

(No Model.)

2 Sheets—Sheet 1.

A. F. ROCKWELL.
DOOR BELL MECHANISM.

No. 431,918.

Patented July 8, 1890.

Fig. 1.

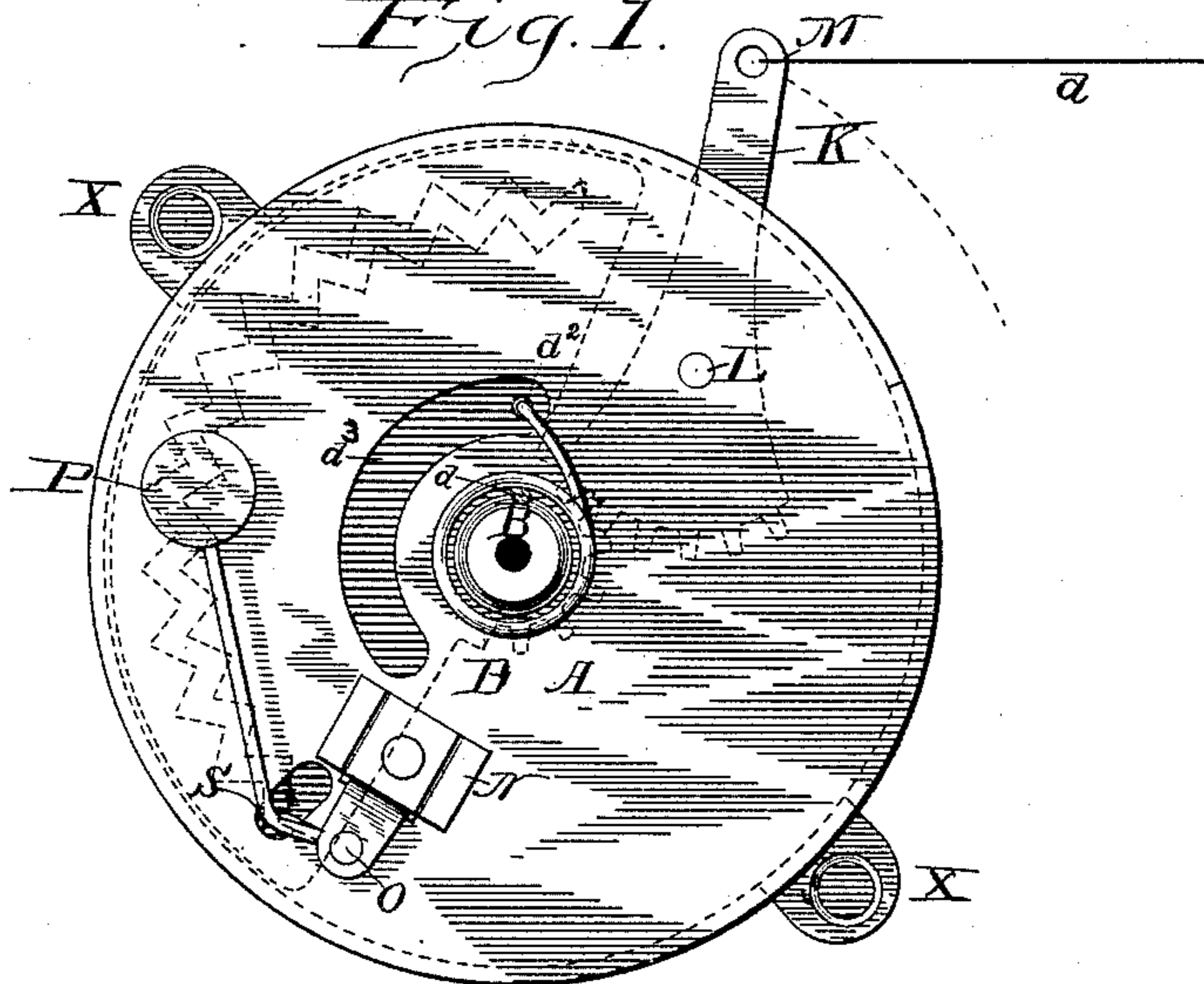


Fig. 2.

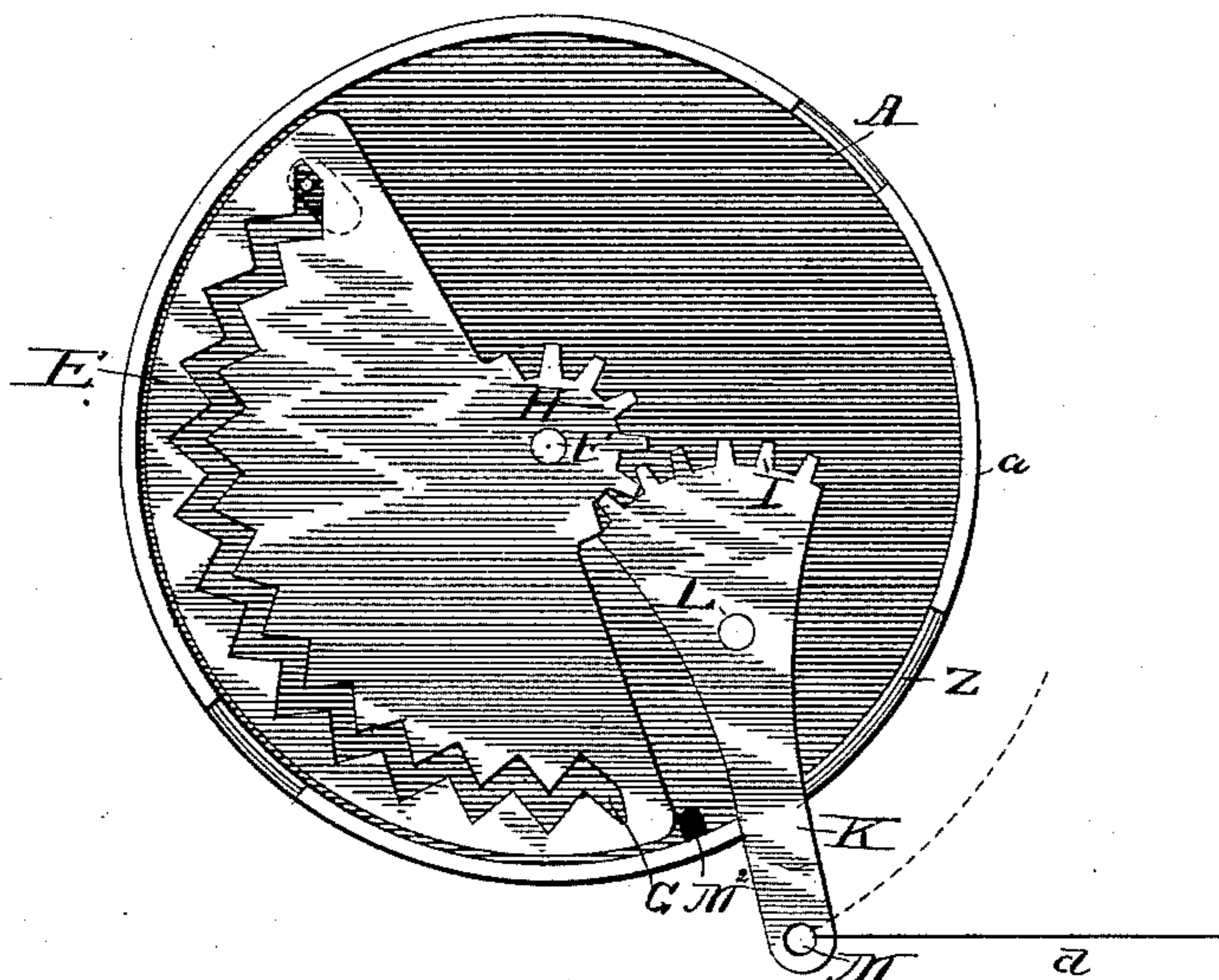
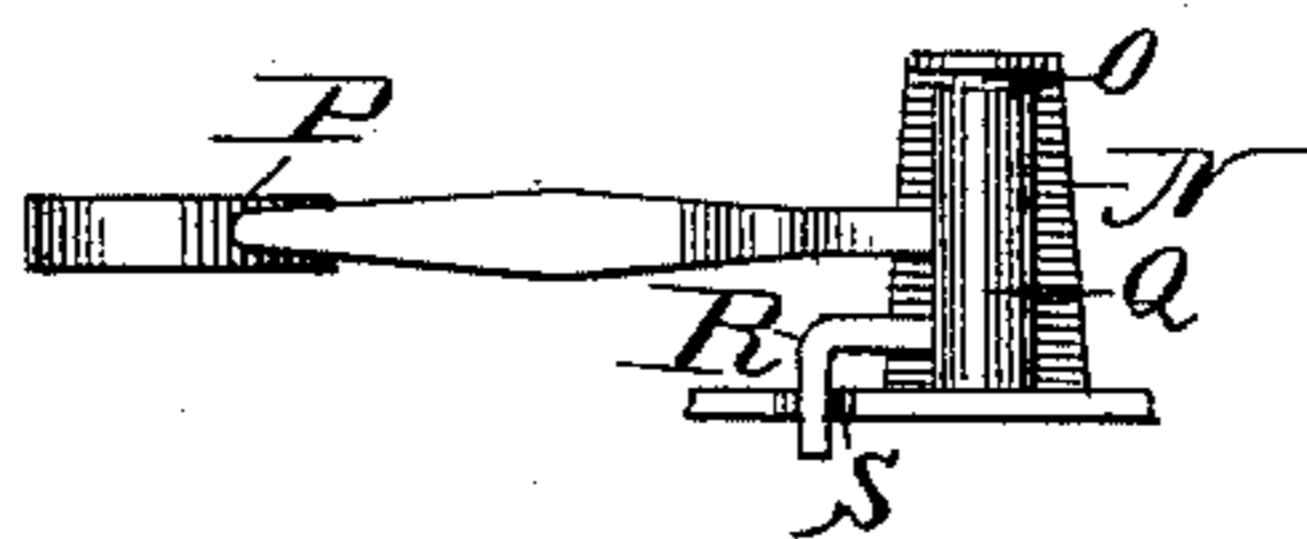


Fig. 3.



Witnesses

Louis B. Johnson.
Marcus S. Hopkins

Inventor

Albert F. Rockwell.

By his Attorneys

Hopkins & Atkins.

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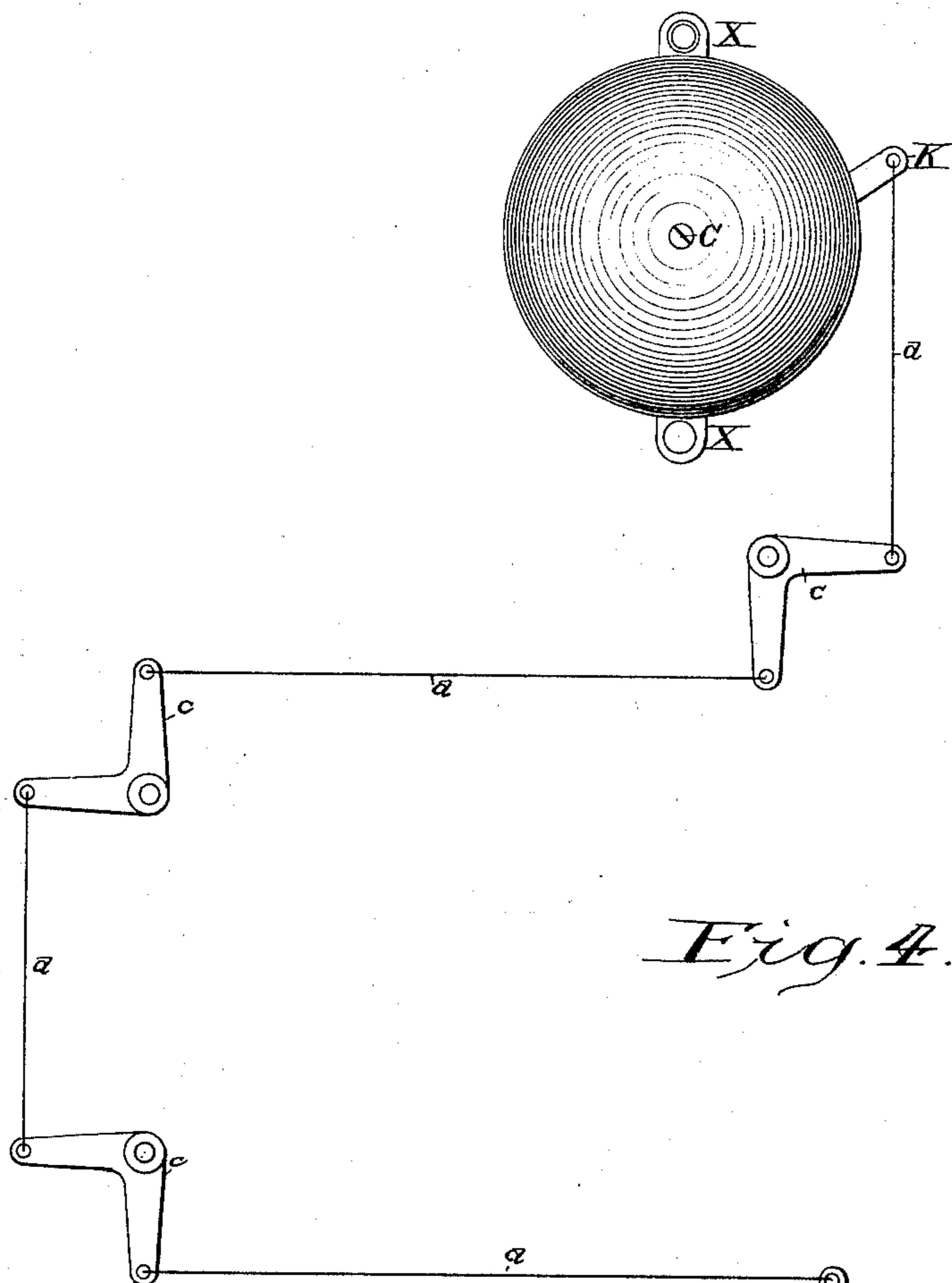


Fig. 4.

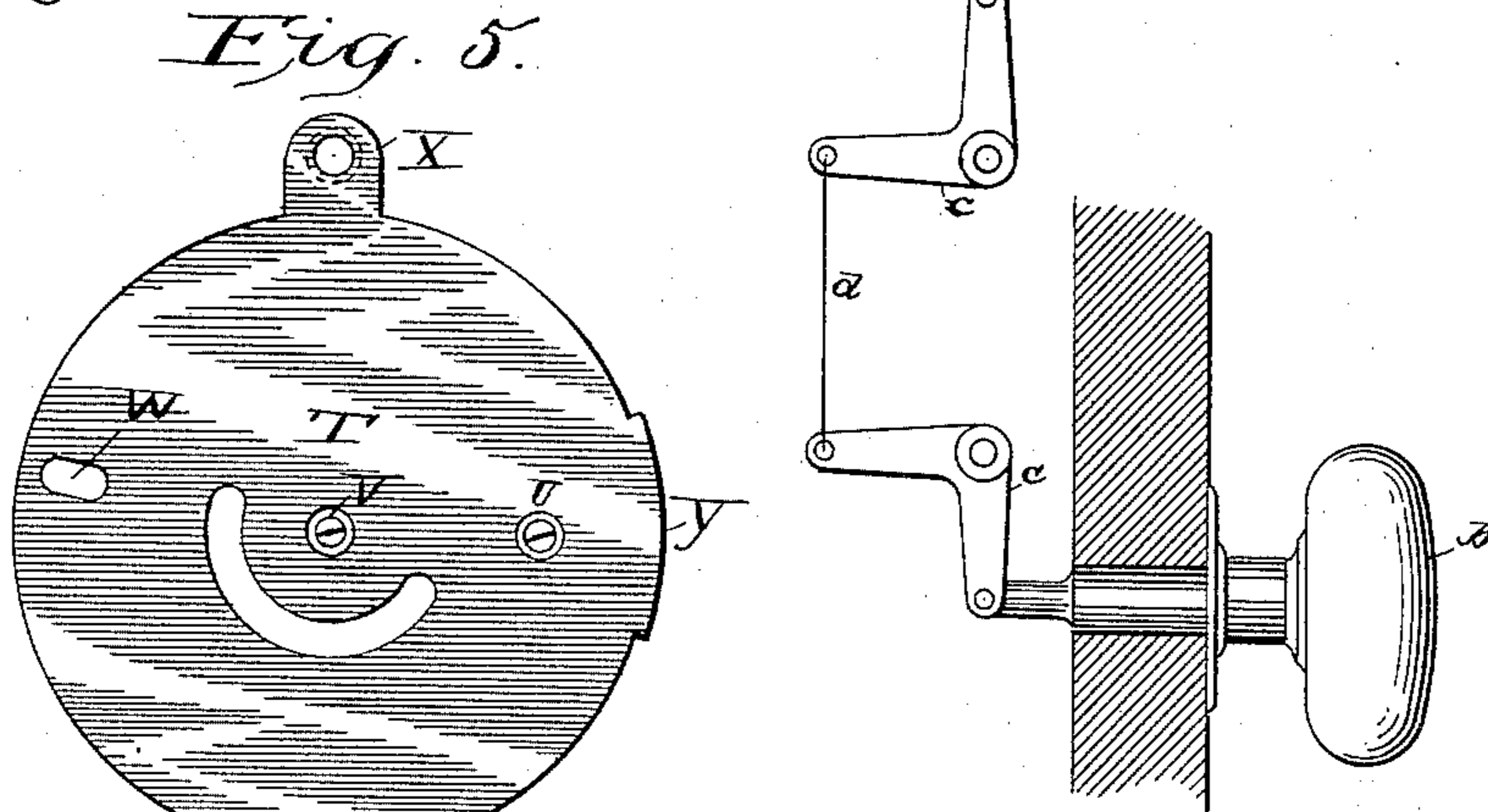


Fig. 5.

Witnesses
Louis G. Joliffe
Marcus S. Hopkins

Inventor
Albert F. Rockwell
By his Attorneys
Hopkins & Atkins.

UNITED STATES PATENT OFFICE.

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

DOOR-BELL MECHANISM.

SPECIFICATION forming part of Letters Patent No. 431,918, dated July 8, 1890.

Application filed February 10, 1890. Serial No. 339,874. (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 a certain new and useful Improvement in Door-Bell Mechanism, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce a simple and economical door-bell to be operated by a pull upon a knob in the usual way; and my invention consists in the peculiar construction and organization of parts, which I will describe in detail.

In the accompanying drawings, Figure 1 is a top view of my door-bell mechanism with the bell removed, the dotted lines indicating the parts below the disk. Fig. 2 is a bottom view of the same with the bottom plate removed. Fig. 3 shows the bell-hammer detached, so as to illustrate how it is pivoted and connected with related parts. Fig. 4 is a diagrammatical view showing my improved door-bell mechanism applied; and Fig. 5 is a detached view of the bottom plate for uncovering the mechanism which is below the disk.

Referring to the letters, A represents a disk which supports all of the operating mechanism.

B indicates a central post extending upward from the upper side of the disk for supporting the bell.

C in Fig. 4 indicates a screw, which may be used to secure the bell to this post. Around the base of the post is a coiled spring D, secured at one end d^1 to the post and at the other end d^2 projecting through a curvilinear slot d^3 in the disk and engaging with a segmental plate E, pivoted at F to the under side of the disk. This segmental plate is provided with a curvilinear slot G, the margins of which are toothed, as clearly shown in Fig. 2, leaving a zigzag way. The plate is also provided with cogs H, which gear with cogs I upon a lever K, pivoted at L, and connected with a bell-wire at its outer end M.

M² indicates a stop on the lower side of the disk to limit the rotary movement of the segmental plate.

N indicates a bracket secured to the upper face of the disk and aiding to support a post O, which forms the pivot of the bell-hammer P, as clearly illustrated in Fig. 3, where Q is a short hollow cylinder surrounding the post and having secured to it the handle of the bell-hammer.

R indicates an arm projecting from the cylinder Q, bent downward at right angles, so as to extend through a slot S in the disk and enter the zigzag curvilinear slot G in the segmental plate E.

T, Fig. 5, shows a bottom cap-plate screwed to place by screws U V. This cap-plate is provided with a small opening W (see Fig. 5) to accommodate the movements of the free end of the arm R. It is also provided with projections X on either side, by means of which the bell mechanism may be screwed to place in use.

Y indicates a projection on one side of this plate to fit in a recess Z in the rim a of the disk.

The operation of my improved bell-ringing mechanism is as follows: A pull upon the bell-knob b (see Fig. 4) operates the bell-crank levers c through the wires d to turn the lever K upon its pivot. This lever, being geared with the segmental plate E, rotates the plate on its pivot, which causes the teeth that form the margins of the curvilinear slot G to strike alternately against the end of the arm R and cause it to vibrate, which vibrates the bell-hammer and produces a clattering stroke upon the bell. As soon as the pull upon the bell-knob is relaxed the coiled spring D returns the segmental plate and the lever K to their original positions and continues the clattering stroke upon the bell until the segmental plate strikes against the stop M². Thus a pull upon the bell-knob causes a clattering stroke upon the bell about equal to twice the duration of the pull, which affords a very good imitation of an electric bell.

What I claim is—

1. The combination, with the disk having the central post for supporting the bell, of the coiled spring around the post, the segmental plate connected with the free end of the spring, and the pivoted lever K, geared with

the segmental plate, and its free end projecting out for connecting with the pull-wire *d*, substantially as set forth.

2. The combination, with the disk, of the
5 segmental plate and pivoted operating-lever K, geared together, the bell, the coiled spring for operating the segmental plate, the pivoted bell-hammer, and the arm R, entering the zig-

zag way in the segmental plate, substantially as set forth. 10

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

ALBERT F. ROCKWELL.

Witnesses:

E. D. ROCKWELL,
ETTA B. SPRING.