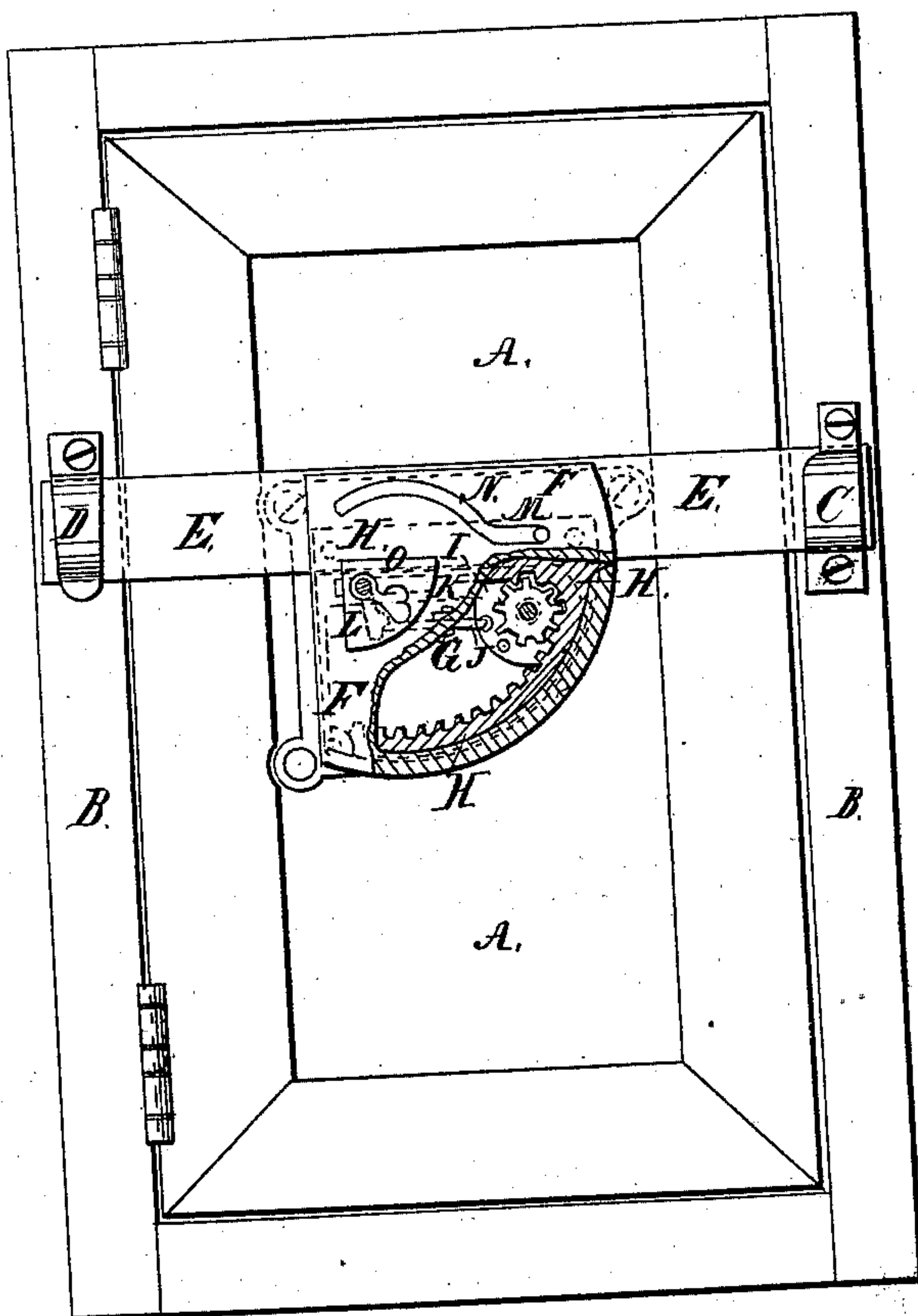


J. E. Hanger,

Door Lock,

No 78,960,

Patented June 16, 1868.



Witnesses:

H. C. Asakettle
J. A. Fraser

Inventor:

Jas. E. Hanger
per Muny &
attorneys.

United States Patent Office.

JAMES E. HANGER, OF STAUNTON, ASSIGNOR TO HIMSELF AND J. E. A. GIBBS, OF ROCKBRIDGE COUNTY, VIRGINIA.

Letters Patent No. 78,960, dated June 16, 1868.

IMPROVEMENT IN CROSS-BAR LOCK FOR DOORS, &c.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES E. HANGER, of Staunton, in the county of Augusta, and State of Virginia, have invented a new and improved Cross-Bar Lock; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

The figure represents my improved lock attached to a door, part of the outer plate being broken away, to show the construction.

My invention has for its object to furnish an improved cross-bar lock, simple in construction, easily operated, and effective in operation, and it consists in the construction and combination of the parts by which the cross-bar is operated, as hereinafter more fully described.

A is the door, and

B are the side-posts or casings.

C is a close keeper attached to one of the side-posts B, and

D is an open keeper attached to the other side-post.

E is the cross-bar, which is pivoted between the outer plate, F, and the inner plate, G, of the lock, in the manner hereinafter described.

H is a curved rack, which is made in substantially the form shown in the figure, and which is rigidly attached to the cross-bar E.

I is a pinion-wheel, pivoted between the plates F and G of the lock, in such a position that its teeth may mesh into the teeth of the curved rack H, as shown in the drawing, so that the pinion-wheel I may be revolved by operating the cross-bar E, and so that the cross-bar E may be operated by revolving the pinion-wheel I.

J is a lever, the ends of which are turned up in opposite directions, or have pins formed upon them, one of which enters a hole in the disk K, attached to or forming a part of the pinion-wheel I, and the other enters a hole in the outer plate, F, in the bottom of the key-recess L.

The cross-bar E is guided in its movements by the pin M attached to said bar, and moving through the slot N in the outer plate, F, and by the pin O, which enters a straight slot in the frame of the curved rack H, as shown in the drawings.

In operating the cross-bar E from the inner side of the door, the key is inserted in the key-hole, and brought into such a position that it may operate the lever J to release the pinion-wheel I, then, by taking hold of the cross-bar E, it may be operated to unbar the door.

The first movement of the cross-bar E is straight until its end is withdrawn from the close keepers C. It then swings around, freeing its other end from the open keeper D, and taking a position parallel with the length of the door, allowing the door to be opened.

In operating the cross-bar E from the outer side of the door, the key is inserted in the key-hole and brought into such a position as to operate the lever J to free the pinion-wheel I. Then, by means of the key, the said pinion-wheel may be revolved, carrying the cross-bar E through the movements hereinbefore described, and unbarring the door.

The door is barred or fastened in the same manner as it is unbarred or unfastened, the movements of the various parts being reversed.

I claim as new, and desire to secure by Letters Patent—

1. The combination of the curved rack H, constructed substantially as herein shown and described, with the cross-bar E and pinion-wheel I, as and for the purpose set forth.

2. Giving to the cross-bar E a longitudinal and swinging movement, by means of the pin M projecting from the cross-bar, and working in the curved slot N of the case F, fastened substantially as herein shown and described, and for the purpose set forth.

Witnesses:

JOHN S. MOORMAN,

C. C. PHILLIPS.

JAMES E. HANGER.