

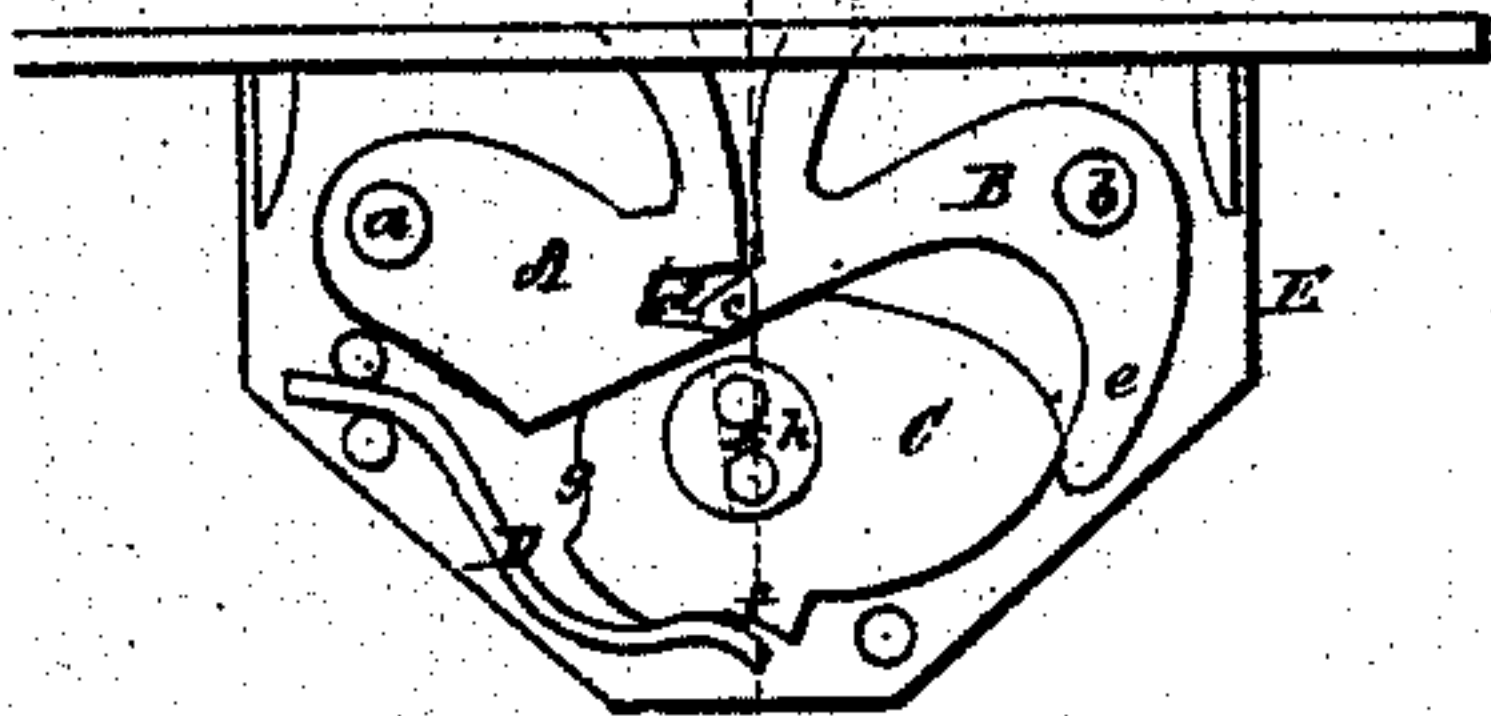
*J. Murphy,*

*Piano Lock.*

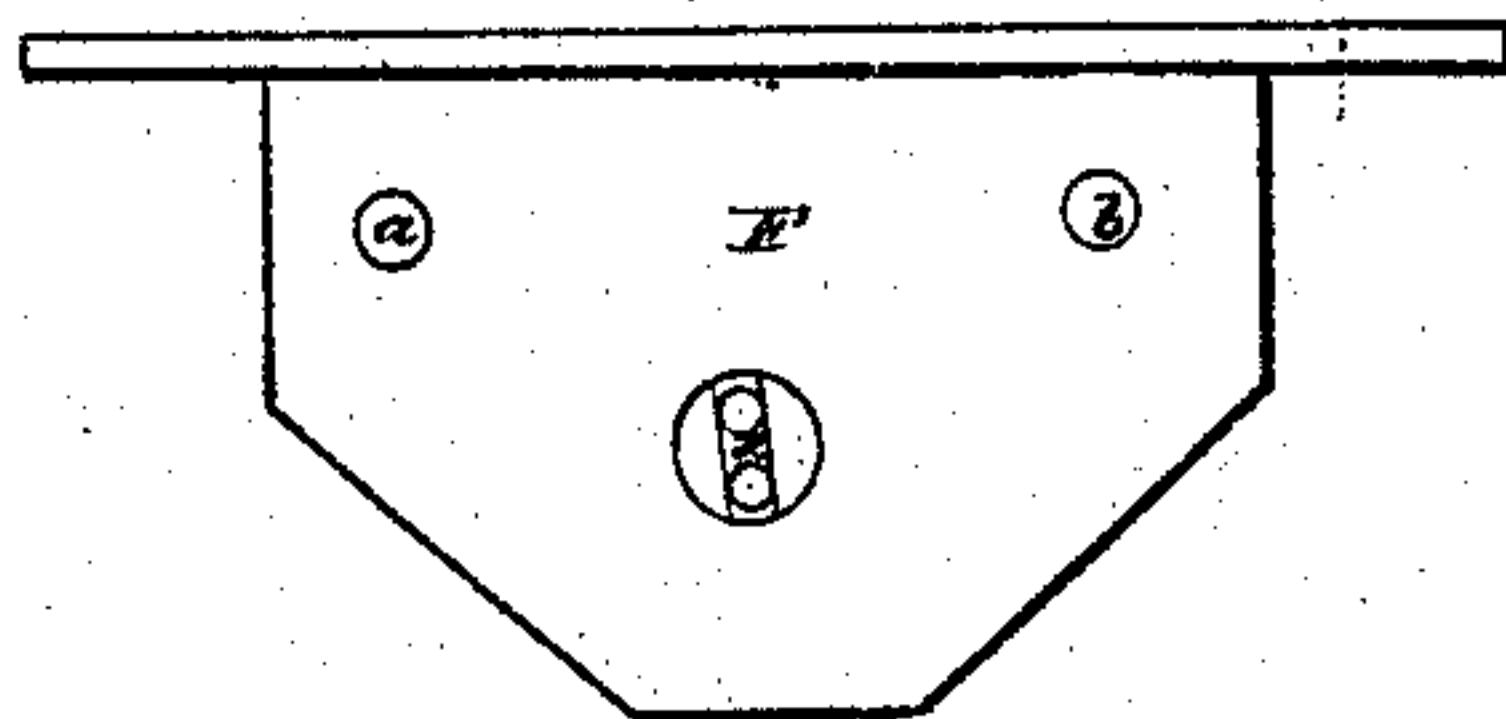
*No. 107,947.*

*Patented Oct. 4, 1870.*

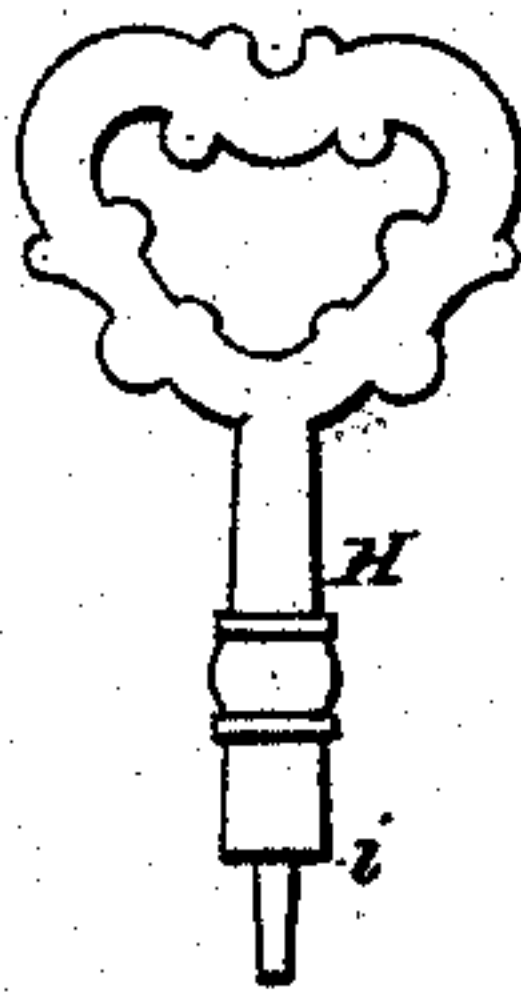
*Fig. 1*



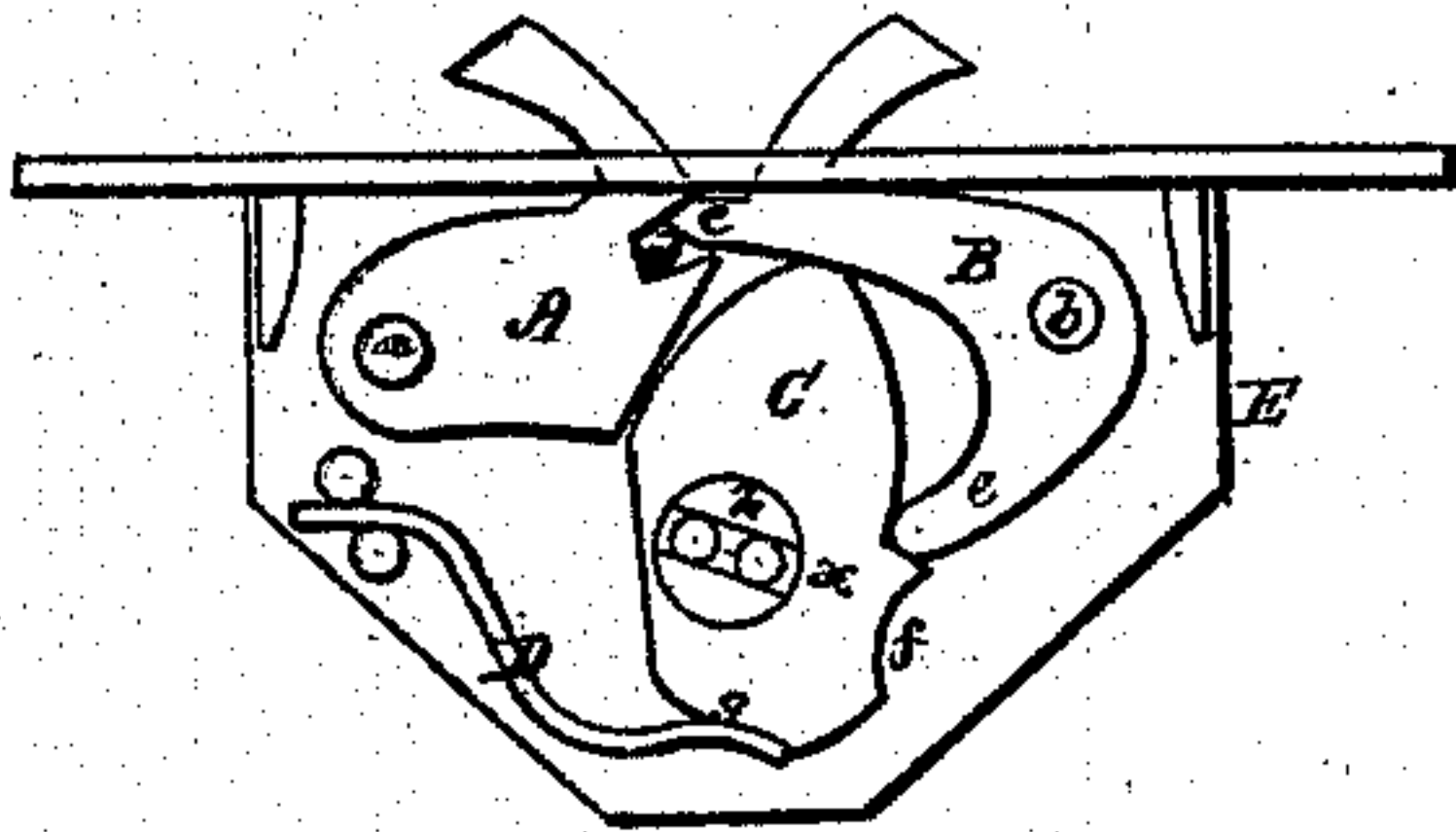
*Fig. 2*



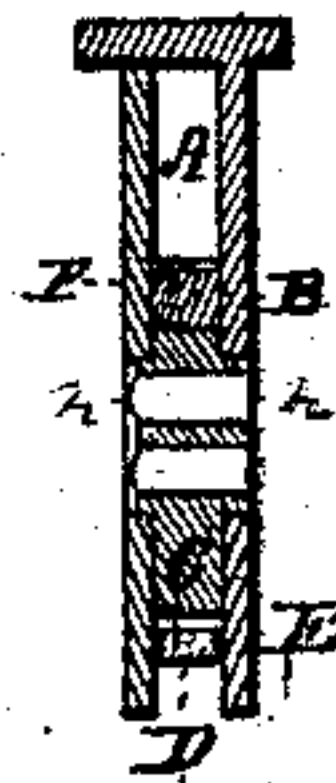
*Fig. 3*



*Fig. 4*



*Fig. 5*



*Fig. 6*



Witnesses

*S. W. Piper*

*J. R. Snow*

John Murphy.

by his attorney.

*R. W. Sady*



# United States Patent Office.

JOHN MURPHY, OF ROSLINDALE, ASSIGNOR TO OREN J. FAXON, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 107,947, dated October 4, 1870.

## IMPROVEMENT IN PIANO-LOCKS.

The Schedule referred to in these Letters Patent and making part of the same

*To all persons to whom these presents may come:*

Be it known that I, JOHN MURPHY, of Roslindale, of the county of Norfolk and State of Massachusetts, have invented a new and useful or improved Piano-Lock; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a view of it as it appears without its cap-plate, a side view of which is shown in Figure 2.

Figure 3 is a transverse section of the lock, such section being taken through the key-hole of the bolt-actuator or cam.

In fig. 1 of such drawing A and B exhibit the two bolts, which turn on separate pivots. *a b*, arranged to project from the lock-plate E.

The bolt B is provided with a tooth, *c*, to engage with or enter a notch, *d*, made in the bolt A.

Furthermore, the bolt B has a curved arm, *e*, extended from it in manner as shown.

The two bolts, formed as represented in fig. 1, play from the positions denoted therein, (in which they are shown as drawn within the lock-case,) into those represented in Figure 4, in which they are exhibited as projecting beyond the case.

A cam, C, formed and arranged with the bolts in manner as seen in figs. 1 and 4, and pivoted to the plate E and the cap-plate F, constitutes the actuator of the bolt B, there being used with such cam a spring, D, to retain it in either of its extreme positions, the spring, under such circumstances, entering into one of two recesses, *f g*, made in the flanks of the heel of the cam.

The pivots of the cam are shown at *h h*, one of them being provided with a suitable cavity or cavities, *x*, for the reception of the head *i* of a key, H, formed as represented in front view in Figure 5 and in edge view in Figure 6.

By inserting the key in the key-hole of the cam C, and turning it so as to partially revolve such cam, the bolts A B may be actuated.

I am fully aware of the piano-locks shown and described in the United States patents Nos. 68,496 and 68,497, granted September 3, 1867, to E. L. Gaylord, and make no claim to either, or any part thereof, a

horizontally or vertically-moving slide being employed in such locks to actuate the bolts.

In my lock I make use of no such slide, but one bolt operates the other, and is actuated by a rotary cam, provided with a retaining spring, the whole being as described and represented.

I am also aware of the locks constituting the subjects of the United States patents Nos. 49,100 and 21,543, the former being granted to Gaylord and the latter to Ackerman.

There are wide and important differences between my lock and these last referred to, for in Gaylord's lock the two bolts operate on one common pivot, and each, separate from the other, is operated by the tumbler; but in my lock the bolts turn on separate pivots and interlock, one serving to operate the other when the first is put in operation by the tumbler or cam C.

Furthermore, the construction of the parts of my lock is such as, when it is locked, to prevent it from being unlocked by a knife or instrument pressed laterally against that part of either bolt which extends out of the lock-case, the position of the cam C and its pivot then being such, with reference to the bolt B, as to cause the cam to act as a stop to the bolts, which cannot be retracted, except by revolving the cam.

In the lock of Ackerman there is but one bolt, which is pivoted to a "fall" or arm, which is operated by a lever or cam, when actuated by a key, all being not only different in construction, but in operation, relatively to the parts of my lock.

I, therefore, claim—

The interlocking bolts A B, constructed and arranged on separate pivots, *a b*, as described, and combined and arranged, as set forth, with the cam C, constructed and provided with the retaining spring D, all being substantially as hereinbefore explained, and as represented in the accompanying drawing.

JOHN MURPHY.

Witnesses:

R. H. EDDY,  
J. R. SNOW.