3 Sheets—Sheet 1.

F. W. MALLETT.

Annunciator.

No. 211,031. Patented Dec. 17, 1878.

Fig. 1.

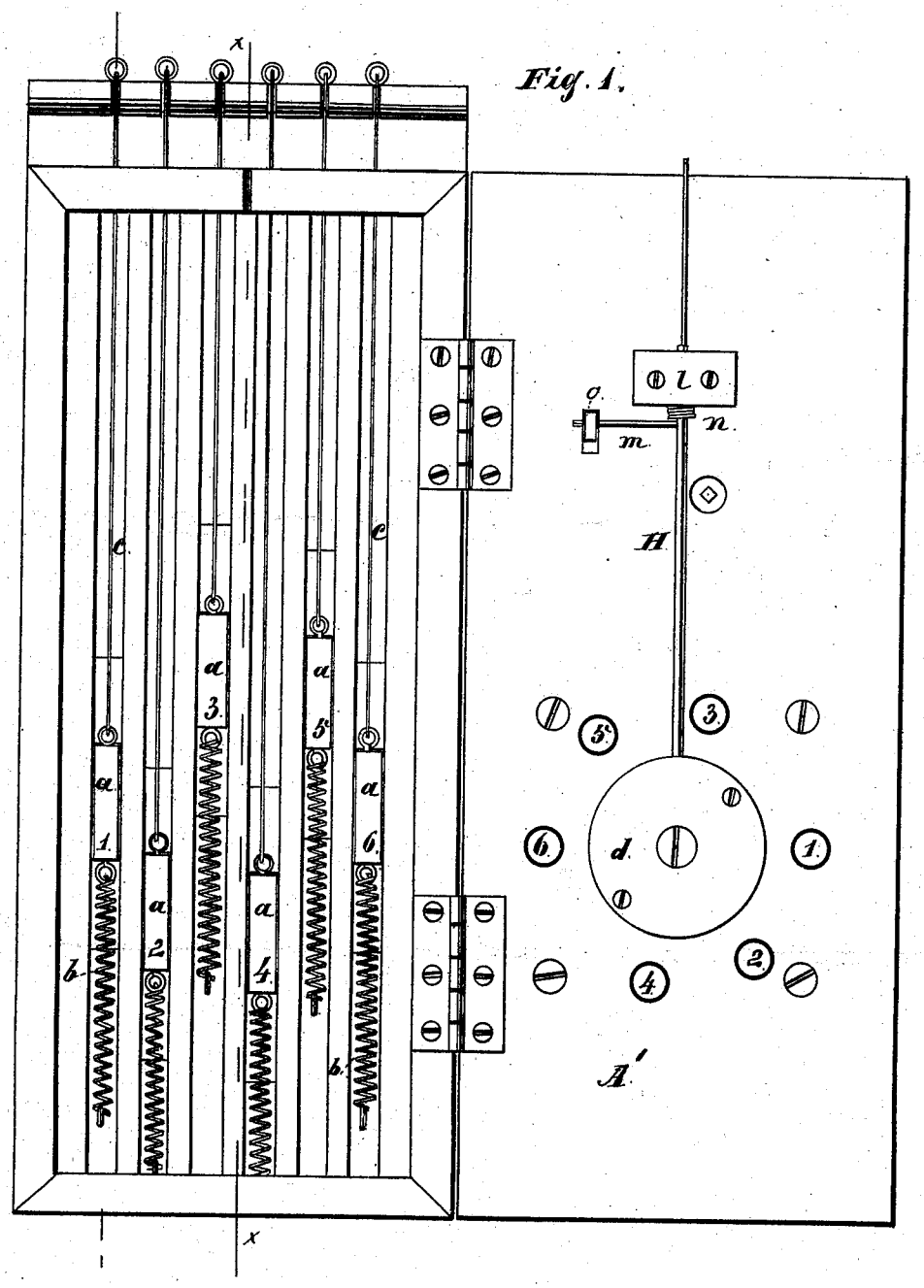

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Fig. 2.

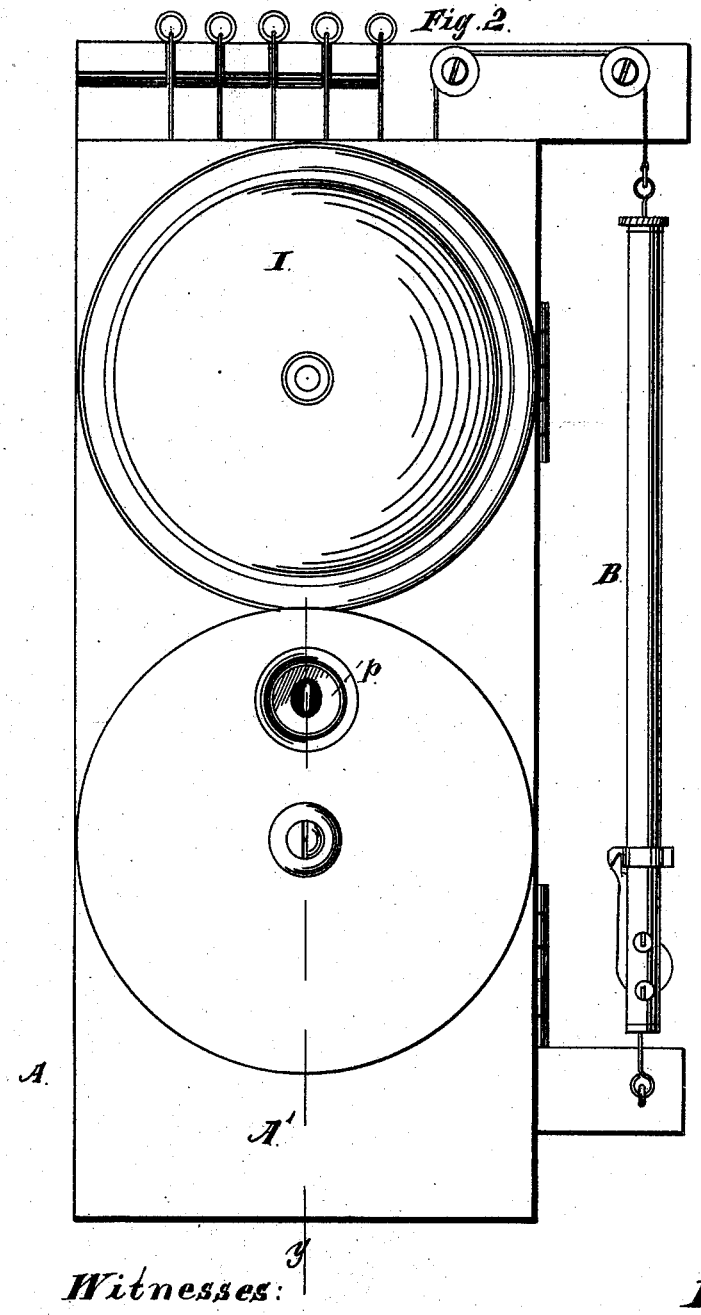
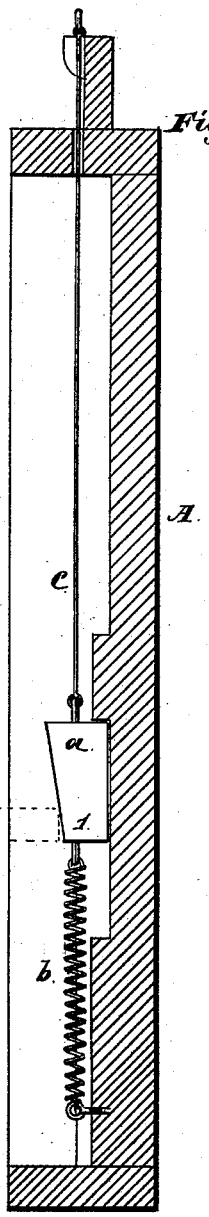


Fig. 3.



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Annunciator.

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Fig. 4

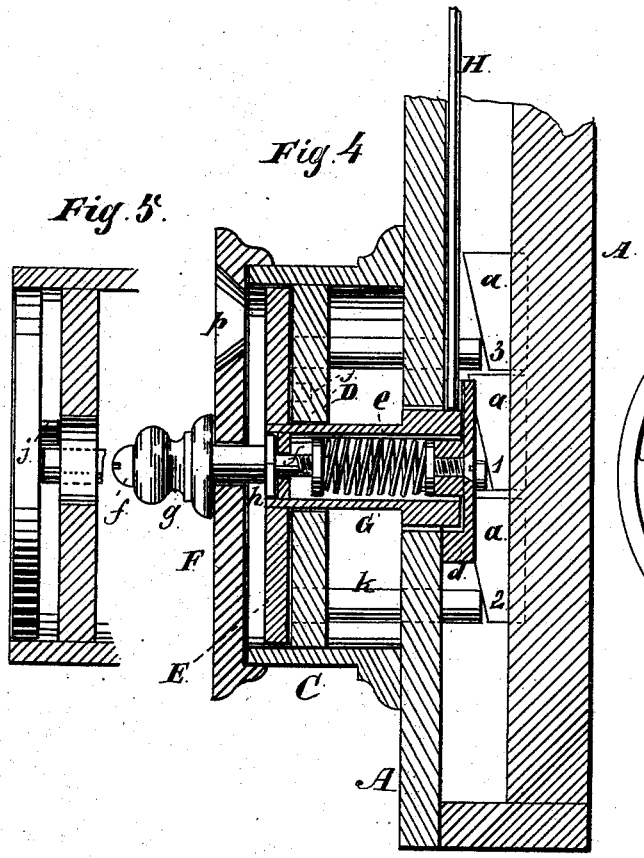


Fig. 5.

Fig. 6.

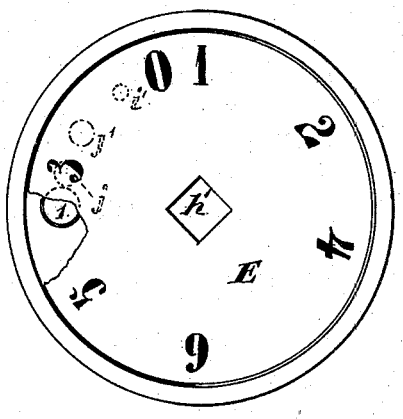


Fig. 7.

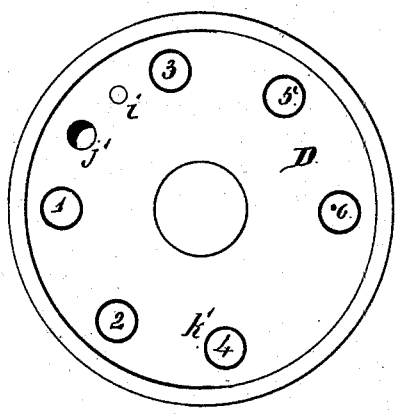


Fig. 9.

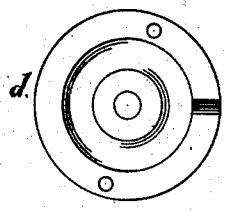


Fig. 8.

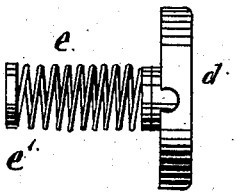
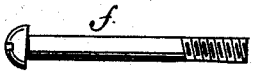


Fig. 10.



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UNITED STATES PATENT OFFICE.

FRANCIS W. MALLETT, OF CHICAGO, ILLINOIS, ASSIGNOR TO ALFRED H. ANDREWS, HERBERT L. ANDREWS, AND THOMAS S. HAYDEN, OF SAME PLACE.

IMPROVEMENT IN ANNUNCIATORS.

Specification forming part of Letters Patent No. **211,031**, dated December 17, 1878; application filed November 18, 1878.

To all whom it may concern:

Be it known that I, FRANCIS W. MALLETT, of the city of Chicago, Cook county, State of Illinois, have invented new and useful Improvements in Annunciators, of which the following is a full description, reference being had to the accompanying drawings, consisting of three sheets, in which—

Figure 1 is an elevation showing the case open; Fig. 2, a front elevation showing the case closed; Fig. 3, a vertical section at line *x x* of Fig. 1; Fig. 4, a vertical section of the lower part of the device, taken at *y y*, Fig. 2; Figs. 5, 6, 7, 8, 9, and 10, details.

My invention is chiefly designed to be used in connection with some automatic arrangement, located in a building or room, for the purpose of giving an alarm in case of a fire.

In the drawings, A represents a case, which has, as shown, a hinged door, A′. *a* are blocks inclined upon one side, located in vertical channels within the case A.

The lower end of each block is connected to a spring, *b*, and the upper end is connected to a wire, *c*, each wire leading to a separate room, and being there connected to a suitable thermostat or automatic fire-indicating device in such a manner that there will be a tension upon the spring *b*.

The thermostat or heat-indicator B shown is so constructed that by its expansion by heat the lock will be released. I do not fully describe this device B, as I intend to make it the subject of another application for a patent, and some other device may be used for accomplishing the result.

C is a circular case or shell secured to the face of the case A. D is a fixed partition in this case C. E is a movable plate or disk of wood, located within the case or shell C. This disk E has upon its face a number of figures, arranged in a circle, indicating the numbers of the rooms to which the wires *c* run. On this disk is also a cipher, (0,) just before the figure 1.

F is a cover fitting over the case or shell C. In this cap or cover F is an opening, *p*, before which the figures on the disk E pass. In setting the disk E for use, after it has been partially rotated, or arranging the device for operation, it is to be pressed inward by the knob *g*; then its rotation can be continued until the pin *j* comes in contact with the pin *i*, at which time the cipher will be in front of the opening *p*, and then the pin *i* can be made to enter the hole *i′*.

G is a cylinder, which may be of wood. The outer end is permanently fastened to the movable plate E, and this cylinder G can move in openings or bearings—one in the face or door A′ of the case A, and one in the partition D. When the parts are in the position shown in Fig. 4, the inner end of the cylinder G extends through the door A′ into the case A.

d is a cap over the inner end of the cylinder G, which is secured to the inside of the door A′. *e* is a metal spring within G. One end is fixed to a disk, which is secured to a block projecting inward from the cap *d*. Upon the other end of the spring *e* is a metal disk, *e′*, having in it a hole provided with screw-threads.

f is a screw which passes through the cap F and disk E into the disk *e′*.

g is a knob having a shank, which has upon its inner end a square or angular piece, *h*, adapted to enter a correspondingly-shaped recess, *h′*, in the disk E. The shank of the knob *g* rotates in the cap F. *i* is a pin secured upon the face of the partition D, projecting therefrom a short distance, and upon the back side of the disk E is a hole, (indicated in dotted lines at *i′*, Fig. 6,) into which the pin *i* enters when the parts are in the position shown in Fig. 4. *j* is a pin secured upon the inside of the disk E. *j′* is a hole in the face of the partition D. *k* are pins loosely placed in holes in the door A′ and in the partition D. They are of such length and so arranged that when the parts are in the position represented in Fig. 4 the outer ends of the pins will be flush with the front of the partition D, while the inner ends will be in contact with the lower portion of the wedge-shaped blocks *a*, as shown in Fig. 4.

H is a metal rod, the lower end of which rests upon the inner end of the cylinder G

when the parts are in the position shown in Fig. 4. This rod H can move vertically, and passes under the guide *l*. This rod H, or an extension thereof, passes up through the top of the case A, so that it can be reached and operated by hand.

m is an arm, one end of which is secured to the rod H, and the other end is connected with a lever or tripping device, *o*, to release the alarm, which is located beneath the gong I in the usual manner. *n* is a short coil-spring, located around the rod H and between the arm *m* and guide *l*.

The pins *k* are located in a circle, and the pin *j* is so located that it will come in contact with any one of the pins *k* which may project through the partition D, and the several parts and figures are so arranged that when the wire *c*, leading to any given room, is released, the figure on the disk E indicating the number of such room will be brought before the opening *p* in F, and to facilitate the arrangement the pins *k* and blocks *a* should be properly numbered.

In use, when the wires *c* are each connected with a device, B, or other suitable device, the blocks *a* will be drawn up in the case A into the position shown in Figs. 1, 3, and 4, when there will be considerable tension upon the springs *b;* then, before the other parts have been properly adjusted, the disk E will be thrown out into contact with the inner face of the cover F by the action of the spring *e;* then this disk E must be turned once around, which can be done by means of the knob *g*, the angular piece *h* being in the recess *h'*, the screw *f* having been first inserted in the disk *e'*, the screw rotating with the knob and disk E, which will produce considerable tension upon the spring *e*.

When the disk E has been turned around, as described, it is to be pushed down against the partition D, the pin *i* entering the hole *i'*, and thus this disk will be held in that position, as shown in Fig. 4.

When the parts have been arranged as described the inner ends of the pins *k* will be in contact with the lower ends of the inclined blocks *a*. Now, if by the operation of the device B, or otherwise, any one of the blocks *a* be released, it will descend rapidly by the action of one of the springs *b*, and in its descent will force out the pin *k* with which it is in contact, and this will force the disk E outward, releasing it from the pin *i*, and when so released the disk E will rotate backward, in consequence of the tension of the spring *e*, until the pin *j* comes in contact with the pin *k*, which has been thrown out by the block *a*, as described, bringing one of the numbers upon the face of the disk E into view before the opening *p* in the cover F, which number will correspond with the number of the room to which attention should be given. At the same time the cylinder G will have been carried forward with the disk E, so that the lower end of the rod H will be released, and by the action of the spring *n* will be thrown down, by which movement the arm *m* will operate the lever or tripping device *o*, and the alarm will be sounded.

In Fig. 1 figures have been placed upon the blocks *a* and pins *k* corresponding with the figures upon the disk E. In Fig. 2 the disk E is shown with the cipher before the opening *p* in F, which is the position the disk E will occupy when the parts are set ready for use, while in Fig. 6 the disk stands in the position it will occupy when Fig. 1 has been brought before the opening *p* in F. In this position the pin *j* is in contact with the pin *k* marked 1, preventing the further rotation of the disk E. If the wire *c*, leading to room 4, had been released, in such case the pin *k* marked 4 would act upon the disk E and extend into the open space between it and the partition D, and the pin *j* would come in contact with such pin *k* marked 4, and the figure 4 on the disk E would be in front of the opening *p* in F.

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

1. In an annunciator, the rotary disk E, in combination with the spring *e* and cylinder G, all constructed and operating substantially as specified.

2. The combination of the rotary disk E, spring *e*, cylinder G, pins *k*, and blocks *a*, substantially as and for the purpose specified.

3. The combination of the rotary disk E, spring *e*, cylinder G, pins *k* and *j*, and blocks *a*, substantially as and for the purposes specified.

4. The rod H, in combination with the cylinder G, spring *e*, disk E, pins *k*, and blocks *a*, substantially as and for the purposes specified.

5. The combination of the rotary disk E, cylinder G, spring *e*, disk *e'*, screw *f*, and knob *g*, substantially as and for the purposes specified.

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Witnesses:
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