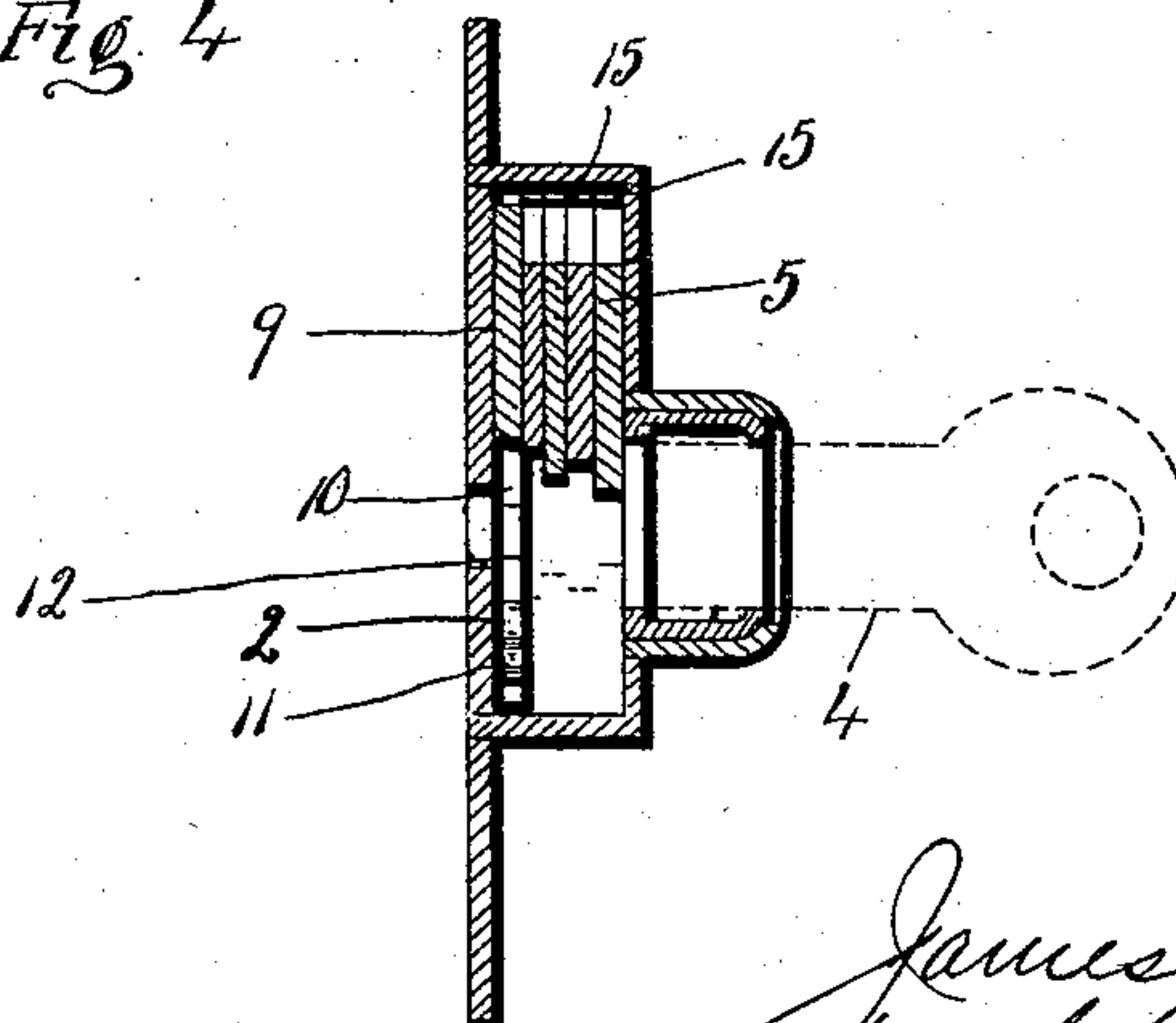


Fig. 4



Witnesses
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UNITED STATES PATENT OFFICE.

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LOCK.

944,685.

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To all whom it may concern:

Be it known that I, JAMES J. MURPHY, a citizen of the United States, residing at Terryville, in the county of Litchfield and State of Connecticut, have invented a new and useful Improvement in Locks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1 a view in elevation of a lock constructed in accordance with my invention. Fig. 2 a corresponding view of the lock with the tumblers removed and showing the position of the blocking-lever after it has been brought into play, but before the bolt has been shot into its fully locked position. Fig. 3 a similar view showing the bolt in its fully locked position. Fig. 4 a sectional view on the line *a—b* of Fig. 1.

My invention relates to an improvement in bolt locks, the object being by simple, compact and reliable means, to prevent what is known in the art as "kicking", by which is meant the forcing of the bolt back into its unlocked position by pressure however exerted, upon its outer end during the operation of throwing it out by the key.

With these ends in view, my invention consists in a lock having certain details of construction and combination of parts as will be hereinafter described and pointed out in the claims.

In carrying out my invention as herein shown, I employ a blocking-lever 2 swinging upon a pivot 3 and virtually located on the opposite side of the key 4 from the tumblers 5 which swing upon a pivot 6 and which are formed with the usual gates 7 for the reception of the stump 8 carried by the bolt 9. The said blocking-lever 2 is formed with fingers 10 and 11 separated by a notch 12 which permits the adjacent edge of the key to coact with the rounded inner surface of the said finger 10 for positively swinging the lever inward toward the center of the lock so as to move its blocking surface 13 into a corresponding but concaved blocking surface 14 in the bolt, whereby the lever 2 is thrown into the path of the bolt so as to prevent the same from being by any means pushed back

into its unlocked position at any time during the operation of throwing it into its unlocked position by the key. When the bolt has finally been moved into its unlocked position by the key, the tumblers 5 are swung by their springs 15 so as to engage their noses 16 with the stump 8, whereby the bolt is positively held in its locked position by the tumblers. But until this happens the coaction of the surfaces 13 and 14 just described, prevents the bolt from "kicking" back into its unlocked position by pressure upon its outer end. A spring 16^a carried by the lever 2 operates to hold the same in position for having its notch 12 entered by the adjacent edge of the key.

It will be understood that when the key is introduced into the lock, it begins to swing the blocking-lever 2 into position for preventing "kicking", simultaneously with its coaction with the sweeps of the tumblers 5 for the operation thereof and with its coaction with the bolt 9 for operating the same, the bolt being furnished with a notch 17 for the reception of the edge of the key opposite the edge thereof which enters the notch 12. When the lock is being unlocked, the tooth 18 of the bolt coacts with the surface 13 of the lever 2 to force the same against the tension of its spring, back into its normal position in which it is shown in Fig. 1.

I claim:—

1. In a lock, the combination with the bolt and the tumblers thereof, of a blocking-lever positively operated by the lock key and coacting with the bolt for preventing the same from "kicking" back while it is being moved into its locked position.

2. In a lock, the combination with the bolt and tumblers thereof, of a blocking-lever located on the opposite side of the key from the said tumblers in position to be engaged by the key for blocking the bolt against "kicking" back while being moved from its unlocked to its locked position.

3. In a lock, the combination with the bolt and tumblers thereof, of a pivotal blocking-lever formed with a notch for the reception of the lock key, whereby the blocking-lever is moved into position to prevent the bolt from "kicking" back while being moved into its locked position.

4. In a lock, the combination with the bolt and tumblers thereof, of a pivotal blocking-

lever located on the opposite side of the lock-
key from the said tumblers and formed with
a convex surface coacting with the shank of
the bolt for blocking the bolt and preventing
5 the same from "kicking" back while the bolt
is being moved into its locked position.

In testimony whereof, I have signed this

specification in the presence of two subscrib-
ing witnesses.

JAMES J. MURPHY.

Witnesses:

OTIS B. HOUGH,
HARRY C. CLOW.