

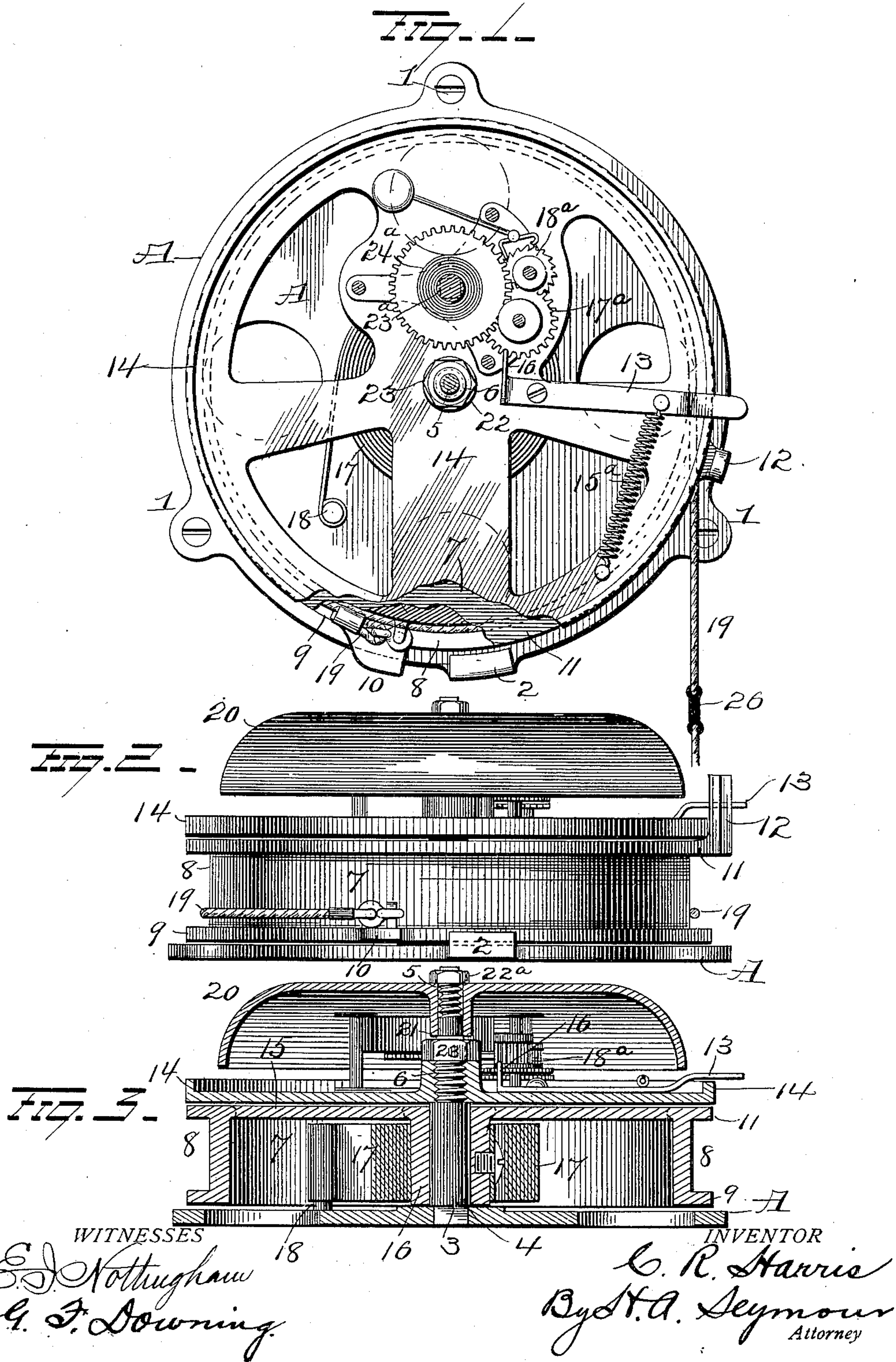
No. 652,361.

Patented June 26, 1900.

C. R. HARRIS.  
MECHANICAL GONG.

(Application filed Nov. 6, 1899.)

(No Model.)





# UNITED STATES PATENT OFFICE.

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## MECHANICAL GONG.

SPECIFICATION forming part of Letters Patent No. 652,361, dated June 26, 1900.

Application filed November 6, 1899. Serial No 735,983. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES R. HARRIS, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain  
5 new and useful Improvements in Mechanical Gongs; and I do hereby 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  
10 use the same.

My invention relates to an improvement in mechanical gongs adapted, primarily, for sounding an alarm in the event of a fire within or adjacent to the premises protected by  
15 the gong; and it consists in certain novel features of construction and combinations of parts, as will be hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is  
20 a face view of my improved alarm with the gong removed. Fig. 2 is a side elevation, and Fig. 3 is a sectional view.

A represents a circular base-plate or support provided along its outer edge with a series of projecting perforated ears 1, by means of which the base or support is secured to the wall or other convenient part of a building. This plate or support A is provided at a suitable point on its peripheral edge with a stop  
30 2, for the purpose to be hereinafter explained, and at its center with a hole or opening in which the inner end of stationary shaft or post 3 is rigidly secured, which latter is provided adjacent to the base-plate A with a  
35 smooth surface 4 and at its reduced end with screw-threads 5, while the intermediate section thereof is provided with screw-threads 6, said intermediate section being of a diameter greater than that of the reduced section and  
40 of less diameter than that of the smooth section. The smooth section 4 of shaft 3 constitutes an axle on which the drum 7, now to be described, revolves. Drum 7 is preferably cast in a single piece and is provided with a  
45 wide peripheral groove 8, the flange 9 of which is provided with a stop 10, adapted to engage the stop 2, formed on the peripheral edge of plate A, for limiting the movement of said drum, while the flange 11 is provided with an  
50 arm 12, projecting at right angles thereto, for engaging the gong-sounding mechanism, here-

inafter to be described. The drum 7 is hollow and is open on one face, and is open on its face which rests adjacent to the plate or support A, and is provided on its opposite side  
55 with a series of flat thin spokes 15, carrying the central inwardly-projecting hub 16. Secured to the hub is one end of the ribbon-spring 17, the opposite end of said spring being removably secured to the post 18, carried  
60 by plate A. Within peripheral groove 8 of drum 7 is secured one end of cable 19, which latter extends from said drum to various points, either up or down, throughout the building in which the gong is secured.  
65

In assembling the parts and before the drum 7 is permanently locked in position the cable 19 is passed several times around the drum, and one or more of said turns of the cable are then drawn off by a straight pull, which winds  
70 up the spring. By now forcing the drum to its seat, so that the stop 10 thereon will abut against the stop 2, the spring 17 is held under tension.

14 is a disk corresponding in size with the  
75 drum 7 and provided centrally with a screw-threaded hub 22 for its attachment to screw-section 6 of the stationary post or shaft 3. This disk 14 is locked in place against movement by a lock-nut 23 and carries a gong-  
80 tripping lever 13, which latter projects beyond the periphery thereof in a position to be engaged by the arm 12 on the drum 7. This tripping-lever 13 is pivoted to the disk 14 and is engaged by a spring 15<sup>a</sup>, which latter tends  
85 to normally hold the tooth 16 of the tripping-lever in contact with the toothed wheel 17<sup>a</sup> of the striking-train 18<sup>a</sup>. From this it will be seen that when the drum is released and permitted to turn on its bearing the arm 12  
90 thereon engages the tripping-lever and moves the latter out of contact with the striking-train, thus permitting the latter to actuate the hammer of the gong.

The gong 20 is provided with a central hole  
95 for the passage of the reduced threaded end of shaft or post 3, the said gong being supported on the shoulder 21, formed at the juncture of the two threaded sections of said post or shaft, the gong being held against  
100 movement by a nut 22<sup>a</sup>. This gong 20 is also provided, adjacent to its central opening, with



a second hole through which the key end of shaft 23<sup>a</sup> of the clock mechanism projects and by means of which the spring 24 is wound. The gong thus assembled is ready to be  
 5 placed in position, and after the base-plate or support A has been secured to the wall or other support the cable 19 is carried one or more times around the drum 7 and then pulled taut, partly unwinding the cable, so  
 10 as to separate the stop 10 on the drum from the stop 2 on the base-plate or support. This cable is then passed through the building, and its free end is secured so as to hold the cable under tension, fusible plugs 26 being  
 15 interposed in the cable at suitable intervals. It will now be seen that if any one of the plugs be destroyed by reason of excessive or abnormal temperature the tension of the cable is destroyed, thus releasing the drum  
 20 and permitting the same to turn until the stop 10 engages the stop 2 on the base-plate. Just before these stops last mentioned engage each other the arm 12 on the drum engages the gong-tripping lever, thus releas-  
 25 ing the gong-train and sounding an alarm, which can be heard throughout the building. If desired, this gong can be placed on the outside of a building, so as to attract atten-  
 30 tion from the outside.

It is evident that changes in the construction and relative arrangement of the several parts might be made without avoiding my invention, and hence I would have it understood that I do not restrict myself to the particular construction and arrangement of parts  
 35 shown and described; but,

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

40 1. In an alarm, the combination with a support, a gong, and a motor for ringing the gong, of a drum, a cord or wire secured at one end to the drum and adapted to be attached at its other end to a fixed support, means for putting  
 45 tension on said cord or wire and a trip controlled by the drum for releasing the motor when the tension on the cord or wire is released or removed.

2. In an alarm, the combination with a support, of a spring-actuated drum mounted on  
 50 said support, a gong and a motor therefor connected with the support, a trip for the motor controlled by the drum and a cord or wire having one or more fusible sections, one end  
 55 of said cord or wire being secured to said drum.

3. In an alarm, the combination with a base-plate, a post projecting from the center thereof and a disk spaced from the base-plate and  
 60 secured to said post, of a revoluble drum

mounted on said post between the base-plate and disk, a motor tending to rotate said drum, a gong supported by the post, a motor for ringing the gong, a trip-arm pivoted to the disk and adapted to normally engage a part  
 65 of the gong-motor to normally retain it at rest and an arm on the drum to move said trip-lever to release the gong-motor when said drum is released.

4. In an alarm, the combination with a  
 70 frame, a gong and a motor therefor mounted on the frame, of a revoluble drum mounted on the frame, means for causing said drum to rotate in one direction, a spring-actuated trip-lever mounted on the frame and adapted  
 75 to engage a part of said motor to hold the same normally at rest, an arm on the drum to actuate said trip-lever and cooperating stops on the drum and frame for limiting the movement of the drum. 80

5. In an alarm, the combination with a base-plate, a post projecting from the center thereof and a disk spaced from the base-plate and secured to said post, of a revoluble drum  
 85 mounted on said post between the base-plate and disk, a motor tending to rotate said drum, a cord or wire having one or more fusible sections, one end of said cord or wire being attached to said drum; a gong supported by the post, a motor for ringing the gong, a trip-arm  
 90 pivoted to the disk and adapted to normally engage a part of said motor for locking it and an arm on the drum to move said trip-lever to release the gong-motor when said drum is released. 95

6. In an alarm, the combination with a base-plate, a post projecting from the center thereof and a disk spaced from the base-plate and secured to said post and a stop secured on  
 100 said base-plate, of a revoluble drum mounted on said post between the base-plate and disk, a stop on said drum for engaging the stop on the base-plate, a spring for imparting tension to the drum, one end of said spring being secured to said drum and the opposite end to  
 105 the base-plate, a gong supported by the post, clock mechanism for ringing the gong, a spring-actuated trip-lever pivoted to the disk and adapted to normally engage a part of the clock mechanism to lock it and an arm on the  
 110 drum to move said trip-lever to release the gong-motor when said drum is released.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHAS. R. HARRIS.

Witnesses:

R. F. ALLEN,  
 E. G. WILHELM.