M. Mc Gonnigle,

Latch.

No. 48,297. Patented June 20, 1865.

Fig. 1.

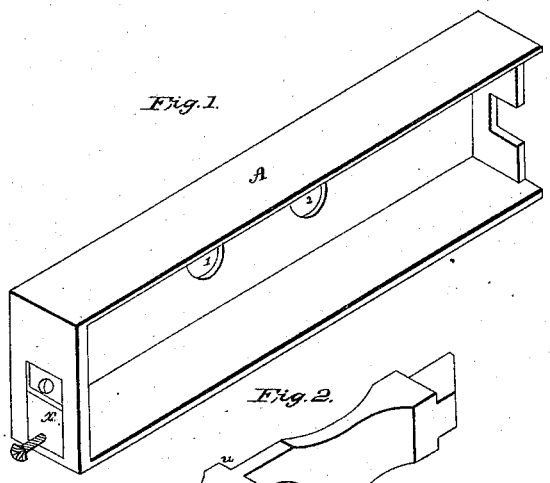


Fig. 2.

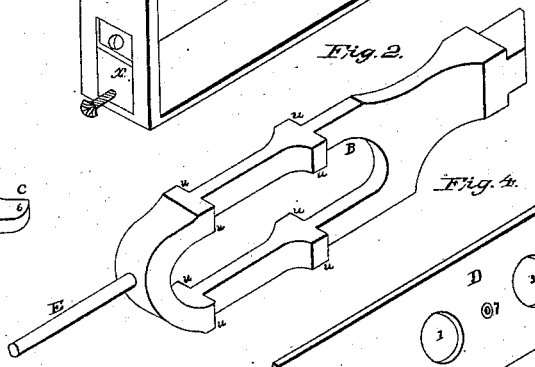


Fig. 3.

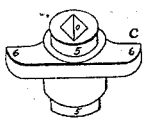


Fig. 4.

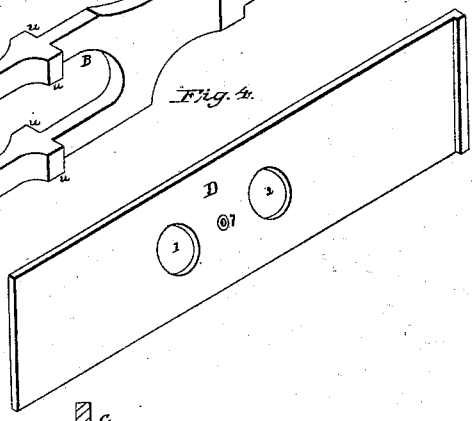


Fig. 5.

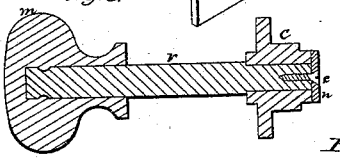
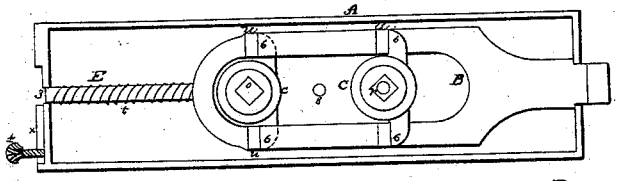


Fig. 6.



Witnesses:
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Alexander Hays

Inventor:
M. M. Gonnigle

UNITED STATES PATENT OFFICE.

M. McGONNIGLE, OF ALLEGHENY CITY, PENNSYLVANIA.

IMPROVEMENT IN DOOR-BOLTS.

Specification forming part of Letters Patent No. **48,297**, dated June 20, 1865.

To all whom it may concern:

Be it known that I, MATTHIAS MCGONNIGLE, of the city and county of Allegheny, in the State of Pennsylvania, have invented a new and useful Improvement in Door-Bolts; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in furnishing the spring-bolts of door-locks or door-bolts with two cams, each cam being furnished with a spindle armed with a door-knob permanently attached thereto, said cams being so arranged with relation to the bolt that they act independent of each other in moving the bolt, the whole being constructed, arranged, and operating in the manner and for the purpose hereinafter described.

To enable others skilled in the art of making bolts or locks to make and use my invention, I will proceed to describe its construction and operation.

In the accompanying drawings, Figure 1 represents the bolt-case. Fig. 2 represents the bolt. Fig. 3 represents the cam for operating the bolt. Fig. 4 represents the movable face-plate of the case. Fig. 5 represents a sectional view of the door-knob, spindle, cam, and mode or manner of attaching or securing the cam to the spindle. Fig. 6 represents the case with the bolt and cams properly arranged in it.

In the accompanying drawings, A represents the case, which is furnished with two openings, 1 and 2, for the journals of the cams, and is also furnished with an opening marked 3, through which passes the stem E of the bolt. In the back end of the case is a recess, in which is placed a plate marked *x*, which is furnished with a thumb-screw marked 4, which is used for holding plate *x* in the desired position. The front end of the case is furnished with a suitable opening for the front end of the bolt.

B represents the bolt, which is furnished with projections on each side, marked *u*, and a stem marked E, around which is placed a spiral spring marked *t*.

C represents the cam, which is furnished with journals 5, projecting arms 6, and opening *o*, through which passes the spindle *r*, in the end of which is a screw, *e*, which is used, in connection with the washer *n*, for holding the cam on the spindle. *m* represents the door-knob, which is secured to the spindle by any of the known plans without the use of screws.

D represents the movable face-plate of the case, and is furnished with two openings marked 1 and 2, which correspond to the openings 1 and 2 in the case. These openings are used for bearings for the journals 5 of the cams C. The movable face-plate D is secured to its place in the case A by means of a screw which passes through the openings 7 and 8.

The operation of my improved spring-bolt for door-locks or door-bolts is as follows: Having all things constructed as herein described, and properly arranged as represented in Fig. 6, and the face-plate D secured to its place in the case A, the lock or bolt is then ready for use. Now, by turning the knob *m* the spindle *r* will cause the arms 6 of the cam C to press against the projections *u* on the bolt B, and will thereby move the bolt back, and as soon as the knob and its spindle are released from the hand of the operator the bolt will be thrown forward by the spring *t*. In securing the bolt in a fixed position to serve as a lock, I move the plate *x* over the opening 3 and secure it in that position by means of the thumb-screw 4.

The advantage of my improvement in bolts is as follows: The knob can be permanently attached to the spindle without the use of screws. I am thereby enabled to make the spring-bolts of door-locks or door-bolts cheaper, stronger, and more durable. When knobs are secured to the spindle of locks or bolts by the use of screws they soon become loose, and both the knobs and screws are lost, and the lock or bolt is then inoperative so far as the spring-bolt is concerned.

It will be observed that in my improved bolt the knob on one side of it is not connected with the knob on the other side—that is to say, in moving the bolt by turning the knob from the outside of the door the knob on the inside of it will not be turned, and vice versa; and it will also be readily seen that by having the action of the two cams, in connection with their spindles and knobs, independent of each other, the knobs and spindles can be secured more

firmly and with more certainty to the lock or bolt, and the wabbling motion and rattling noise so very common to door-knobs and the spindle are entirely and completely overcome and avoided.

Having thus described the nature, construction, operation, and advantage of my improvement, what I claim as my invention is—

1. The use of two spindles and knobs, in combination with two cams and one spring-bolt, constructed, arranged, and operating substantially as herein described, and for the purpose set forth.

2. The arrangement of the plate *x* in the end of the case A, in connection with the thumb-screw 4, opening 3, and stem E, as herein described, and for the purpose set forth.

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