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TIME ALARM MECHANISM.

(Application filed Mar. 17, 1899.)

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

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TIME-ALARM MECHANISM.


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To all whom it may concern:

Be it known that I, CHARLES SCHMIDT, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Improvement in Signal Mechanism, of which the following is a specification.

My invention is an improvement in apparatus in the nature of an alarm mechanism intended for use in factories, school-houses, residences, or elsewhere where it is designed to give signals at certain times and the mechanism is to be set in advance to secure the sounding of the alarm at such time; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is an elevation of a clock mechanism provided with my improvements. Fig. 2 is a detail view illustrating the rim of the main and the pins operating therein. Fig. 3 is a detail edge view of a portion of the main wheel and the lever operated thereby. Figs. 4 and 5 are detail views illustrating the means for releasing the fly-wheel of the ordinary striking mechanism. Fig. 6 is a detail side view of the notched wheel of the ordinary striking mechanism, and Fig. 7 is a detail view showing the cam-surface which is provided on said wheel for the purpose of operating the special-alarm mechanism presently described.

I have shown the improvements applied to a common American eight-strike wooden clock having a fly-wheel A, by which to release the arm B from the notched wheel C, all of which features are common in the clock referred to and operate in the present instance in the usual manner.

In carrying out my invention I provide the main wheel D, which is geared at E with the clock-train and is arranged to reverse itself in twenty-four hours. This main wheel D is provided at every half-hour interval with a pin E, arranged to be protruded to operate a lever F, presently described. The pins E preferably operate through openings D', formed in the rim of the wheel D, and such pins are provided at their inner ends with arms E', which operate in radial notches D" also formed in the rim of the wheel D. These arms E' form handles for manipulating the pins E, and they are extended at their inner ends E' to engage elevations or flanges D on the main wheel, whereby the pins E may be held in any desired adjustment. By this construction it is apparent any pin E may be adjusted outward to properly operate the alarm mechanism when such pin comes to the position in which it will operate the lever F. This lever F is pivoted at F', is arranged at one end for engagement by the pin E of the wheel D, and has its other end connected by a wire F" with a second lever G, which is arranged to release the fly-wheel A of the ordinary striking mechanism. This lever G is pivoted between its ends, is connected at one end to the wire F", and has at its other end a lateral pin g, which is movable into and out of the path of the blades of the fly-wheel A, as shown in Figs. 4 and 5.

In the operation of the described construction the pin E of the main wheel will engage the lever F and tilt the same, causing it to operate the lever G to move the pin g out of the path of the fly-wheel, so the latter will be released, and the arm B will be lifted out of the notch C of the wheel C, permitting such wheel to move to sound the ordinary striking mechanism in the usual manner. In order that the wheel C may effect the operation of the special alarm, I provide such wheel C with a series of notches C', having at their juncture square shoulders H' and rising from the inner end of one shoulder to the outer end of the succeeding shoulder, as will be understood from Figs. 1 and 7. An arm or lever I is pivoted at i and is arranged at one end i' to ride upon the cams H', whereby to rock its other end i" to cause the same to operate a circuit-closer at J, whereby to open the electric circuit when the end i" of the lever I rides upon the cam H. The electric circuit includes a suitable alarm mechanism, which may be a bell, as shown, arranged at any point where it is desired to sound the alarm. From the foregoing it will be understood that when the notched wheel C is released to operate in the usual manner the cam-surfaces H will operate the lever I to sound the special alarm at K.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—
1. In an apparatus substantially as described, the main wheel having peripheral openings and radial notches corresponding therewith, the pins movable in and out in said peripheral openings and having arms operating in the radial notches and protruding at their outer end to serve as handles and having stop extensions at their inner ends and projections on the wheel for engagement by said stop extensions, substantially as set forth.

2. An apparatus substantially as described comprising the main wheel having peripheral openings and radial notches corresponding to said openings, the pins movable radially in said openings and having arms operating in the radial notches and serving as handles by which to protrude and withdraw the pins, means for holding the pins in any desired adjustment, the clock-train geared with the main wheel, a lever arranged for operation by the projected pin of the main wheel, a second lever connected with the said first lever, the usual striking mechanism having its fly-wheel arranged to be held and released by the said second lever, the special alarm, and means whereby said special alarm may be operated by the ordinary striking mechanism, substantially as set forth.

3. In an apparatus substantially as described, the combination with the alarm-wheel having notches and provided with the surface composed of a series of cams, the special-alarm mechanism, and an arm or lever arranged at one end to operate the special-alarm mechanism and at its other end to ride upon the cams of the alarm-wheel, substantially as set forth.

4. In an apparatus substantially as described, the combination of the usual mechanism having a fly-wheel and the series of cams on its striking-wheel, the special-alarm operating lever I arranged to be operated by said cams, a stop movable into and out of the path of the fly-wheel, a main wheel having movable pins or parts arranged to be projected, and intermediate devices between said main wheel and the stop for the fly-wheel, whereby the parts on the main wheel when projected may be caused to adjust the stop out of the path of the fly-wheel substantially as set forth.

5. An apparatus substantially as described comprising the clock-train, the main wheel driven thereby and having parts arranged to be projected, a lever arranged for operation by the projected parts of the main wheel, a second lever connected with the first lever, the fly-wheel arranged to be held and released by the said second lever, the special-alarm mechanism, and means whereby the special alarm may be operated by the ordinary striking mechanism substantially as set forth.

6. In an apparatus substantially as described, the combination of the clock mechanism having a fly-wheel and striking-wheel, the special-alarm mechanism arranged for operation by the striking-wheel, the main wheel having parts arranged to be projected, stop devices movable into and out of the path of the fly-wheel, and devices connected with said stop devices and arranged for operation by the projected parts of the main wheel substantially as set forth.

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Witnesses:
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