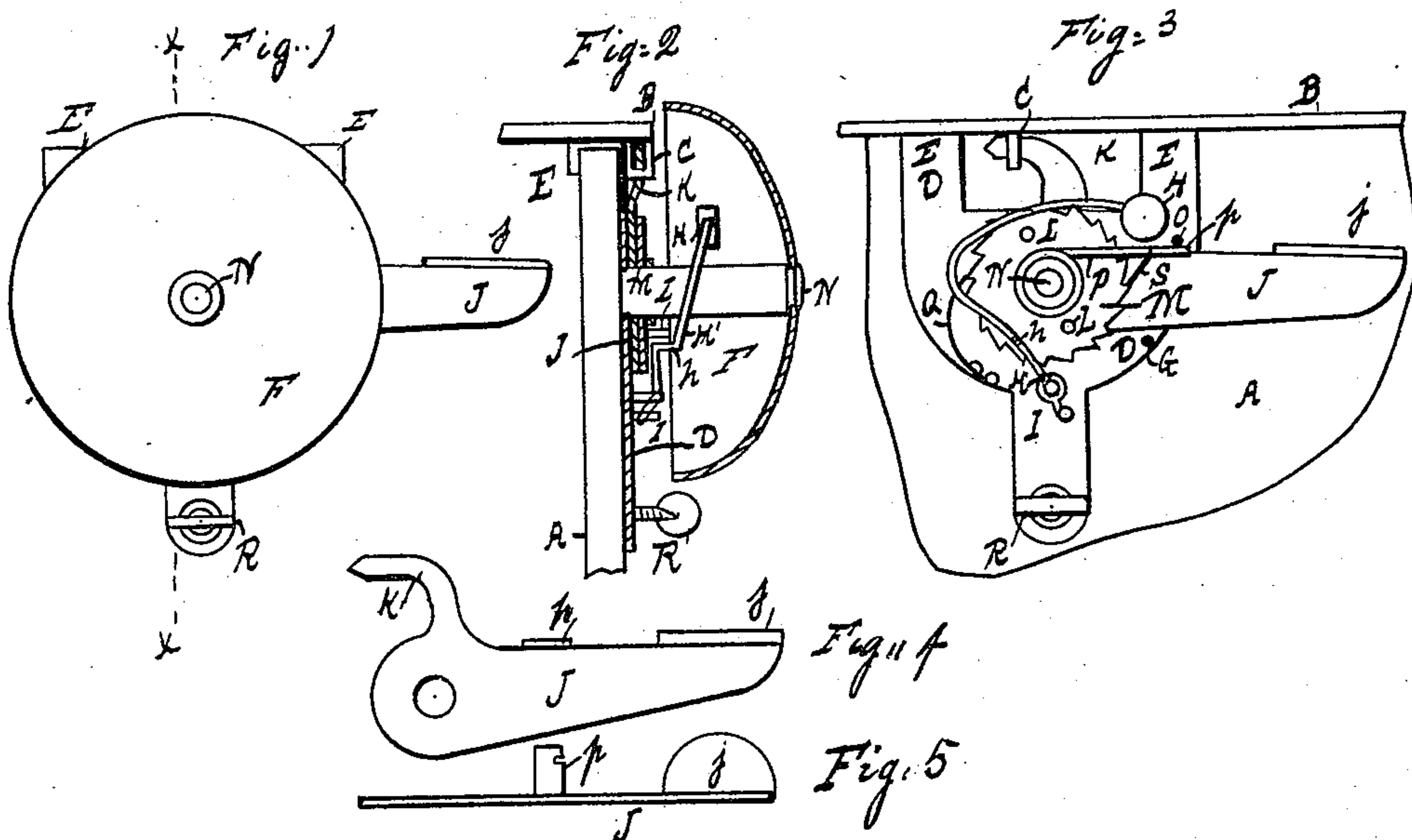


(No Model.)

M. A. DIBBLE.
ALARM LATCH.

No. 428,381.

Patented May 20, 1890.



Witnesses

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Phineas M. York.

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UNITED STATES PATENT OFFICE.

MORTON A. DIBBLE, OF JACKSON, MICHIGAN.

ALARM-LATCH.

SPECIFICATION forming part of Letters Patent No. 428,381, dated May 20, 1890.

Application filed December 30, 1889. Serial No. 335,464. (No model.)

To all whom it may concern:

Be it known that I, MORTON A. DIBBLE, of Jackson, in the county of Jackson and State of Michigan, have invented a new and useful
5 Improvement in Alarm-Latches, of which the following is a specification.

My invention relates to alarm-latches; and the object of my improvement is to provide a
10 device to be attached to box-lids and similar devices, which shall indicate when said lids have been opened a certain number of times. I attain this object in the device illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the entire de-
15 vice. Fig. 2 is a section on the line $x x$, Fig. 1. Fig. 3 is an elevation of the device attached to a box with the bell or gong removed. Fig. 4 is an elevation of the latch-lever, and Fig. 5 is a plan view of the latch-lever with
20 the lower portion, as shown in Fig. 4, uppermost.

Similar letters refer to similar parts throughout the several views.

The device embodying my invention is in-
25 tended to be attached to boxes containing cigars. To advertise a certain brand of cigars the dealer announces that every third, fifth, or tenth sale, as the case may be, will be given free. When the box is opened to pro-
30 duce the third, fifth, or tenth purchase, the gong is sounded, and thus the sale to be given free to the purchaser is indicated. Each device is constructed to strike the gong when the latch has been operated a certain number
35 of times. The number can be learned by counting the teeth of the wheel or by actual trial.

A is a portion of the front of the box.

B is the lid of the box.

40 C is a metal loop, which loop is secured to the box-lid and extends therefrom in a position to be engaged by the latch K.

D is a metal plate, to which plate the operative parts of the alarm-latch are secured.

45 E E are hooks formed at the upper portion of the plate D, and adapted to pass over the upper edge of the front of the box to secure the alarm-latch in place.

50 R is a screw for securing the lower portion of the alarm-latch to the box and to prevent any lateral movement of the alarm-latch in reference to said box.

N is a standard secured in and extending from the plate D.

F is a gong secured to the outer end of the
55 standard N with its concave face toward the plate D.

H is a tongue or striker for sounding the gong F.

H' is the shaft of the striker H. The shaft
60 H' is made of resilient material and is attached at I rigidly to the plate D.

h is an offset formed in the lower portion of the shaft H'.

J is a lever pivoted upon the standard N
65 near the plate D. Said lever is provided at one end with the latch K and at the other end with the thumb-plate j.

p is a stud extending from the lever J.

P is a spring secured at one end to the
70 standard N and pressing at the other end upon the stud p to hold the latch K in engagement with the loop C.

M is a ratchet-wheel adapted to revolve
75 upon the standard N.

L L are lugs extending from the face of the
ratchet-wheel M. Said lugs should be of a length greater than the distance from the
plate D to the shaft H' below the offset h, and less than the distance from said plate to said
80 shaft above said offset.

S is a pawl secured at one end to the lever J, and at the other end engaging with the teeth of the ratchet-wheel M.

Q is a spring-click secured at one end to
85 the plate D, and at the other end engaging with the teeth of the ratchet-wheel M O.

G are lugs for limiting the motion of the lever J.

The operation of the above-described device
90 is as follows: When it is desired to raise the lid, the lever J is oscillated by pressing down upon the thumb-plate j. When the lever J is oscillated, the latch K is thereby withdrawn from the loop C and the lid is free to be lifted.
95 When the lid is closed, the spring P raises the long arm of the lever J, thus forcing the latch K into engagement with the loop C. When the lever J is oscillated, as above described, it carries with it the pawl S, which
100 pawl acts upon the teeth of the wheel M to rotate said wheel a distance equal to the length of one tooth. As the wheel M is rotated the lugs L L come successively into con-

tact with the shaft H' below the offset *h*, bendingsaid shaft out of its normal position. When a lug L has been carried beyond the offset *h*, thestriker H is released from engage-
5 ment with said lug and permitted to vibrate, thus striking and sounding the gong F.

It will be noticed that by this device the gong is only sounded when the lever J has been oscillated a number of times equal to the
10 number of teeth between the lugs L L.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a loop or catch C, a
15 plate D, a lever J, having a pawl S and provided with a latch K, adapted to engage said loop, said lever being pivoted to said plate, a ratchet-wheel M, pivoted to said plate and bearing lugs L L, a gong F, and a striker H,
20 secured to said plate and adapted to be oscillated by said lugs, substantially as shown and described.

2. The combination, with a box, of a loop or catch C, extending from the lid of said box,
25 a plate D, provided with hooks E E, a lever J,

having a pawl S, and provided with a latch K, adapted to engage said loop, said lever being pivoted to said plate, a ratchet-wheel M, pivoted to said plate and bearing lugs L L, a gong F, and striker H, secured to said plate D
30 and adapted to be oscillated by said lugs, substantially as shown and described.

3. The combination of the plate D, a standard N, secured in and extending from said plate, a lever J, pivoted to said standard and
35 provided with a latch K and bearing a pawl S, a ratchet-wheel turning upon said standard and bearing lugs L L, a click engaging with said ratchet-wheel, a spring P, secured to said standard and bearing upon said lever,
40 a resilient striker H, adapted to be oscillated by said lugs, and a gong secured at the outer end of said standard, with its concave face toward said plate, substantially as shown and described.

MORTON A. DIBBLE.

Witnesses:

JOSIAH B. FROST,
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