(No Model.)

J. ROCHE.

PIANO LOCK.

No. 465,293. Patented Dec. 15, 1891.

Fig. 1

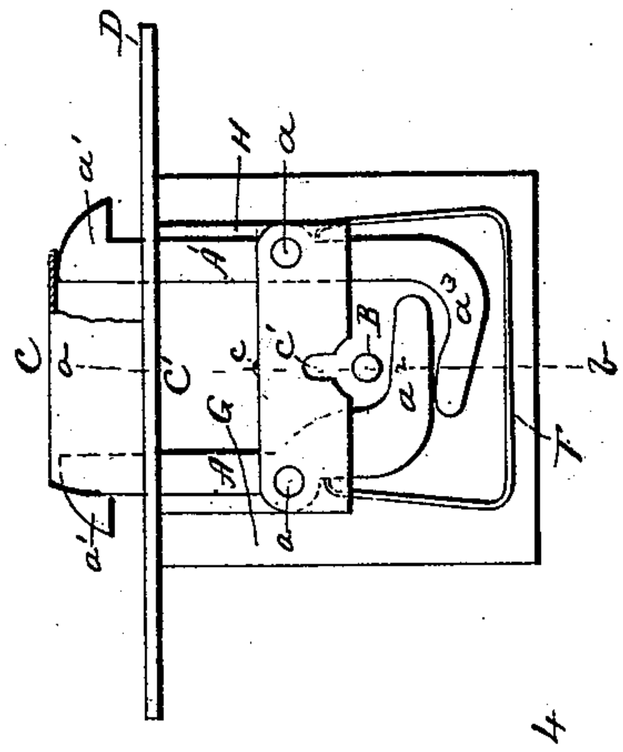


Fig. 2

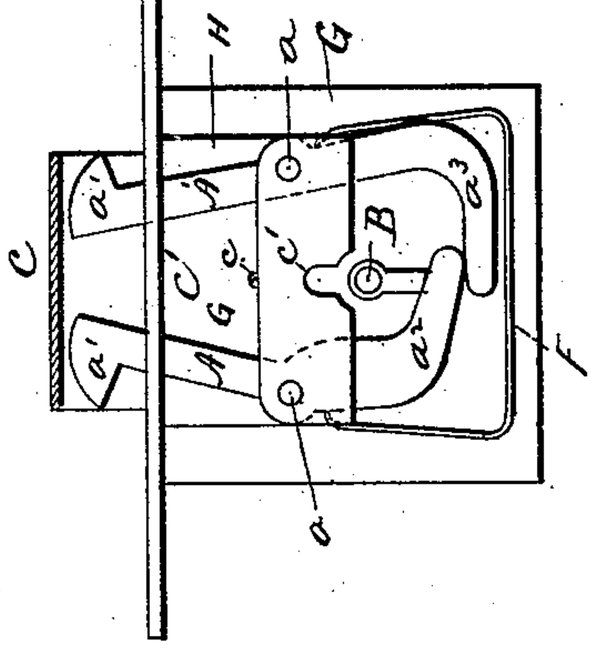


Fig. 3

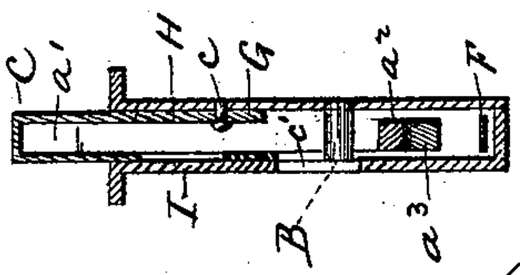
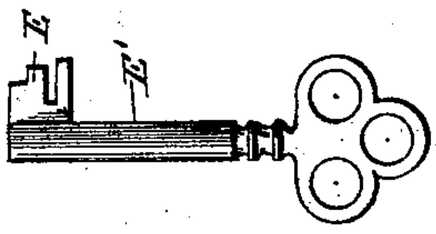


Fig. 4



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES ROCHE, OF TERRYVILLE, CONNECTICUT, ASSIGNOR TO THE EAGLE LOCK COMPANY, OF SAME PLACE.

PIANO-LOCK.

SPECIFICATION forming part of Letters Patent No. 465,293, dated December 15, 1891.

Application filed August 19, 1891. Serial No. 403,124. (No model.)

To all whom it may concern:

Be it known that I, JAMES ROCHE, of Terryville, in the county of Litchfield and State of Connecticut, have invented a new Improvement in Piano or Desk Locks; and I do hereby declare the following, when taken in connection with accompanying drawings, and the letters 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, partly in elevation and partly in section, of a lock constructed in accordance with my invention, the combined bolts and tumblers being shown in their projected or normal positions; Fig. 2, a similar view with the tumblers in their retracted or unlocked positions; Fig. 3, a view of the lock in vertical transverse section on the line *a b* of Fig. 1; Fig. 4 a plan view of a single-bitted key, such as may be used with my improved lock.

My invention relates to an improvement in that class of locks commonly known as "desk" or "piano" locks, and more particularly to locks of such class which have a fixed bolt-like housing, and two combined bolts and tumblers hung within the lock and having hooked upper ends located within the said housing, and tails located on opposite sides of the key-stud of the lock, respectively, the object being to produce a cheap, durable, and reliable lock of the general construction described, which shall be adapted to be operated by a single-bitted key.

With these ends in view my invention consists in the combination, with a fixed bolt-like housing projecting from the face or selvage plate of the lock, of two combined bolts and tumblers hung within the body of the lock on opposite sides of the key-stud thereof, and having hooked outer ends located within the opposite edges of the said housing, and curved tails extending below the said key-stud and turned toward and beyond each other and lying close together, whereby when the key engages with the inner tail of the two the movement thereof will be transmitted to the other tail, so that both of the combined bolts and tumblers will be simultaneously operated.

The two combined bolts and tumblers A and A′ of my improved lock are hung on opposite sides of the key-stud B of the lock upon studs *a a*, situated above the level of the said stud. The outer ends of the said combined bolts and levers are constructed to form hooks *a′ a′*, which are located in the opposite edges of a fixed bolt-like housing C, closed at its outer edge, but open at its ends and formed, as herein shown, of a folded sheet-metal plate passed through a suitable opening formed in the face-plate or selvage D of the lock, the larger end C′ of the said plate receiving a rivet *c*, by means of which it is held in place and having its extreme lower edge cut away, as at *c′*, to receive the key for which the said end of the plate is thus made to do duty as a ward. The inner ends of the said combined bolts and tumblers are extended below the key-stud to form tails a^2 and a^3, turned inwardly so as to pass each other and lie close together, the tail A^2 being extended under the stud, so as to be engaged by the bit E of the key E′ when the same is turned in either direction. A spring F, embracing the lower ends of the combined bolts and tumblers and engaging with them at points below the studs *a a*, on which they are hung, exerts a constant effort to throw them into their normal or projected positions, as shown by Fig. 1 of the drawings.

The details of the construction of the lock may be varied as desired. As herein shown it has a simple back-plate G, riveted to the under side of the face-plate, and a narrow plate H, perforated at each end to adapt it to slip over the outer ends of the studs *a a*, and having its lower edge cut away midway of its length to receive the key for which it forms a ward. A flanged cap I forms the front plate of the lock and is secured in place by the studs *a a*, which are headed down upon it. I do not, however, limit myself to any particular construction of the lock outside of the combined bolts and tumblers, and would therefore have it understood that I hold myself at liberty to make such changes and alterations from the construction herein shown and described as fairly fall within the spirit and scope of my invention. A single-bitted key is smaller than a double-bitted key, and thus more convenient to carry, and, more-

over, requires only a single-ended key-opening in the lock-case. Furthermore, under my construction the combined bolts and tumblers are operated from points sufficiently (and about equally) distant from their fulcra to secure a longer leverage and hence an easier action than can be secured with a double-bitted key which must engage one of the combined bolts and tumblers near its fulcrum and the other at a point distant therefrom, so that it requires much more force to throw one tumbler than the other.

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

In a lock, the combination, with a fixed bolt-like housing projecting from the face or selvage plate of the lock, of two combined bolts and levers hung within the body of the lock on opposite sides of the key-stud thereof and having hooked outer ends located within the said housing, and curved tails extending below the said key-stud and turned inward under the same to extend beyond each other and lying close together, substantially as set forth, and whereby when the bit of a single-bitted key engages with the inner tail the movement thereof will be transmitted to the other tail, so that both of the combined bolts and levers will be simultaneously operated and their hooked upper ends retracted within the housing by a single-bitted key.

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

JAMES ROCHE.

Witnesses:
H. B. PLUMB,
GEO. W. CROSLEY.