

(No Model.)

W. J. BOWEN.
POLARIZED ELECTRIC BELL.

No. 288,202.

Patented Nov. 13, 1883.

Fig. 2.

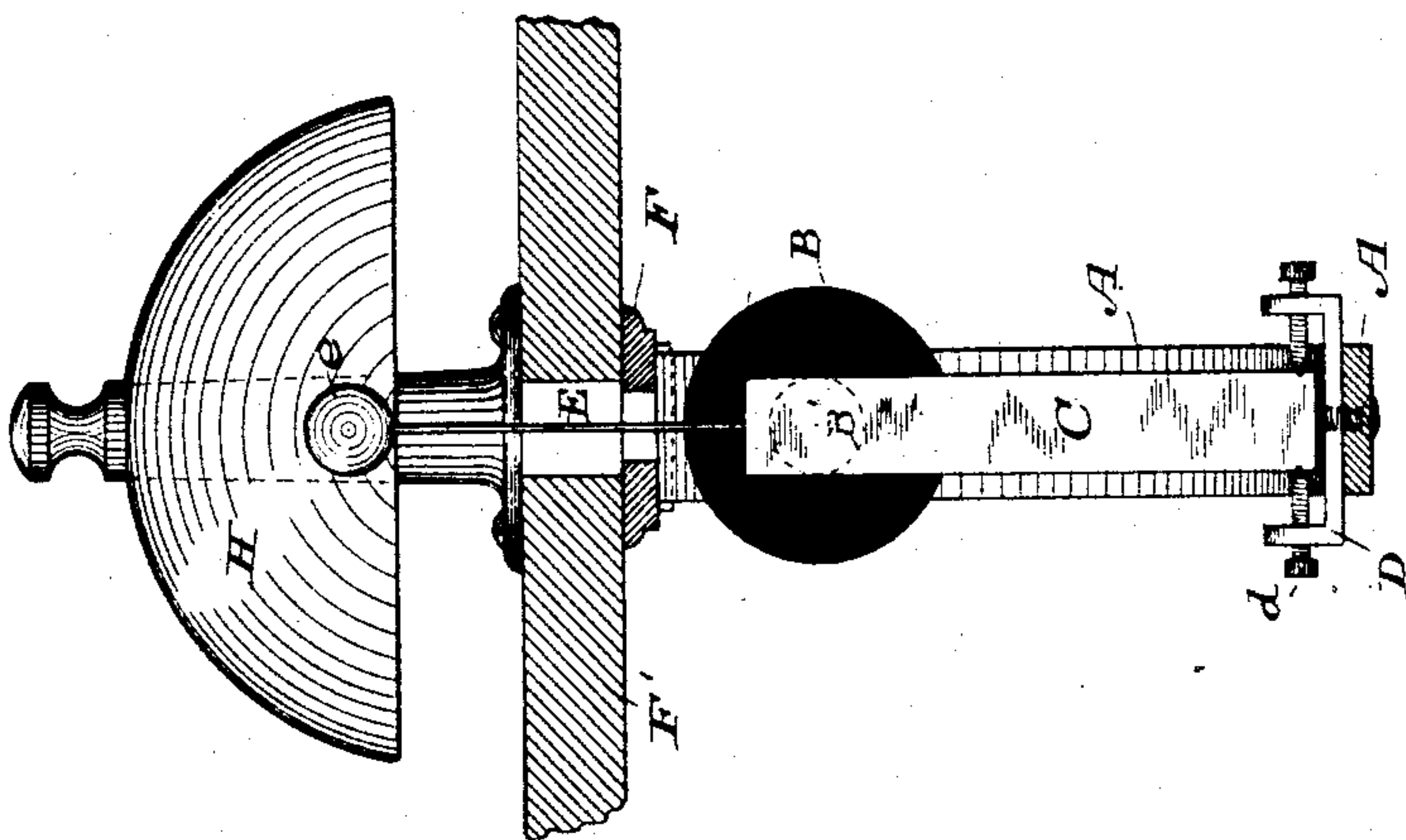
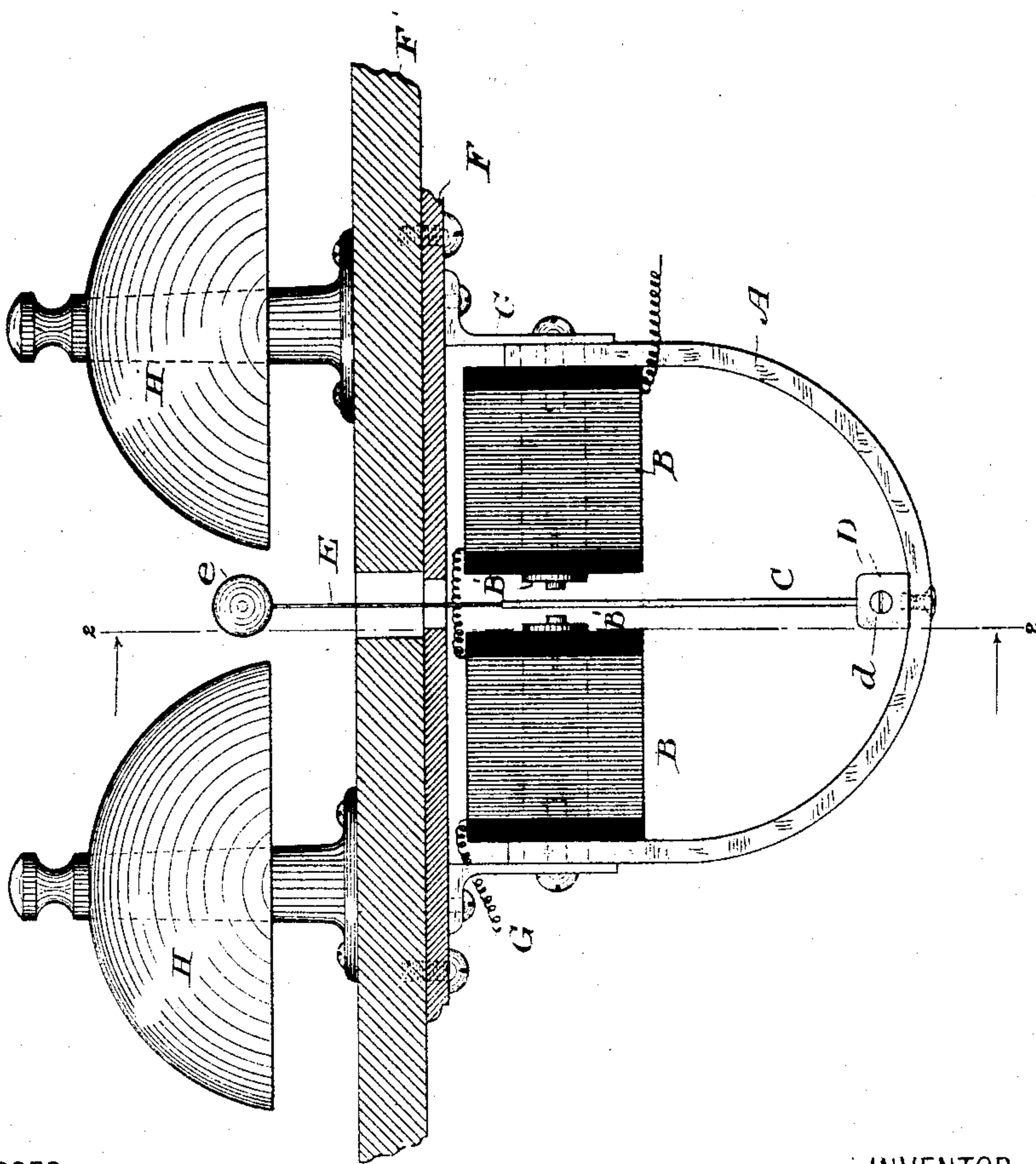


Fig. 1.



WITNESSES

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UNITED STATES PATENT OFFICE.

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POLARIZED ELECTRIC BELL.

SPECIFICATION forming part of Letters Patent No. 288,202, dated November 13, 1883.

Application filed August 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. BOWEN, a citizen of the United States, residing at Norwalk, in the county of Huron and State of Ohio, have invented certain new and useful Improvements in Polarized Electric Bells; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The present invention relates to improvements in the construction of polarized electric bells, the details of which will be hereinafter fully described.

In the accompanying drawings, Figure 1 is a front elevation of a device embodying my improvements. Fig. 2 is an elevation partly in section, and taken on the line 2 2 of Fig. 1.

Similar letters denote like parts.

A represents a permanent magnet, which should be of substantially horseshoe form.

B B are electro-magnets mounted horizontally within the horseshoe-magnet, their cores B' B' being connected directly to the poles of said permanent magnet, which forms an appropriate and durable frame for the actuating mechanism.

The soft-iron armature C is pivoted at its lower portion to the center of the magnetic frame A, where it is held in position by screws d, adjustable in clip D, which is suitably secured thereto, and it is provided with upward-extending arm E and striker e.

The magnetic frame A is secured to suitable base or support, F, of non-magnetic metal, preferably brass, by means of brackets G G, of similar material, and the frame so constructed is then attached to a wooden casing, F', by which construction a rigid frame, A F, is formed, which is not affected by warping or shrinkage of its wooden casing or support.

Two bells, H H, are mounted upon the casing F', and the striker e, being located between them, will ring first one and then the other as it is alternately attracted by the magnets.

By appropriately arranging the electro-magnets with respect to the polarity of the permanent magnet to which their cores are attached the bells may be rung by passing a current of alternating polarity through the coils, by interrupting the passage of a continuous current, or by merely opening a closed or closing a normally-open circuit including a source of electricity.

Having described my invention, I claim—

1. A polarized electric bell consisting, essentially, of a permanent magnet of substantially horseshoe shape, provided with an electro-magnet attached to each of its poles, said electro-magnets extending inward toward each other, an armature located between the poles of the electro-magnets, and having an upward-extending striker-arm, the lower end of said armature being centrally pivoted within the horseshoe-magnet, a base or support, and one or more bells mounted thereon in proximity to the striker extension of the armature, as set forth.

2. The combination of metallic frame A F, electro-magnets B B, having their cores attached to said frame, and normally polarized by the magnetic portion A thereof, the armature C, having extension E and striker e, and pivotally attached at its lower end to the center of said frame A between the poles of the electro-magnets, a suitable casing or support, and bells H H, all arranged and operating substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM J. BOWEN.

Witnesses:

G. W. BUTLER,

W. H. HUSTED.