

(No Model.)

J. G. NOYES.
ELECTRICAL CALL BELL.

No. 401,296.

Patented Apr. 9, 1889.

Fig. 1.

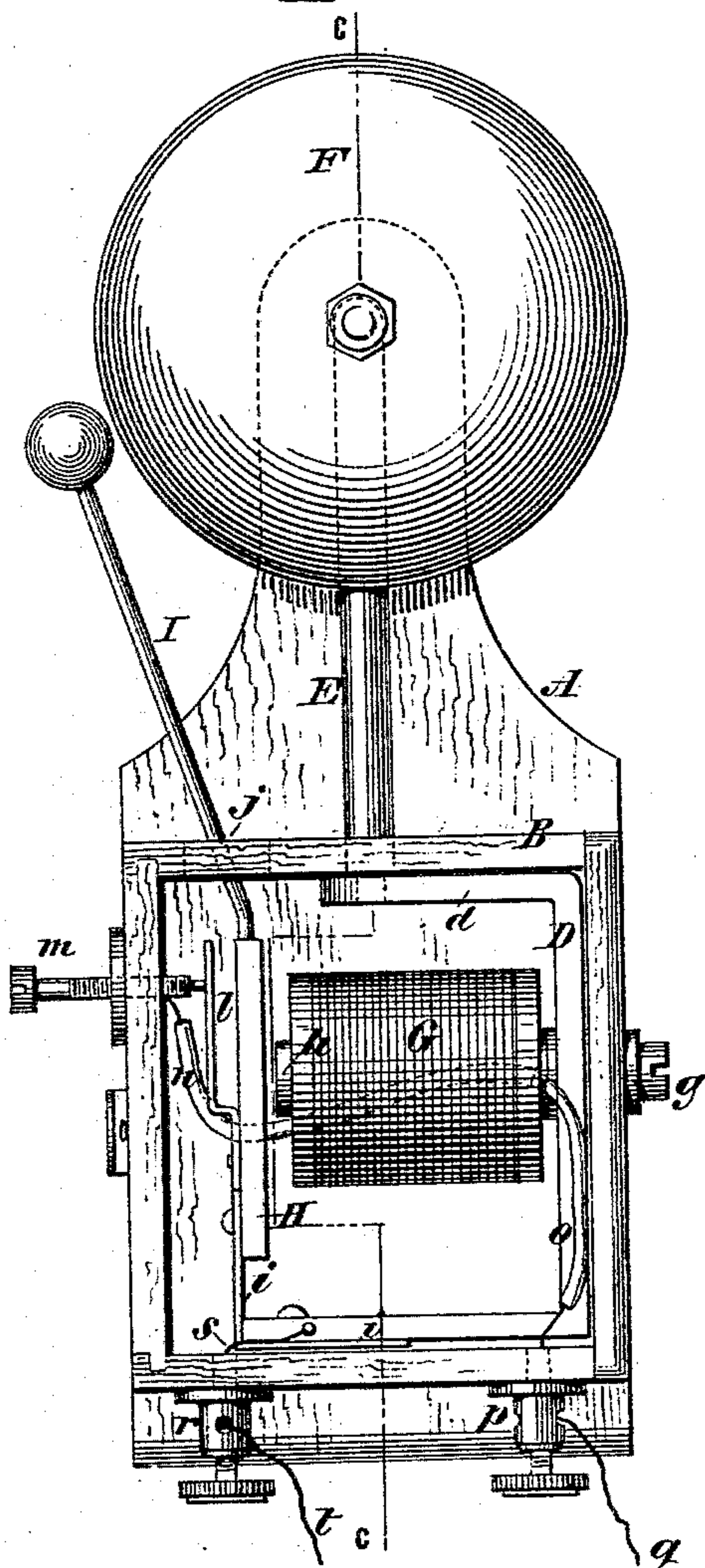
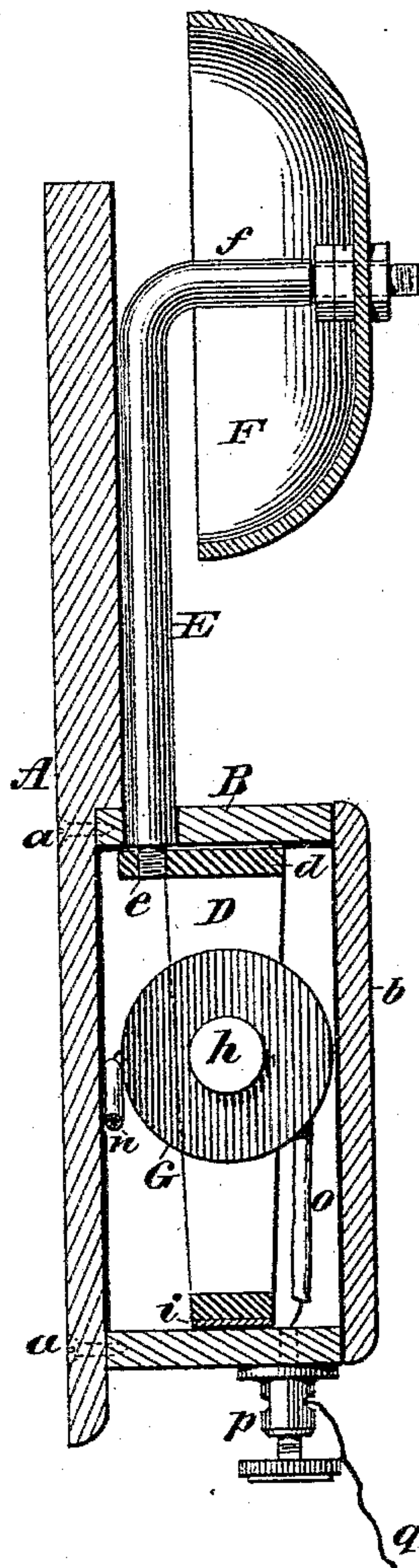


Fig. 2.



WITNESSES:

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ELECTRICAL CALL-BELL.

SPECIFICATION forming part of Letters Patent No. 401,296, dated April 9, 1889.

Application filed December 17, 1888. Serial No. 293,884. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH GILLET NOYES, a resident of the city, county, and State of New York, have invented an Improved Electrical
5 Call-Bell, of which the following is a specification.

The object of my invention is to provide an electrical call-bell that shall be simple in construction, effective in use, and cheap to manufacture.
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The invention consists in the combination, with a single magnet and its core, of a single armature perpendicular to said core, a clapper on said armature, and a bell to be struck by
15 said clapper.

The invention further consists in the details of improvement and the combinations of parts that will be more fully hereinafter set forth.

20 Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a face view of a call-bell constructed according to my invention, the cover
25 of the box being removed, disclosing the interior mechanism; and Fig. 2 is a vertical cross-section of the same on the line *cc*, Fig. 1.

In the accompanying drawings, the letter A represents the back or main support of my
30 call-bell, and B is an open box-frame that is secured to the back A by screws *a*, or otherwise. The open box-frame B has a removable front or cover, *b*.

The above parts I prefer to make of wood,
35 and when put together they form a box to contain the mechanism of my call-bell.

D is a metallic frame or yoke that extends along three sides of the frame B and parallel thereto within the frame. The leg *d* of the
40 frame or yoke D has a screw-threaded aperture, *e*, that receives the threaded end of a standard, E, on the upper end of which standard is secured a bell, F. The standard E extends parallel with the upper part of the back
45 A, as shown, and can only be screwed into the yoke D before the back A is joined to the open box-frame B, on account of the horizontal upper end, *f*, of the standard E, which would contact the back A. The yoke or frame
50 D is held in the frame B by a screw, *g*, that

passes through one side of the frame B and into the yoke D.

G is a single magnet that is wound in any suitable manner, and it has a single core or pole, *h*. The magnet G is in electrical connection with the yoke B, and for this purpose
55 is carried by said yoke. It is supported on the yoke B by the screw *g*, that passes from said yoke into the pole or core *h* of the magnet. (See Fig. 1.)
60

H is the armature of the magnet G, which is carried perpendicular to the pole of the magnet, so as to be attracted by the magnet. The armature H is supported by a metal spring-strip, *i*, that is secured to the yoke D, (see Fig. 65 1.) whereby the armature is in electrical connection with the yoke D, but is normally held out of contact with the magnet pole or core by the spring *i*. The armature H carries a clapper, I, that is adapted to strike the bell F. The
70 clapper I passes through an aperture, *j*, in the open box-frame B, whereby it is permitted movement. The armature H also carries a spring or contact-piece, *l*, that is adapted to contact a screw or stud, *m*, that is carried by
75 the open box-frame B when the armature is in its normal position. (See Fig. 1.) The screw *m* is insulated from the yoke D and magnet G through the intervention of the wooden open box-frame B; but if the frame B
80 be made of a conducting-material the screw *m* should be otherwise insulated.

The screw *m* is connected to one terminal of the magnet G by a conductor, *n*, while the other terminal of the magnet is connected by
85 a conductor, *o*, with a binding-post, *p*, carried by the open box-frame B, and thereby insulated from the magnet.

q is a line-wire connected with the post *p* for conducting current to the call-bell. *r* is
90 another binding-post carried by the frame B, and said post is connected by a conductor, *s*, with the yoke D.

t is a line-wire connected with the post *r*.

When the circuit in the lines *q t* is closed, 95 the current passing through the single magnet G attracts the armature H, which causes the clapper I to strike the bell F, the circuit being thereby broken at *lm*. When the armature returns to the normal position, the spring
100

l, again contacting the screw *m*, closes the circuit, and the armature is again drawn by the magnet, and so on, thereby giving a continuous ringing of the bell so long as the current enters the instrument.

The above call-bell will be very simple in construction and by having few parts will not be liable to get out of order.

Having now described my invention, what I claim is—

1. The combination of the open box-frame A B, yoke D, standard E, bell F, single magnet G, single screw *g*, that passes through the frame B and yoke D and into the magnet G, said screw thereby holding said parts B D G together and establishing a metallic connection between the core of the magnet and the yoke, armature H, perpendicular to the single magnet, spring *i*, clapper I on the armature-

spring *l*, screw *m*, for engagement with the spring *l*, conductor *n*, connecting the screw *m* with one terminal of the magnet, conductor *o*, post *p*, connected with the magnet by the conductor *o*, post *r*, and conductor *s*, connecting the post *r* with the yoke D, all arranged substantially as herein shown and described.

2. The open box-frame B and removable back A, combined with the yoke D, L-shaped standard E, and bell F, the standard being screwed into the yoke D before the back A is applied to the frame B, so that the standard cannot be separated from the yoke while the back A is in position, substantially as described.

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Witnesses:

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