

(No Model.)

J. M. BABBITT, P. F. WOOD & J. A. DOUD,  
BELL BUOY.

No. 540,039.

Patented May 28, 1895.

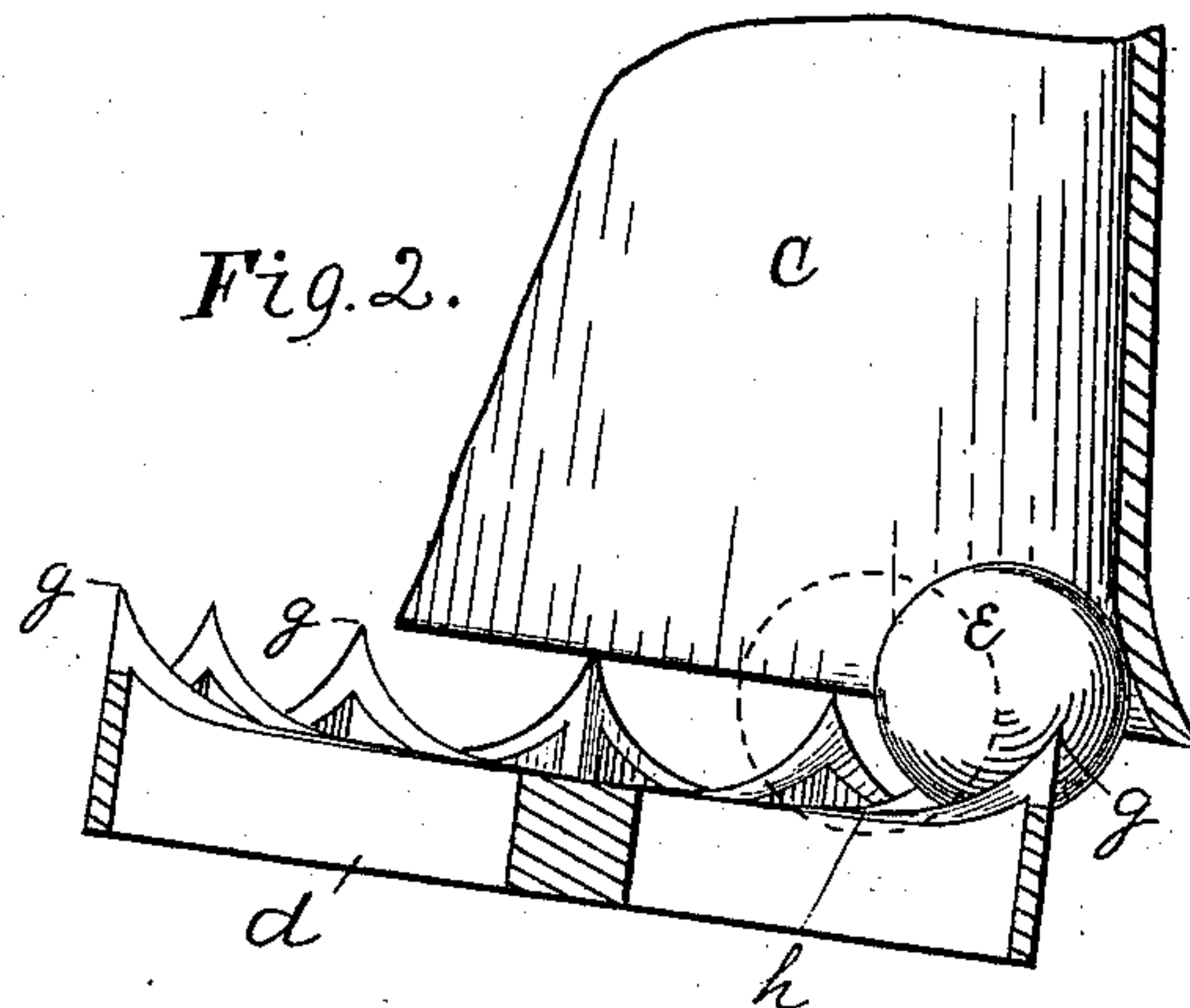
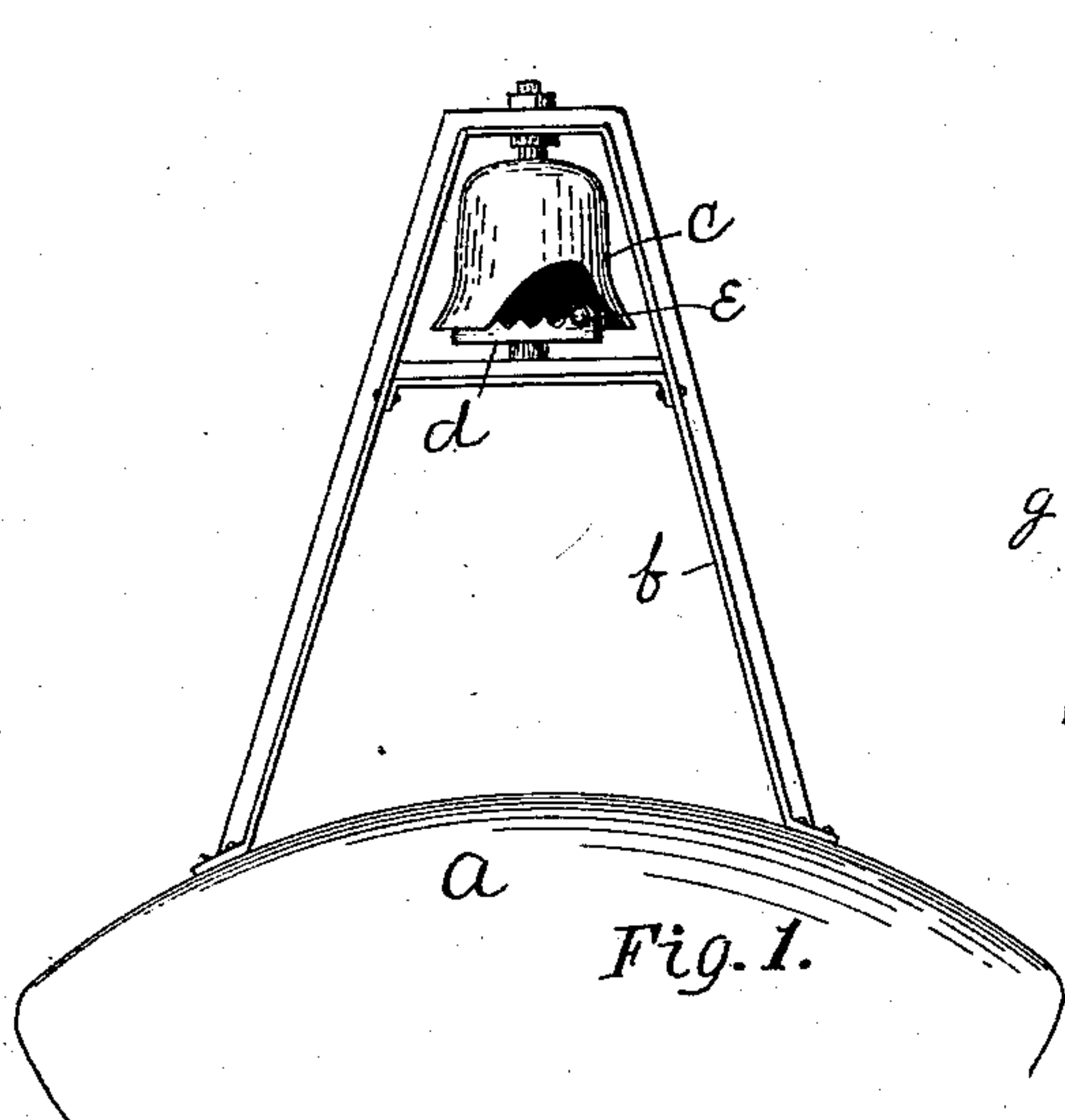


Fig. 3.

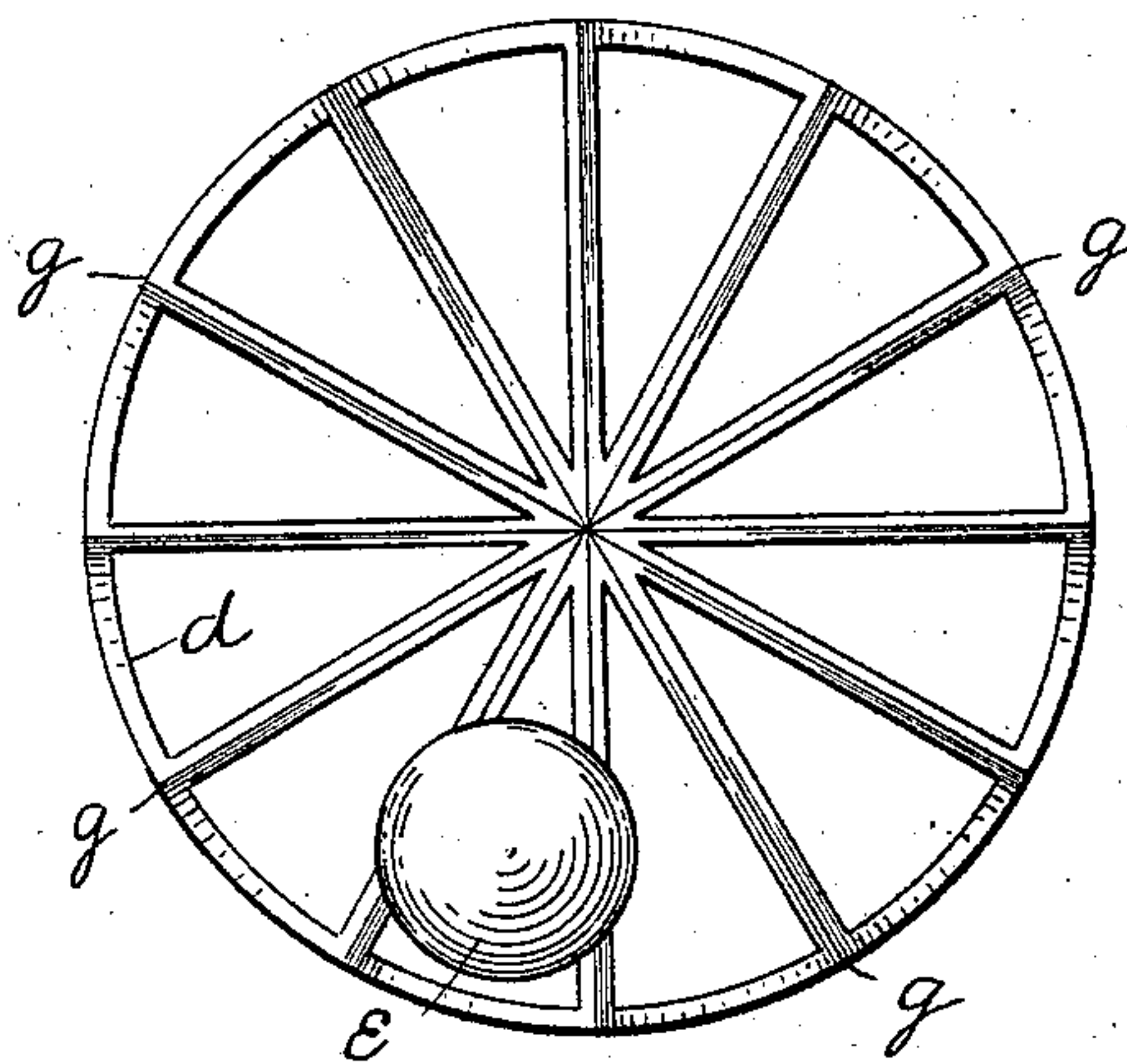
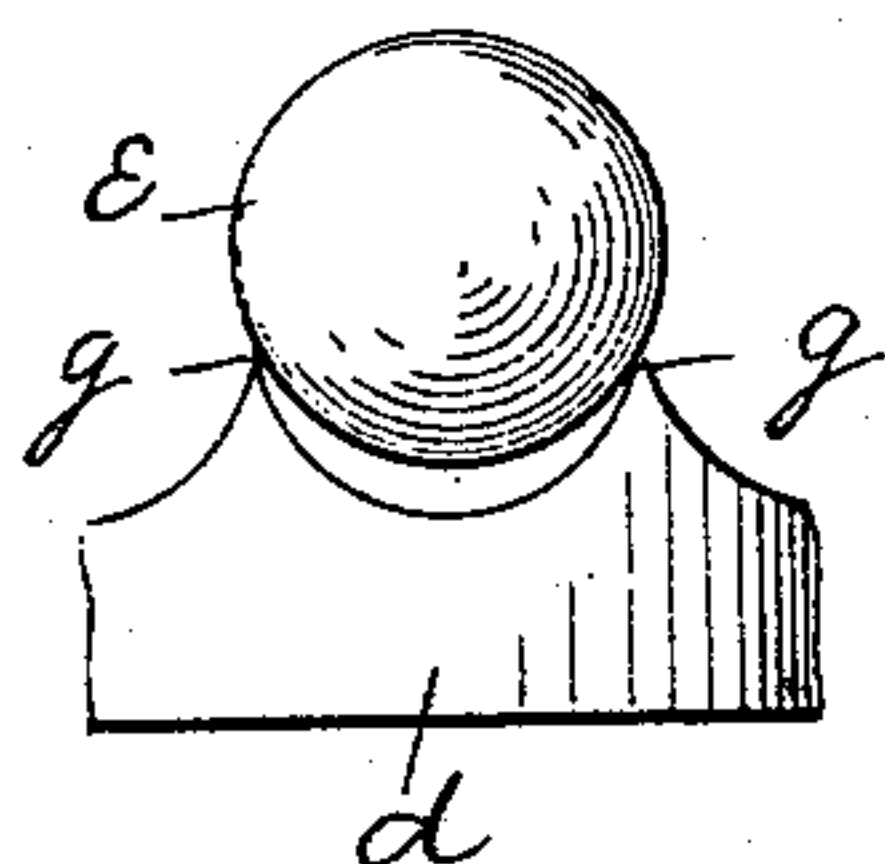


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## BELL-BUOY.

SPECIFICATION forming part of Letters Patent No. 540,039, dated May 28, 1895.

Application filed February 16, 1895. Serial No. 538,658. (No model.)

*To all whom it may concern:*

Be it known that we, JOSEPH M. BABBITT, PATRICK F. WOOD, and JOHN A. DOUD, citizens of the United States, residing at New Bedford, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Bell-Buoys, of which the following is a specification.

Our invention relates to the mechanism, which causes the bell of a bell-buoy to sound, when the buoy is oscillated by the waves; and it consists in a series of ribs, radiating from a common center, having their outer ends curving upward, and adapted to be secured in the mouth of the bell; and a ball, adapted to roll on, and be supported between any two adjacent ribs, and strike the bell before its center of gravity has passed beyond the upwardly curved ends of said ribs.

The accompanying drawings illustrate our invention, in which—

Figure 1 is a side view of a portion of the top of a buoy with the bell-frame and bell supported thereon and showing a portion of the bell broken away to show our improved bell-striking mechanism secured in the mouth thereof. Fig. 2 is a view of our improvement in vertical section, showing the ball thereon in the act of striking a section of the bell, and showing the whole in the inclined position it would assume when the buoy was oscillated by the action of the waves. Fig. 3 is a plan view of our improvement, showing the ball thereon. Fig. 4 is a side view of a section of our improvement, showing the relative size of the ball to the space between the outer ends of the ribs.

Similar letters refer to similar parts in the several views.

The letter *a*, indicates a portion of the top of a bell-buoy.

*b*, indicates the bell-frame secured thereon; and *c*, indicates the bell, hung in the top thereof, all in the usual manner.

Secured to the bell-frame, in the mouth of the bell *c*, is our improved bell-striking mechanism, consisting of the ribs *g*, radiating from a common center, having their outer ends curved upward; and the ball *e*, adapted to roll on and be supported between either two adjacent ribs. The ribs *g*, are curved upward at their outer ends, that the ball, having struck the bell by the momentum

gained from rolling from one end of the ribs to the other, shall by its gravity, recede from, and be held out of contact with the bell, until by the oscillation of the buoy, it has gained sufficient momentum to carry it up the incline of the outer ends of the ribs, and again strike the bell, as is clearly shown in Fig. 2, where the ball after striking the bell, will recede down the incline of the outer ends of the ribs *g*, and assume the position shown by the dotted lines *h*.

In the ordinary bell striking mechanism, the table on which the ball rolls is solid from side to side, and nearly fills the mouth of the bell. Consequently the sound is greatly muffled; but in our invention, the spaces between the ribs are open for the free passage of the sound from the bell. Moreover, the spaces being thus open, neither snow nor ice can find lodgment sufficient to render the operation of the bell ineffective. In the ordinary bell striking mechanism, a series of springs are secured to the edge of the table, to cause the ball to recoil after striking the bell and hold it from contact therewith, and said springs are constantly breaking and getting out of order, or becoming clogged with snow and ice, thereby rendering the bell inoperative to a large extent, if not wholly so; but in our invention, the ball after striking the bell, is held from contact therewith, by the sharp incline of the outer ends of the ribs on which it rolls.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

In a bell-buoy, a bell-striking device, consisting of a series of ribs radiating from a common center, having their outer ends curved upward, adapted to be secured in the mouth of the bell; and a ball, adapted to roll on, and be supported by any two adjacent ribs, and strike the bell, when the buoy is oscillated by the waves, substantially as shown and described.

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