

No. 663,791.

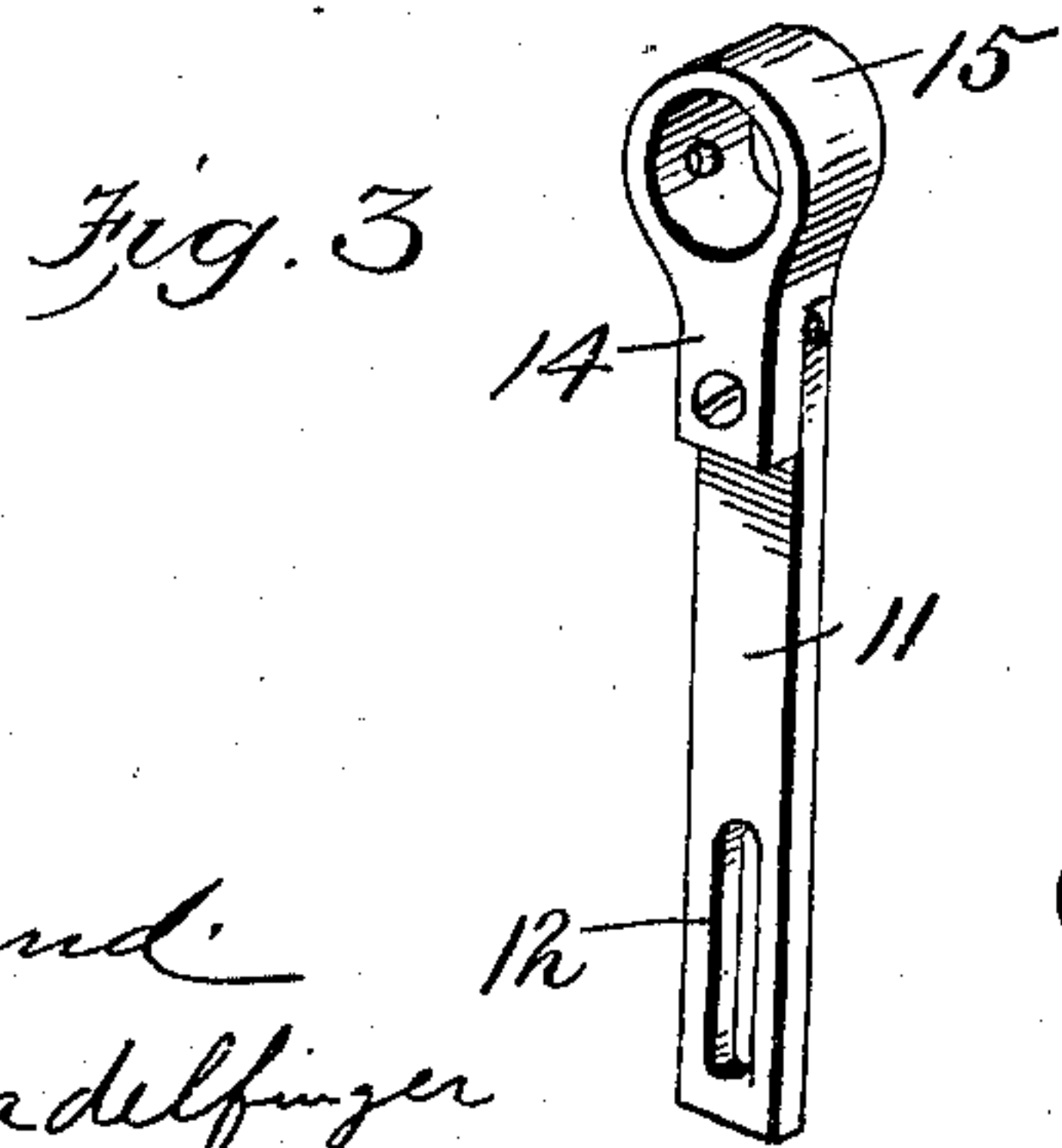
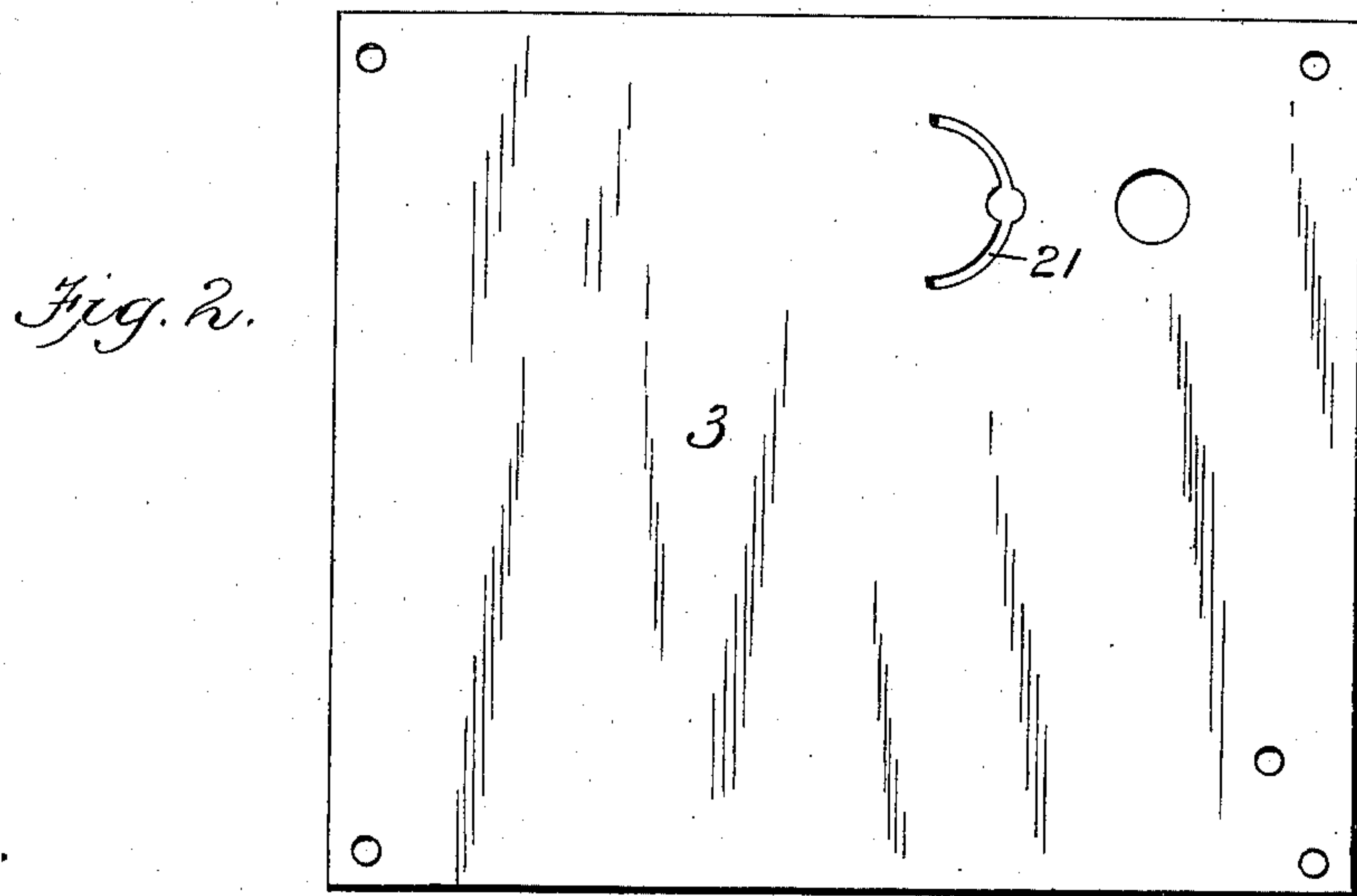
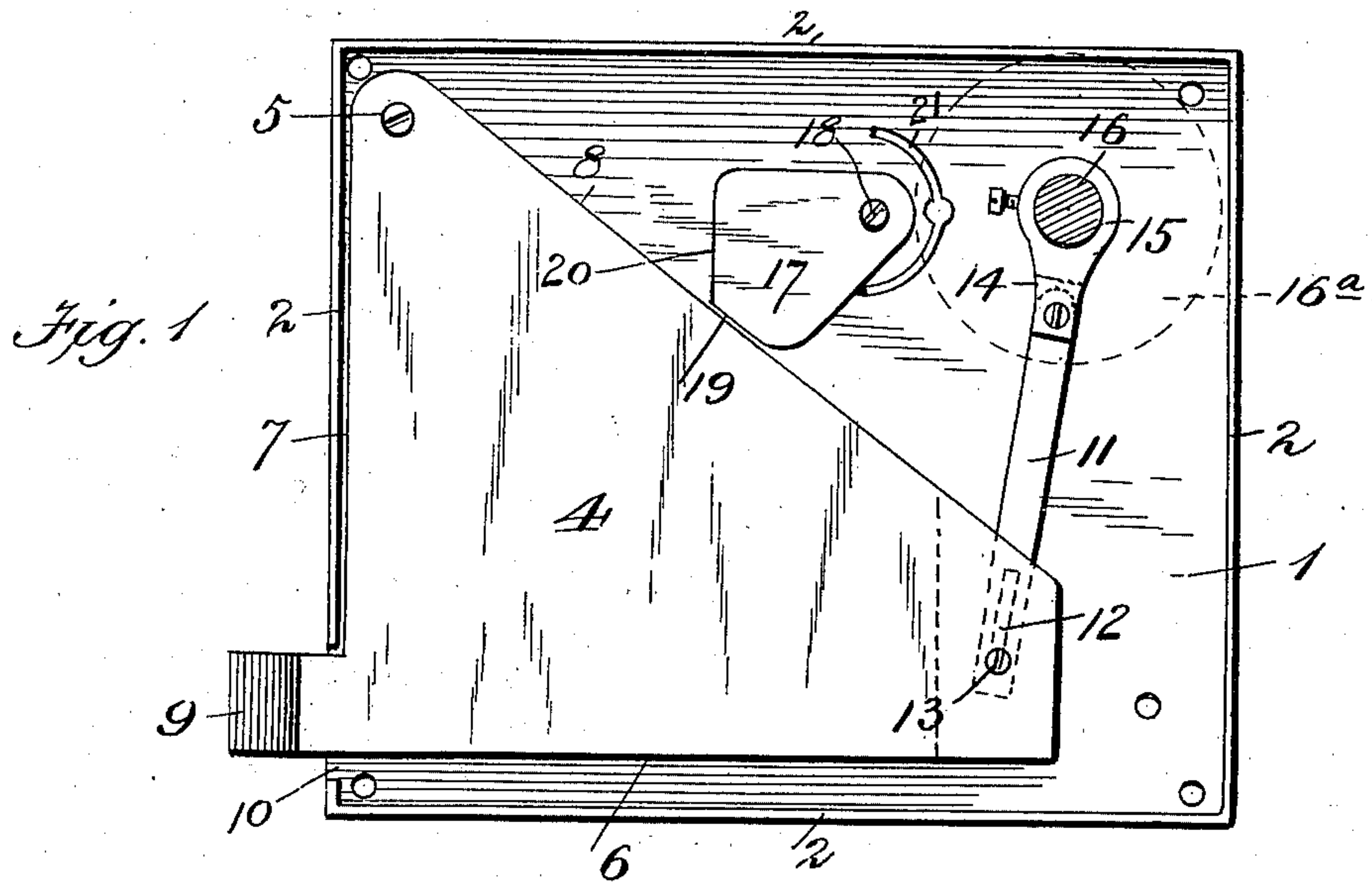
Patented Dec. 11, 1900.

S. T. SIMMONS.

LOCK.

(Application filed Sept. 12, 1900.)

(No Model.)



Witnesses:

F. L. Curran.
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UNITED STATES PATENT OFFICE.

SAMUEL T. SIMMONS, OF COLUMBUS, OHIO.

LOCK.

SPECIFICATION forming part of Letters Patent No. 663,791, dated December 11, 1900.

Application filed September 12, 1900. Serial No. 29,780. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL T. SIMMONS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented new and useful Improvements in Door-Locks, of which the following is a specification.

My invention relates to door-locks; and the object of the same is to provide a springless lock which will be simple in construction and efficient in operation. It is a well-known fact that the spring of the ordinary lock is the weakest part about it and soon becomes useless. My device is free from this vital defect and under ordinary wear is practically indestructible.

The novel construction employed by me in carrying out my invention is fully described in this specification and illustrated in the accompanying drawings, forming a part thereof, in which—

Figure 1 is a plan view of my lock with cover removed. Fig. 2 is a plan view of the cover. Fig. 3 is a detail of the link and bar. Like numerals of reference designate like parts in the various views of the drawings.

The numeral 1 designates the lower portion of the casing of my lock. This casing has a rim 2 formed integral therewith, which extends around it. A cover 3 is provided for the casing and is fastened thereon in the usual manner by screws fitted in apertures in the casing.

Pivotally secured within the casing by a screw 5 is a latch member 4. This latch is substantially the shape of the frustum of a right-angled triangle, with base 6, perpendicular 7, and hypotenuse 8. One apex of the triangle is cut off. This is done for the purpose of saving space. The essential feature is the two sides at right angles and a third diagonal to the two. A beveled catch 9 is formed integral with the latch member 4. It extends through an aperture 10 in the rim and performs the usual function. When the catch 9 contacts with the door-casing, the latch member will swing on the pivot 5 and permit the catch 9 to slide into the casing.

Attached to the rear end of the latch member 4 is a slotted bar or link 11. The slot 12 fits a screw 13, mounted to slide therein and rigidly seated in the latch member 4. The

upper end of the link 11 is pivotally joined to a bar 14, which bar is provided at its upper end with an apertured member or ring 15. The ring 15 is rigidly keyed to a spindle 16, carrying knobs, one mounted on each end. (Not shown.)

A pivoted locking member 17, mounted to turn on a pin 18, is positioned above the diagonal or hypotenuse and constructed with a straight side 19, tangent to a circle described by it in revolving on its axis. The lock member is so positioned that when it is dropped the straight side 19 will extend parallel to and in contact with the hypotenuse 8. The member 16 has a second straight side 20 so constructed that when the lock is raised this side will extend parallel to the top rim of the casing and hold the lock 17 in an upright position. A keyhole 19 pierces the casing at a point near the lock member 17 on a line with the pivot 18. By inserting a key in the hole the lock 16 may be readily operated to either lock or release the latch member 4.

The operation of my improved lock can now be set forth. Suppose the latch 17 is raised, with the side 20 extending parallel to the upper edge of the rim 2, the door can then be closed, for when the catch 9 comes in contact with the door-casing the latch 4 will be actuated and the catch 9 retracted, the screw 13 sliding in the slot 12. To open the door, the knobs are turned, the bar 14 is actuated, the rear end of the latch 4 raised, and the catch 9 disengaged. When the knobs are released, the latch will drop by gravity and return to its initial position. In locking the door the lock member 17 is displaced by the key, when it will drop by gravity into a position with the side 19 extending parallel to the hypotenuse 8 and contacting with it. The latch will then be locked, as the force acting on the side 19 will be normal thereto and the lock will not be displaced upward.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent, is—

1. In a door-lock, the combination, substantially as described, of a latch member pivotally mounted in a casing and provided with a catch and having a diagonal side, a link member pivotally secured to the rear end of said latch member, and a lock member

having a straight side and pivotally mounted adjacent to the said diagonal side of said latch member and constructed so that when left free it will take a position with its straight
5 side in contact with said diagonal and hold the latch against displacement.

2. In a door-lock, the combination, substantially as described, of a pivoted latch mounted in a casing and provided with a
10 catch, a spindle mounted to turn, a bar

rigidly secured at one end to said spindle, and a link member pivotally attached to said latch at one end and to said bar at the other.

In testimony whereof I have hereunto set my hand in presence of two subscribing wit- 15
nesses.

SAMUEL T. SIMMONS.

Witnesses:

N. W. DICK,
ORA SCRIMGER.