

(No Model.)

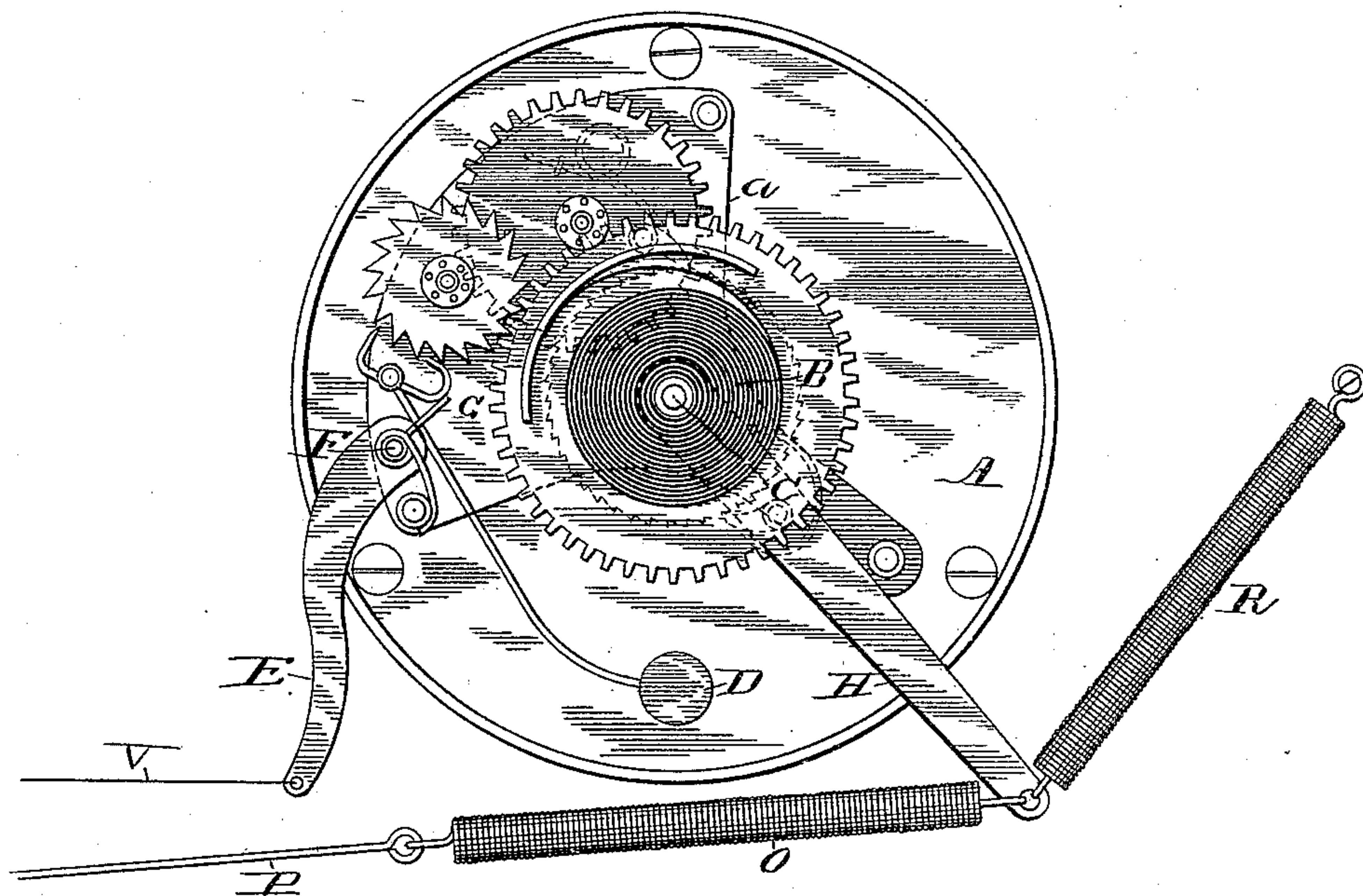
3 Sheets—Sheet 1.

A. F. ROCKWELL.  
DOOR BELL MECHANISM.

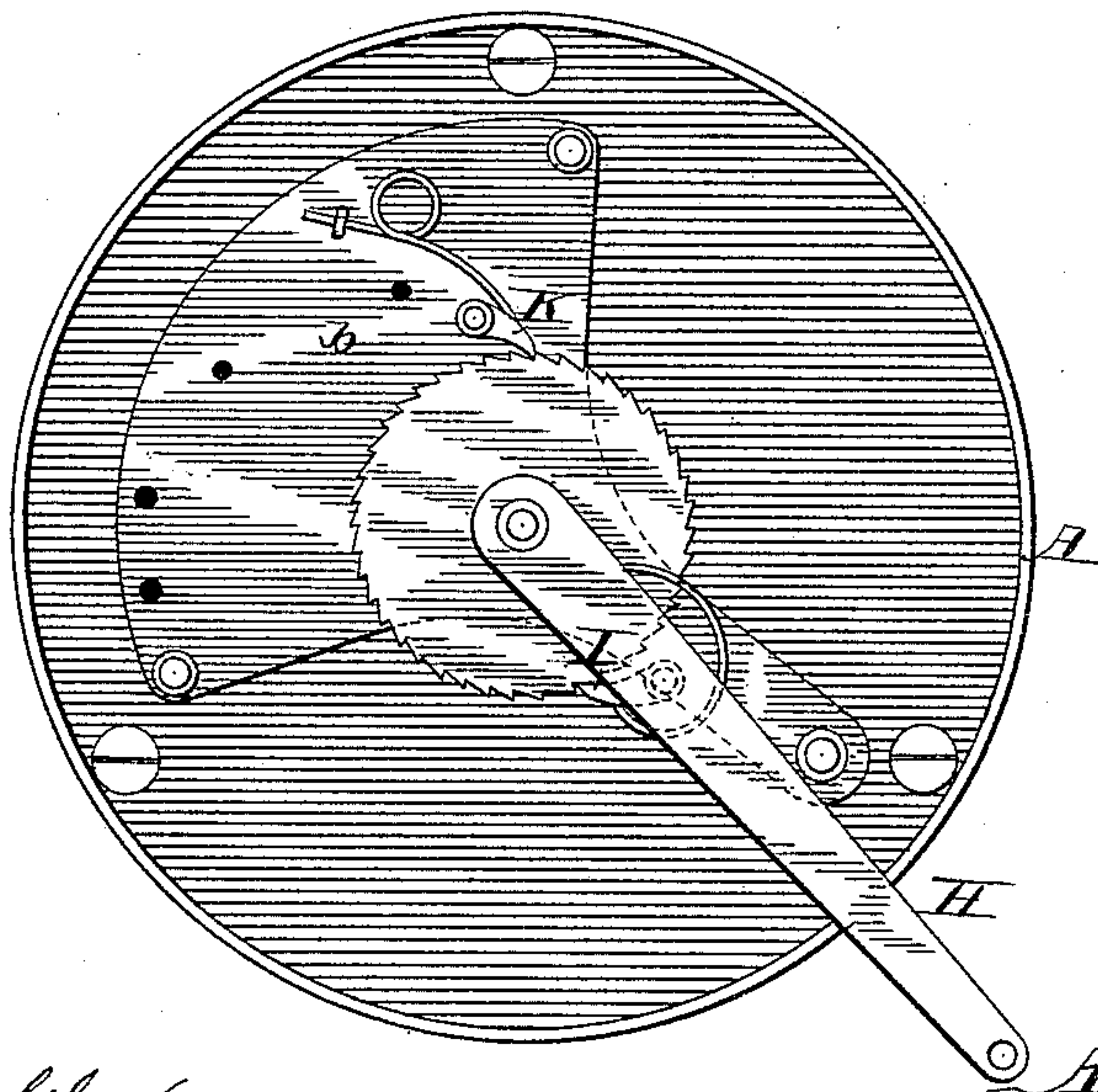
No. 430,040.

Patented June 10, 1890.

*Fig. 1.*



*Fig. 2.*



Witnesses

*Louis G. Johnson.*

*Marcus S. Hopkins.*

Inventor

*Albert F. Rockwell*

By *his* Attorneys

*Hopkins & Atkins.*

(No Model.)

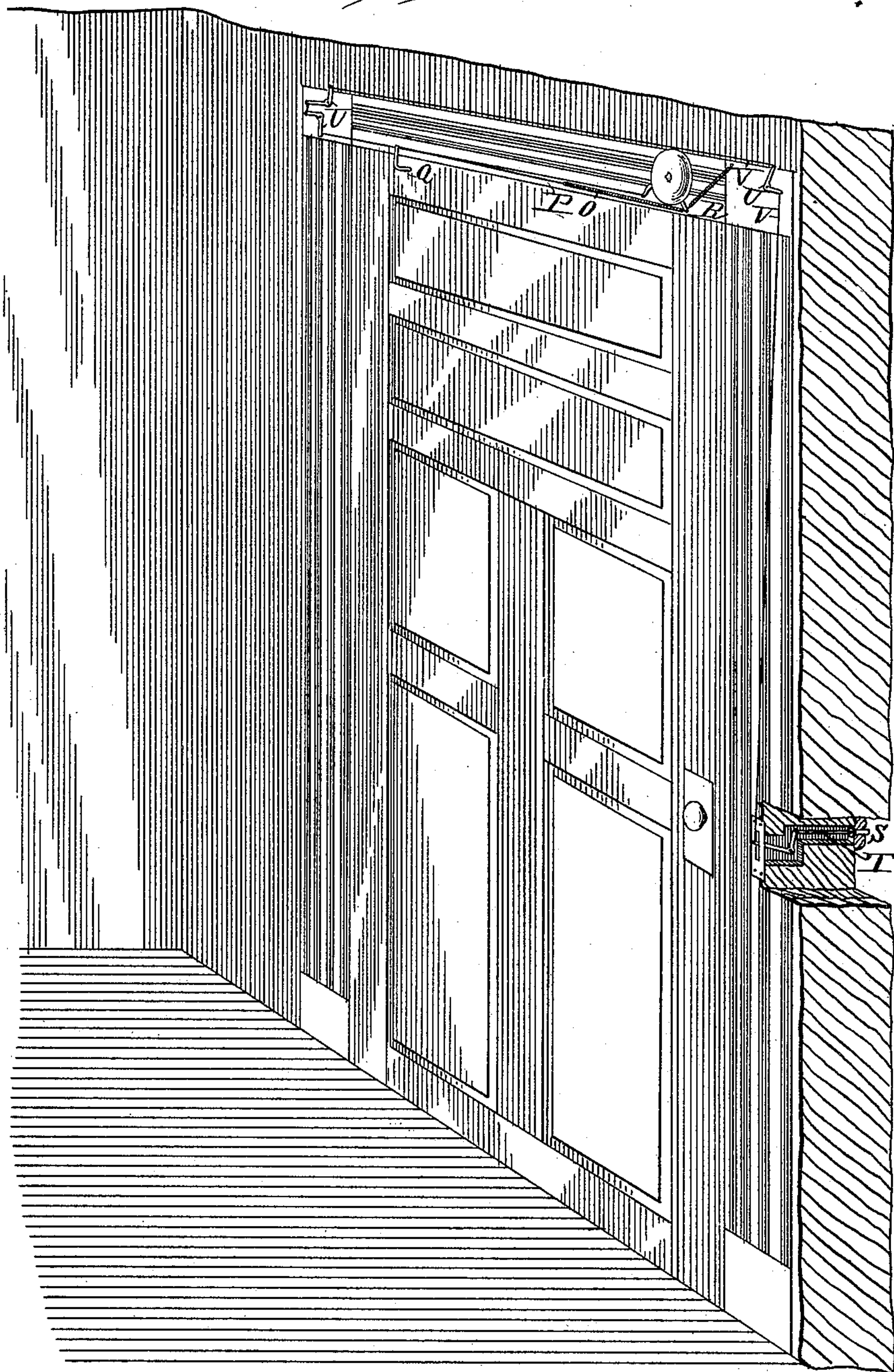
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*Fig. 3.*



Witnesses

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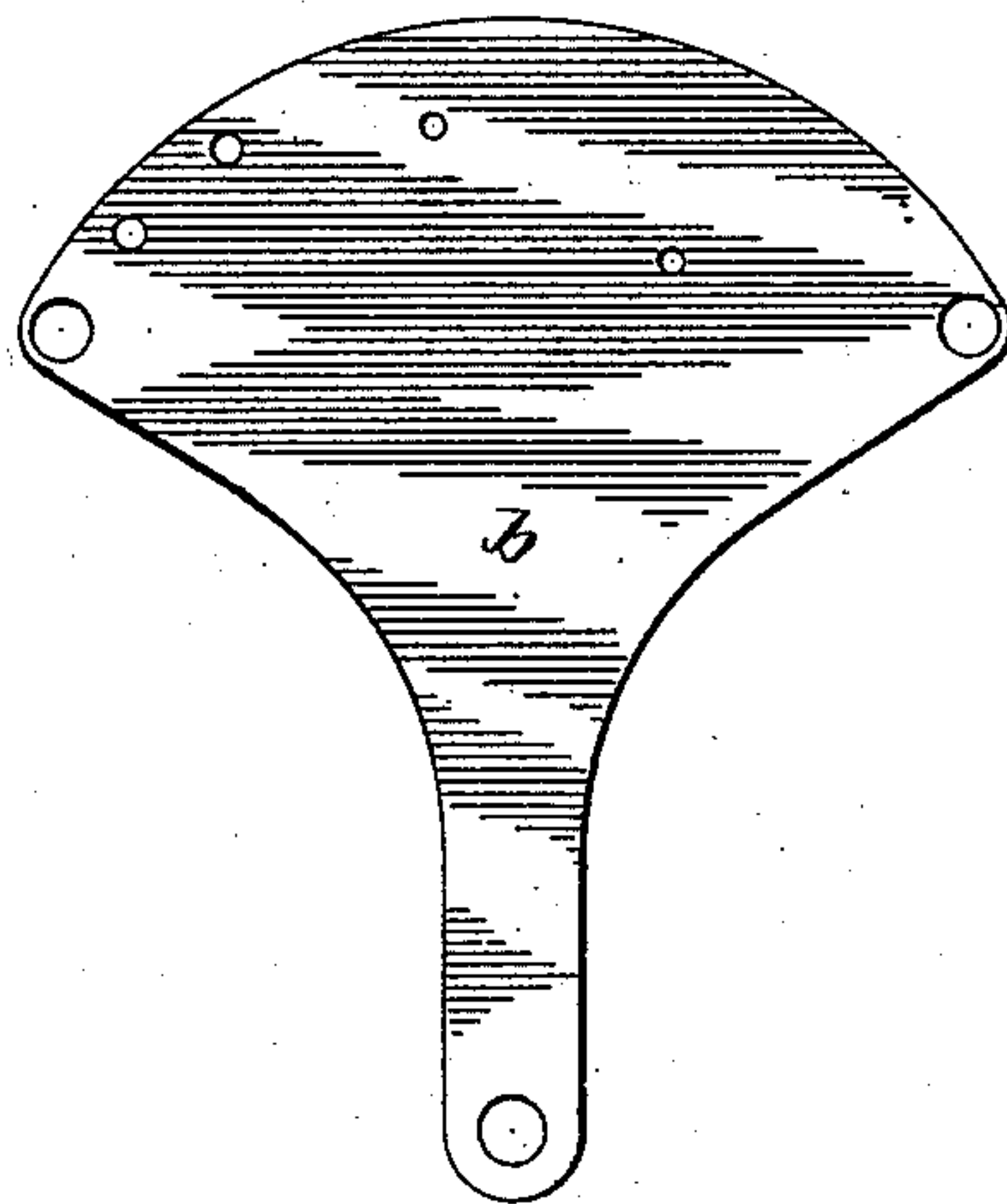
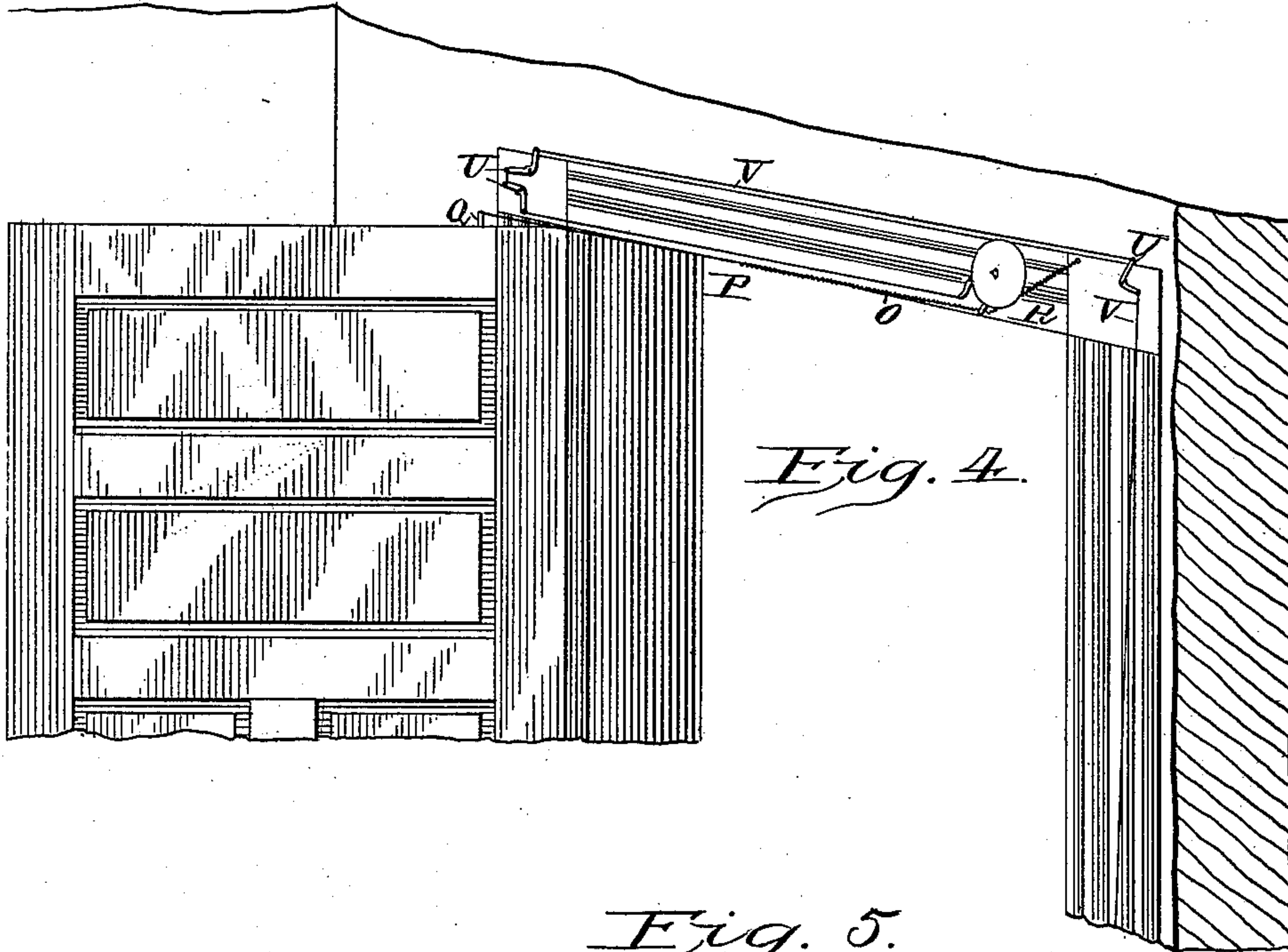
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WITNESSES:

*Louis G. Julius.*

*Marcus S. Hopkins.*

INVENTOR.

*Albert F. Rockwell*

BY

*Hopkins & Atkins.*

ATTORNEYS



# UNITED STATES PATENT OFFICE.

ALBERT F. ROCKWELL, OF BRISTOL, CONNECTICUT, ASSIGNOR TO THE NEW  
DEPARTURE BELL COMPANY, OF SAME PLACE.

## DOOR-BELL MECHANISM.

SPECIFICATION forming part of Letters Patent No. 430,040, dated June 10, 1890.

Application filed February 18, 1890. Serial No. 340,923. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT F. ROCKWELL, of Bristol, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Door-Bell Mechanism, of which the following is a specification, reference being had to the accompanying drawings.

The object of my improvement is to provide for winding up the main spring of a door-bell by the operation of opening the door, and at the same time provide for closing the door by a spring connected with the door-casing at one end and with a main-spring-winding lever at the other end.

In the accompanying drawings I have illustrated my improvements with the bell applied on the door-frame immediately over the door; but of course the bell might be located in any desired position, as is usual, proper bell-wires and bell-cranks of ordinary character being employed to connect the door with the bell.

Figure 1 of the drawings is a plan view of suitable door-bell mechanism of ordinary character, adapted to be wound up by the movement of the lever upon a pivot. In this figure the cap-plate is removed, so as to show the main spring and gears. Fig. 2 is another plan view of the mechanism, the main spring and gears also being removed, so as to show only the lower plate lever and pawl-and-ratchet mechanism secured to the base. Fig. 3 is a perspective view, showing a door with my improvements applied, the door being closed. Fig. 4 is another perspective view showing a portion of the door with my improvements applied, the door being opened to illustrate the action of the springs, one of which serves to wind up the main spring and the other to close the door. Fig. 5 is a view of the top plate of the bell-ringing movement detached.

Referring to the letters upon the drawings, A indicates a base for supporting the bell-ringing mechanism. This mechanism is of ordinary character, consisting of a main spring B, secured to an arbor C, gearing, an escapement mechanism, and bell-hammer D. a indicates the bottom plate, and b, Fig. 5, the top plate of the works.

E indicates a lever pivoted at F, and provided with a stop G to engage normally with the escapement mechanism and prevent its operation by the main spring. The bell-hammer is arranged so that when the lever E is turned on its pivot it will disengage the escapement mechanism and allow the hammer to strike the bell with a clattering sound, as usual.

None of the mechanism thus far described is claimed to be novel in this case, and any other suitable bell-ringing mechanism might be used with my present improvements.

H indicates a lever loosely secured to the main-spring arbor and carrying the spring-pawl I. This lever and pawl are adapted to turn the ratchet-wheel, which is also secured to the main-spring arbor in a direction for winding up the main spring, as is usual.

K indicates another spring-pawl, adapted to hold the ratchet-wheel after it is turned for winding up the main spring.

O is a coiled spring connected with the free end of the lever H and with a wire P, secured to any suitable fastening Q, attached to the door, so that whenever the door is opened the tendency will be to pull on the end of the lever E in a direction for winding the main spring. When the main spring becomes fully wound, then the spring O will yield without moving the lever, and its recoil will close the door. R is another coiled spring, which should be of less strength than the spring O, and it is secured at one end to the lever H, and at the other fastened to the door-frame or to any other object to hold it. The office of this spring is to draw back the lever after it has been turned on its pivot to wind the main spring. In doing this this spring also aids in closing the door by its recoil.

S in Fig. 3 indicates a push-button connected with the push-rod T and with bell-crank levers and wires U V for ringing the bell. I thus provide for automatically winding up the main spring of a door-bell-ringing mechanism, whenever it is unwound, by the operation of opening the door. I also provide that when the main spring is fully wound the opening of the door will not be obstructed. I also provide for restoring the lever H to its position for commencing wind-

ing by spring action and for closing the door, both when the lever II is moved by recoil of a spring and when it remains in the position for beginning winding after the main spring  
5 has been fully wound.

My improvements are adapted to be applied in all the various situations usual in the construction of buildings in which it may be desired to locate the bell in various positions  
10 and at various distances from a door.

What I claim is—

The combination, with a door, of a door-bell mechanism provided with a lever for winding up the main spring of the door-bell

mechanism, and two springs O and R, each 15 connected to the spring O and to the lever, and a pull-wire P, connected to the door, whereby the opening of the door will wind the main spring, and its closing will be caused by the recoil of the springs, all the parts being ar- 20 ranged and operating substantially as set forth.

In testimony of all which I have hereunto subscribed my name.

ALBERT F. ROCKWELL.

Witnesses:

SETH W. BEEBE,  
ETTA B. SPRING.