

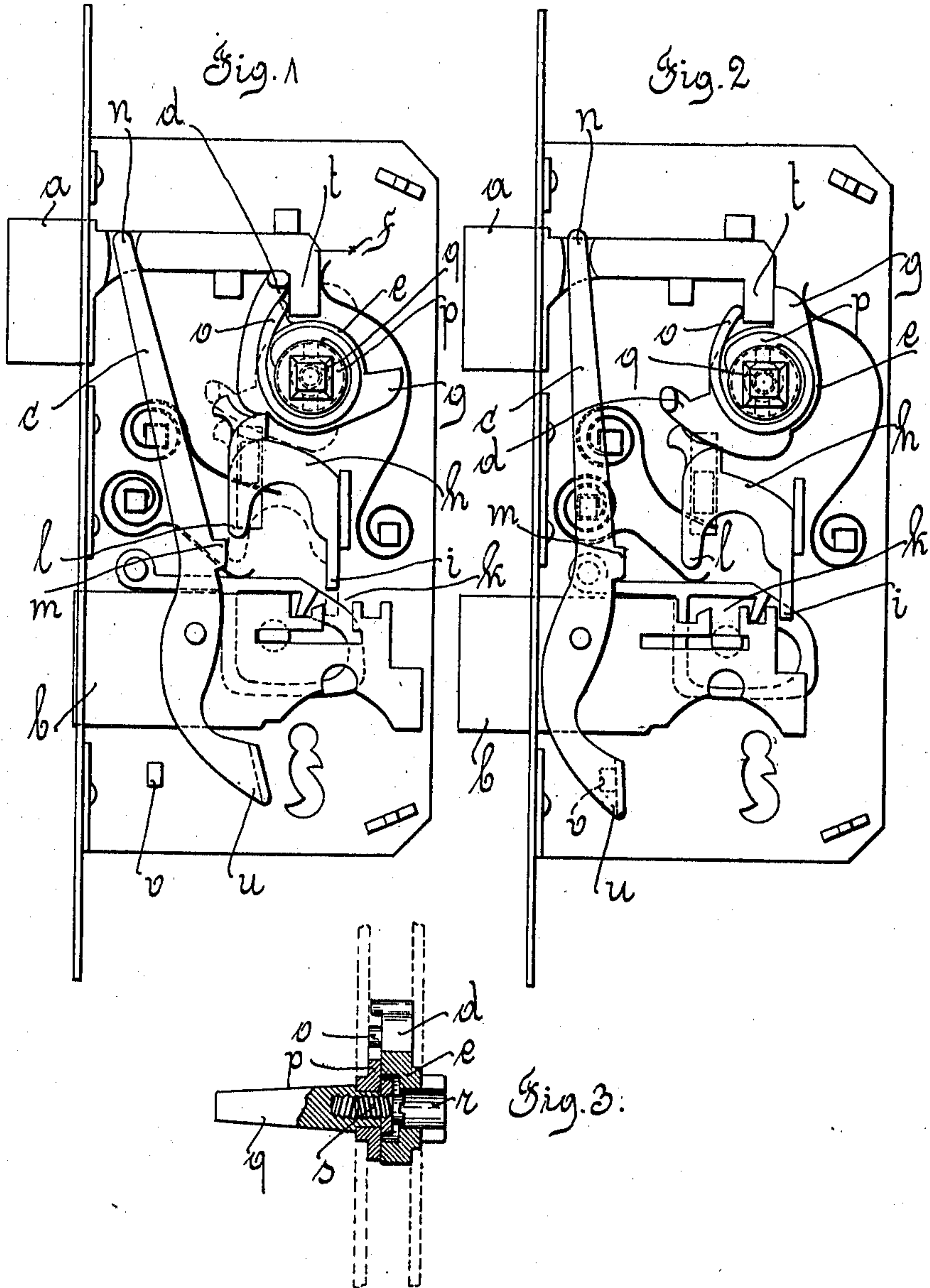
R. BROHMANN.

LOCK.

APPLICATION FILED DEC. 19, 1910.

993,750.

Patented May 30, 1911.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

RUDOLF BROHMANN, OF HANOVER, GERMANY.

## LOCK.

993,750.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed December 19, 1910. Serial No. 598,100.

*To all whom it may concern:*

Be it known that I, RUDOLF BROHMANN, a subject of the German Emperor, residing at Hanover, in Germany, have invented a certain new and useful Improvement in Locks, of which the following is a specification.

This invention consists in an improvement in, or modification of, the lock described in the specification filed with my application for patent, Serial No. 563917.

The lock described in my prior specification cited is designed only for doors with handle on one side (the inside), and comprises a handle-operated device whereby the latch-bolt can be locked when the dead bolt has been shot into locking position.

The object of the present invention is to provide a lock which is applicable to doors with handles on both sides, and has a latch-locking device which can be made operative without shooting the dead bolt.

The invention is illustrated in the annexed drawing, in which—

Figure 1 is an elevation of the interior of the open lock, with dotted lines indicating the position when the latch bolt is locked. Fig. 2 shows both bolts locked, and Fig. 3 is a view of the bipartite handle spindle, partly in section.

The latch bolt *a*, dead bolt *b* and locking lever *c* pivoted to the bolt *b* are substantially similar to the parts *d*, *b*, *e*, in my prior specification cited.

*r* is the short, hollow spindle member provided for attachment of the inside handle, and *e* is a collar on this spindle. When the inside handle is turned in one direction the arm *d* on the collar *e* retracts the bolt *a* in the direction indicated by the arrow *f*, whereas on turning the said handle in the opposite direction into latch-locking position, the arm *g* of the collar *e* is thrust against the rear end of the bolt *a* and the arm *d* vertically depresses the slidable locking member *h*, so that if the bolt *b* is in retracted position (Fig. 1) the projection *i* of the latter enters the recess *k* in said bolt *b*, and the projection *l* of the slide is moved into the path of the shoulder *m* of the lever *c*. Any unauthorized attempt to open the lock causes the bolt *a* to bear against the upper end *n* of the lever *c*, and the latter to bear against the slide *h*.

When bolt *b* is protracted, the lower end *u* of the lever *c* abuts against abutment *v*, so

that bolt *a* is likewise locked, by the lever *c*. By turning the inside handle into latch-locking position after shooting bolt *b*, the projection *i* is pushed down behind the bolt *b*, as shown in Fig. 2.

The spindle member for the outside handle comprises the part *q* and the plate *p* carrying the preferably elastic lever arm *o*. The squared part *q* traverses the plate *p*, and is made fast by means of a screw *s* inserted through the hollow member *r*.

When the latch bolt *a* is not locked, it can be operated by the outer handle, by the arm *o* abutting against the pendent part *t*, but when the bolt *a* is locked the outer handle can only be slightly moved, to the extent allowed by the elasticity of the arm *o*, so that the person using the handle becomes aware that the door is locked. Rotation of the outer handle is preferably limited by an abutment on the casing, so that the arm *o* cannot be excessively bent.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. In a lock the combination of a dead bolt, a latch bolt, an inside handle spindle, a lever actuable by the inside handle spindle for acting on the latch bolt, a locking member movable into the path of the dead bolt when shot, means integral with said lever for moving said locking member, an outside handle spindle, and a lever actuable by the outside handle spindle for retracting the latch bolt.

2. In a lock the combination of a dead bolt, a latch bolt, an inside handle spindle, a lever actuable by the inside handle spindle for acting on the latch bolt, a locking member movable into the path of the dead bolt when shot, means integral with said lever for moving said locking member, an outside handle spindle, and an elastic lever actuable by the outside handle spindle for retracting the latch bolt.

3. In a lock the combination of a dead bolt having a gap, a latch bolt, an inside handle spindle, a lever actuable by said spindle for acting on the latch bolt, a locking member which is movable into the path of the dead bolt or into the gap thereof, according to whether the dead bolt is shot or retracted, means integral with said lever for moving said locking member, a lever pivoted to said dead bolt and engaging the latch bolt, an abutment for said last mentioned



lever when the dead bolt is shot, an outside handle spindle, and a lever actuatable by the outside handle spindle for retracting the latch bolt.

- 5 4. In a lock the combination of a dead bolt having a gap, a latch bolt, an inside handle spindle, a lever actuatable by said spindle for acting on the latch bolt, a locking member which is movable into the path of the  
10 dead bolt or into the gap thereof, according to whether the dead bolt is shot or retracted, means integral with said lever for moving said locking member, a lever pivoted to said dead bolt and engaging the latch bolt, an abut-

ment for said last mentioned lever when the 15 dead bolt is shot, an outside handle spindle, and a lever actuatable by the outside handle spindle for retracting the latch bolt, said last mentioned lever and said locking member being positioned so that said member 20 forms an abutment for said lever when said member is engaging the gap in the dead bolt.

In witness whereof I have signed this specification in the presence of two witnesses.

RUDOLF BROHMANN.

Witnesses:

MARTA L. THOMPSON,  
R. PAUL THOMPSON.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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