

J. E. BUERK.

Alarm Clock.

No. 58,058.

Patented Sept. 18, 1866.

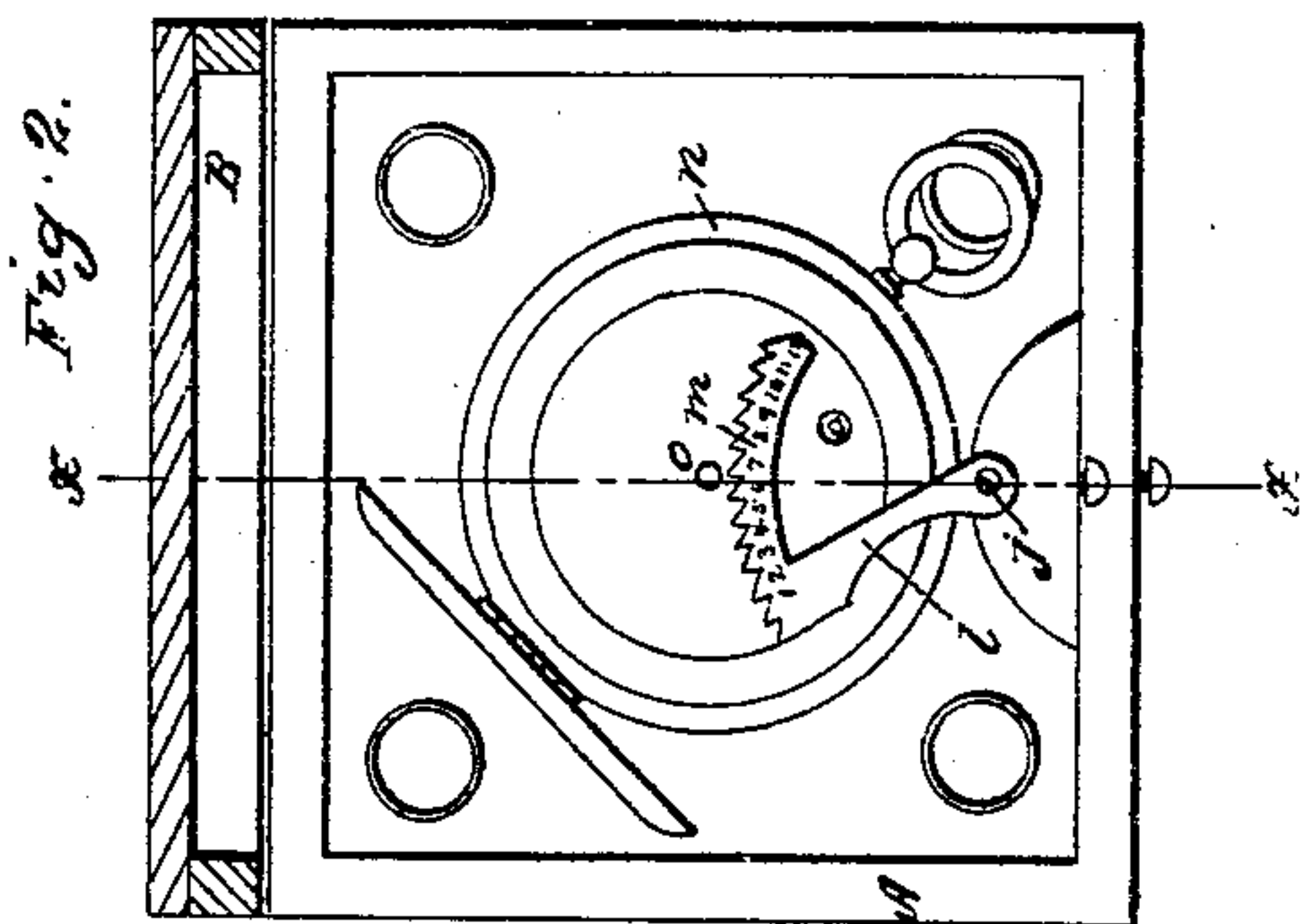
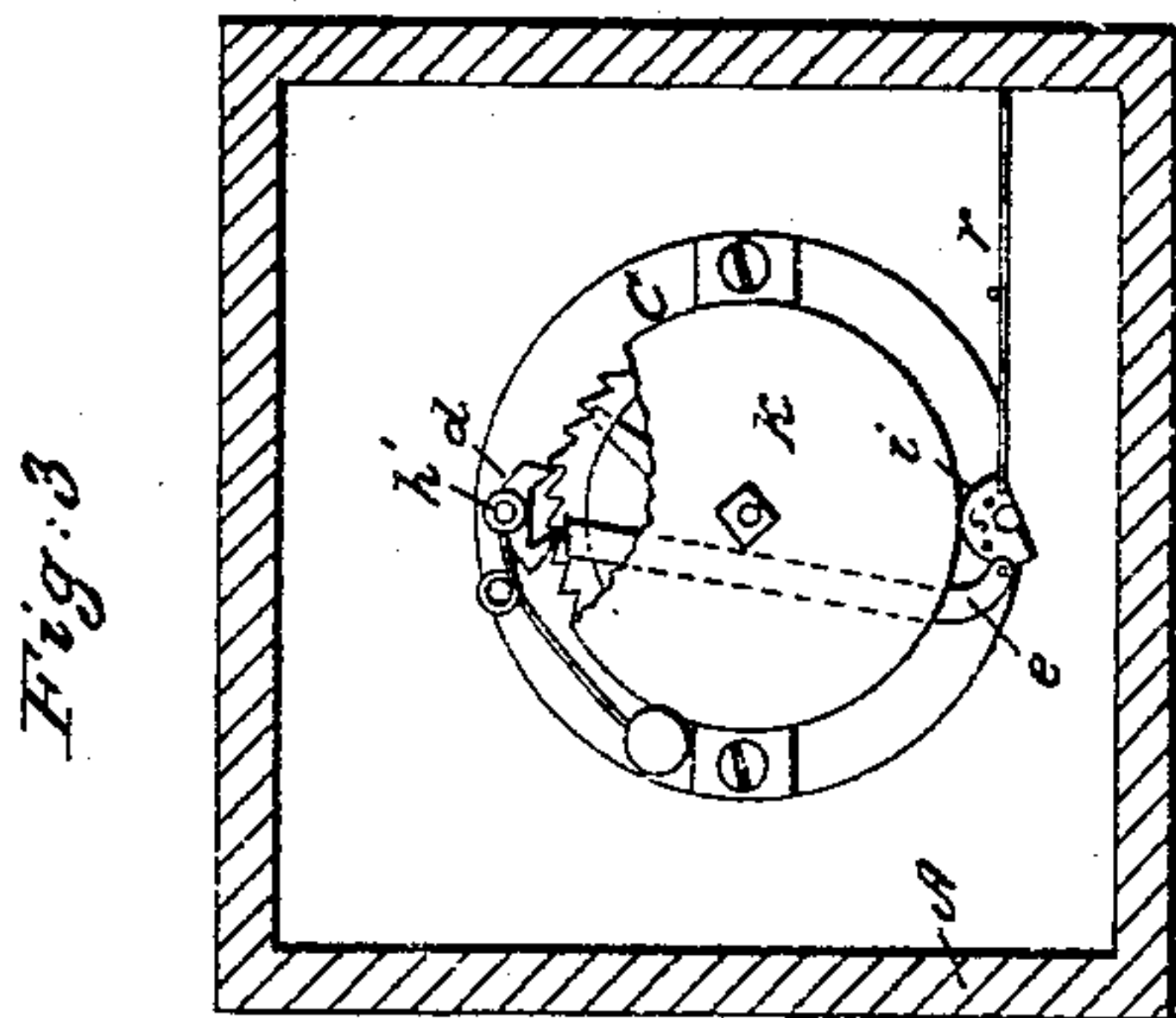


Fig. 4.

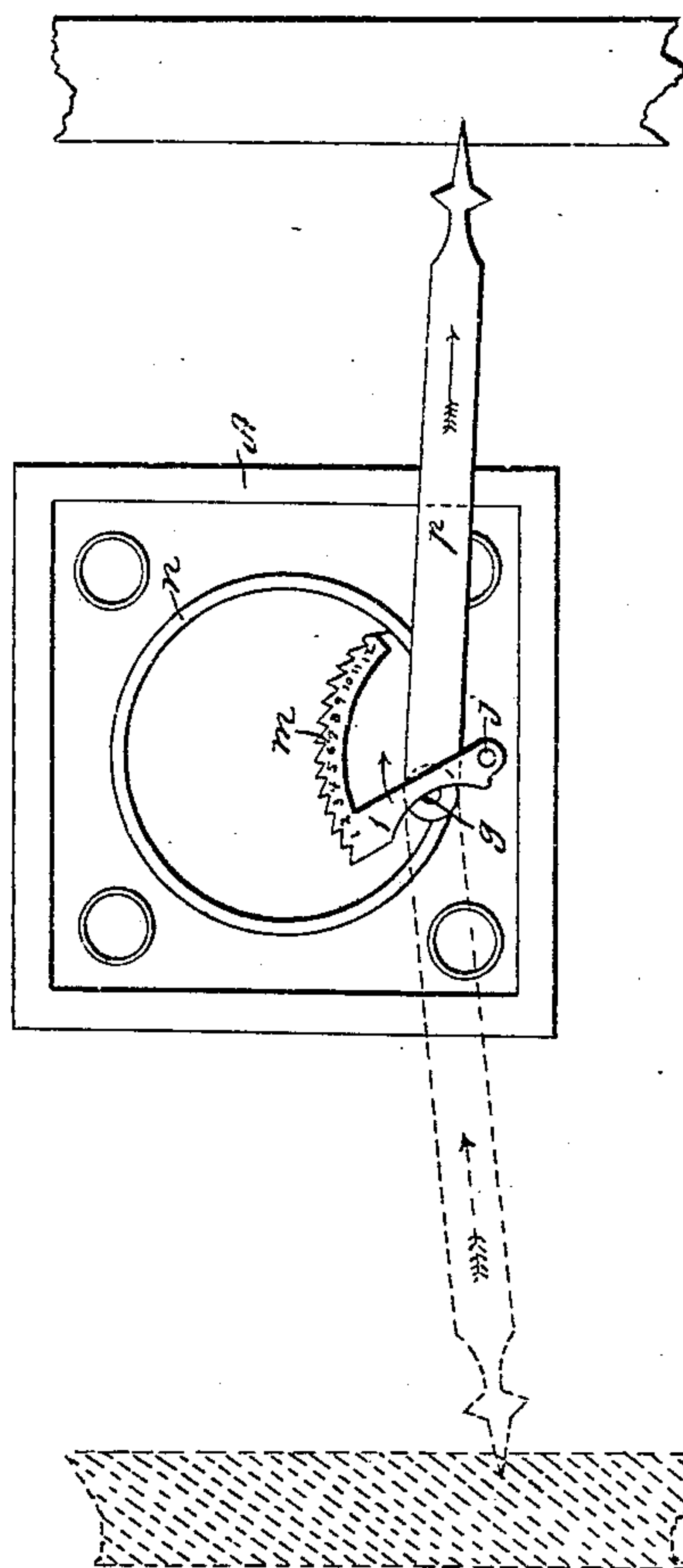
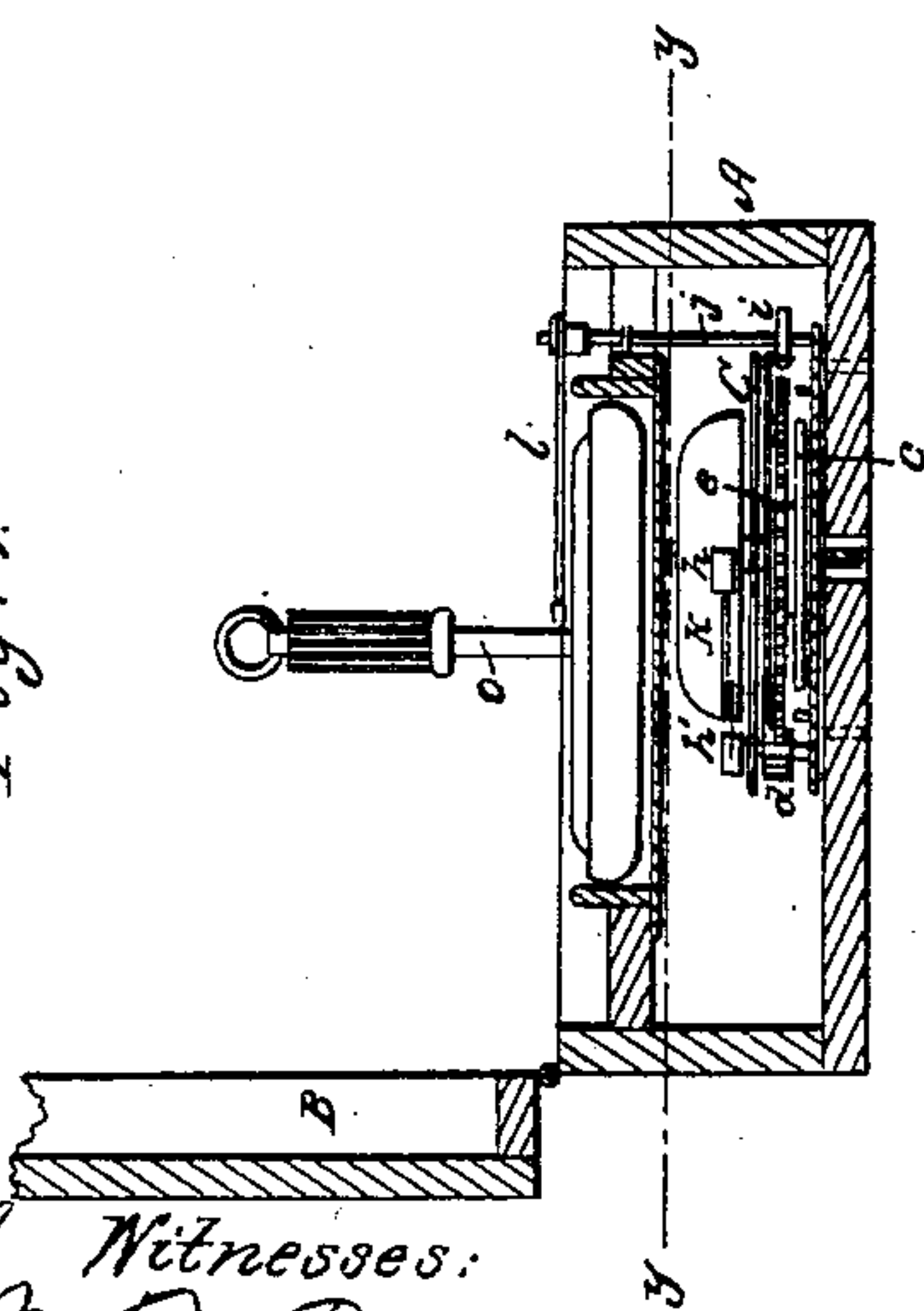


Fig. 1.



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# UNITED STATES PATENT OFFICE.

J. E. BUEBK, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN ALARM-CLOCKS.

Specification forming part of Letters Patent No. 58,058, dated September 18, 1866.

*To all whom it may concern:*

Be it known that I, J. E. BUEBK, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Alarm-Movement; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a longitudinal vertical section of this invention, taken in the plane indicated by the line *x x*, Fig. 2. Fig. 2 is a plan or top view of the same. Fig. 3 is a horizontal section of the same, the plane of section being indicated by the line *y y*, Fig. 1. Fig. 4 is a plan or top view of the same when applied to a door as a burglar-alarm.

Similar letters of reference indicate like parts.

This invention consists in an alarm-movement, from the escapement of which extends a stop-lever, which bears against a segmental disk mounted on a shaft, to the upper part of which is secured a serrated segment in such a manner that by turning the serrated segment either by hand or by the action of a watch or other mechanism until the flat part of the segmental disk faces the stop-lever the escape-wheel is released and the alarm begins to sound. The serrated segment is marked with figures from 1 to 12, (more or less,) and by adjusting a watch in the proper position, and securing on the central arbor thereof a watch-key with a projecting wing or tooth, the alarm can be made to sound at any desired time during the night or day.

A represents a box, made of wood or any other suitable material, and provided with a lid or cover, B, so that it can be conveniently closed whenever it may be desirable. On the bottom of this box is secured the alarm-movement C, which consists of a coiled spring, *a*, secured with its inner end to an arbor, *b*, and with its outer end to the bed-plate of the alarm-movement. The end of the arbor *b* extends through a hole in the bottom of the box, and it is made square to receive a key, which serves to wind up the spring *a*.

On the arbor *b* is secured an escape-wheel, *e*, which is connected with said arbor by means

of the winding apparatus, and the motion of which is governed by the anchor-escapement *d*. From the anchor extends a stop-lever, *e*, and it (the anchor) is mounted on an arbor, *h'*, which also carries the hammer *h*.

The stop-lever *e* extends across the escape-wheel, and it bears against the circumference of a segmental disk, *i*, which is mounted on a vertical shaft, *j*. As long as the stop-lever bears against the convex part of the segmental disk *i* the anchor *d* is retained in such a position that it prevents the escape-wheel from revolving; but when the segmental disk is turned so that its flat part faces the stop-lever the escape-wheel is released, and as it revolves it imparts to the anchor a rapid oscillating motion, causing the hammer to strike in quick succession against the bell *k* until the force of the spring is spent.

The position of the segmental disk *i* is governed by an arm, *l*, which is secured to the vertical shaft *j*, and which is operated either by the action of a watch-movement or by a rod connecting with the door or window of the room, or by any other suitable means. If the arm *l* is to be operated by a watch-movement it is provided with a serrated segment, *m*, which extends over a cup, *n*, secured in the upper part of the box A, and made of a suitable size to receive a watch of the ordinary size. The segment is provided with twelve (more or less) teeth, which are marked with figures from 1 to 12, and each of which represents one hour. Said segment extends near to the center of the watch, on the central arbor of which a watch-key, *o*, is placed, which is provided with a tooth that gears in the teeth of the serrated segment, (see Figs. 1 and 2;) and since the central arbor of a watch makes one revolution every hour, the segment is moved one tooth per hour until it comes in such a position that the flat part of the segmental disk *i* comes opposite the stop-lever, when the alarm-movement is released and the alarm is sounded.

If a person desires to be awakened four hours after going to bed, the tooth of the watch-key is brought in gear with the tooth No. 4 of the serrated segment, and after the lapse of four hours the alarm is sounded.

Instead of operating the arm *l* by means of the watch-key and the serrated segment *m*, it may be operated by a rod, *p*, as shown in Fig.

3. This rod is provided with a projecting pin, *q*, which bears against the edge of the arm *l*, and the opposite end of the rod is connected to or fastened in the door, if said door opens outward, as shown in said figure in black outlines, or it is made to bear against the door, if the door opens inward, as shown in red outlines in said figure. In either case if the door is opened the arm *l* is turned in the direction of the arrow marked on it in Fig. 3, and the alarm is sounded.

To prevent the arm *l* from turning too far, a spring, *r*, is secured in the interior of the box *A*; and if the arm *l* has been turned far enough, a pin, *s*, projecting from the segmental disk *i*, bears against the spring *r*, and prevents the shaft *j* from turning any farther than necessary to release the alarm-movement.

By these means a simple alarm is obtained which is of great convenience for travelers or persons living in hotels. The box *A* takes

but little room, (it can be made neat,) and the alarm-movement is so constructed that the same is not liable to get out of order.

What I claim as new, and desire to secure by Letters Patent, is—

1. The arm *l* and segmental disk *i*, in combination with the stop-lever *e* of the alarm-movement, constructed and operating substantially as and for the purpose set forth.

2. The serrated segment *m*, in combination with the tooth of the watch-key *o* and with the alarm-movement, constructed and operating substantially as and for the purpose described.

The above specification of my invention signed by me this 12th day of May 1866.

J. E. BUERK.

Witnesses:

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