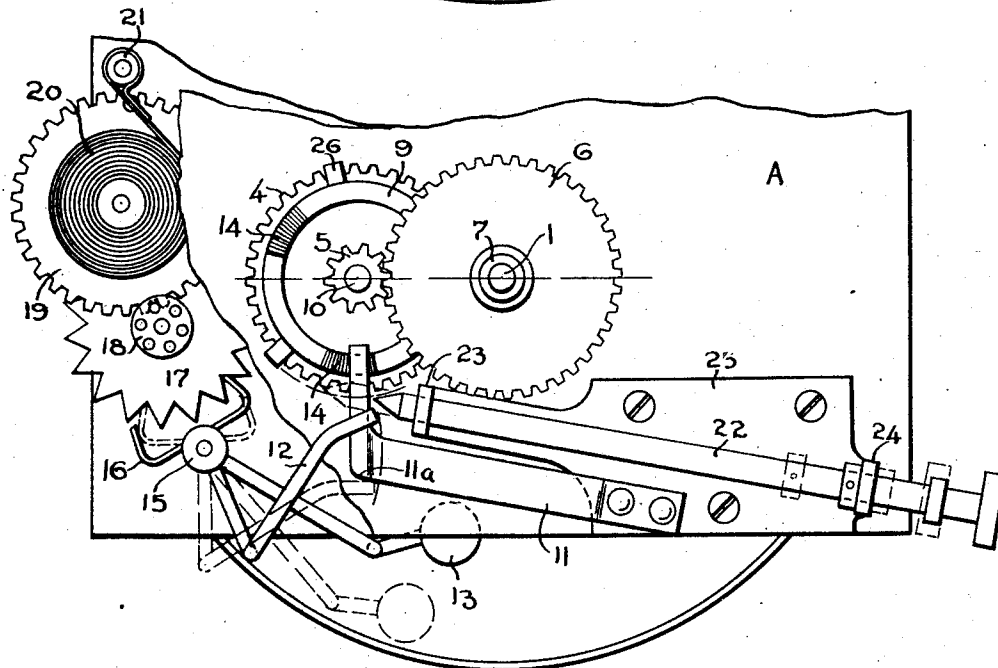
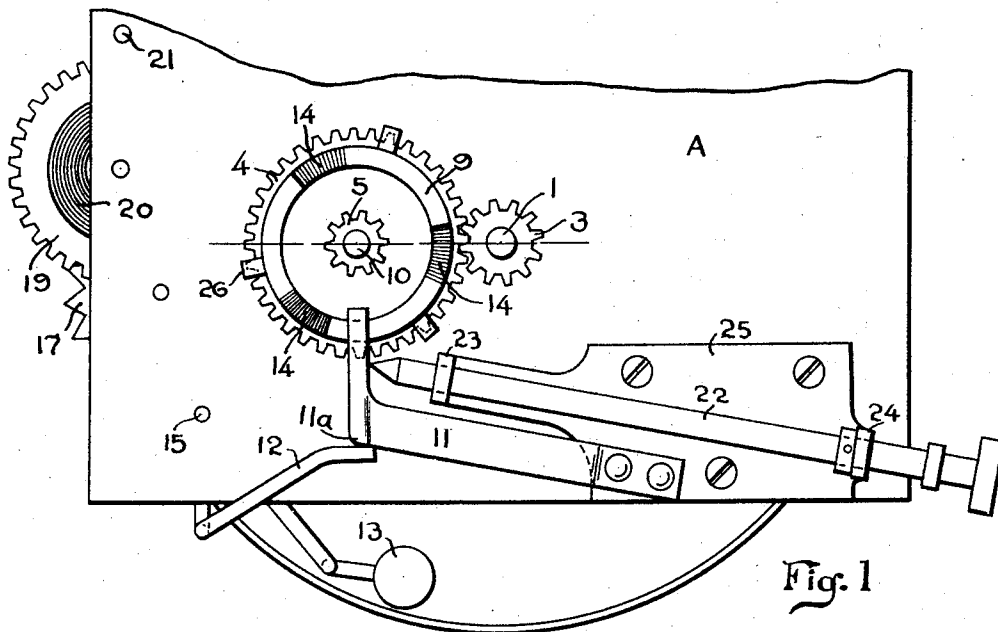


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ALARM DEVICE.
APPLICATION FILED NOV. 4, 1912.

1,060,379.

Patented Apr. 29, 1913.

2 SHEETS—SHEET 1.



WITNESSES
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Fig. 2

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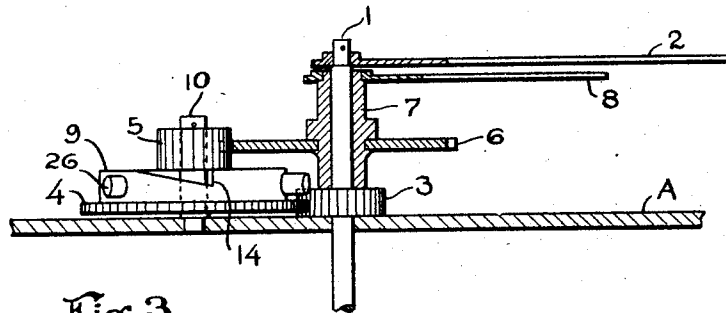


Fig. 3

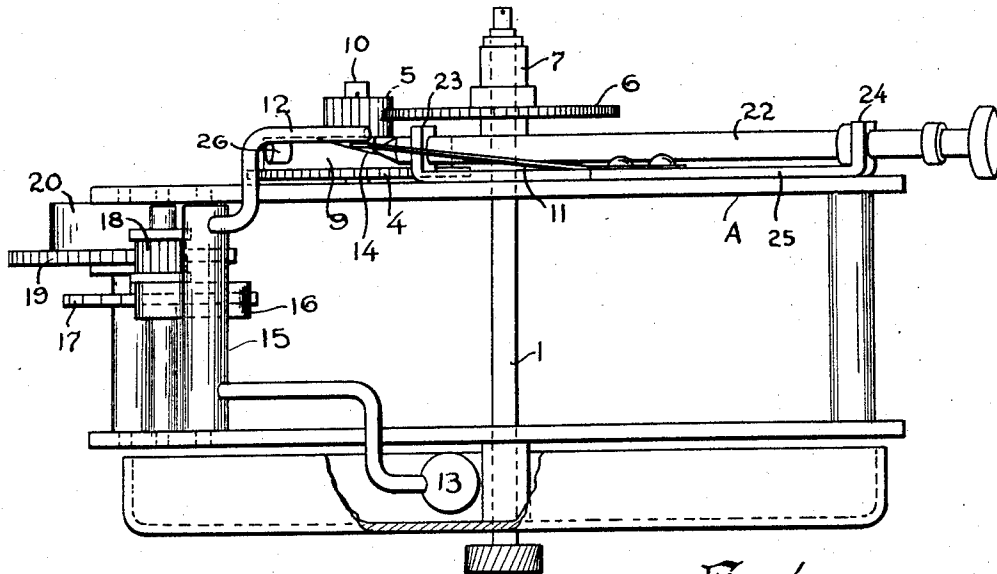


Fig. 4

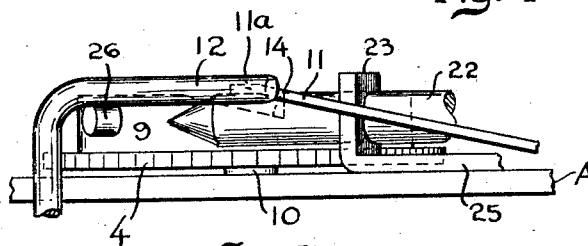


Fig. 5

WITNESSES

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UNITED STATES PATENT OFFICE.

VERN B. TEACHOUT, OF DETROIT, MICHIGAN.

ALARM DEVICE.

Specification of Letters Patent.

Patented Apr. 29, 1913.

1,060,379.

Application filed November 4, 1912. Serial No. 729,265.

To all whom it may concern:

Be it known that I, VERN B. TEACHOUT, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Alarm Devices, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to special alarm devices for use in connection with clocks.

It has for its object a form of alarm that is arranged to sound hourly or at other stated periods.

The peculiar and novel mechanism by which this end is accomplished is more fully described in detail in the specification hereinafter following.

In the drawings:—Figure 1, is an elevation of the special alarm mechanism. Fig. 2, is an elevation of the same in operation. Fig. 3, is a side elevation of the mechanism showing the hour-hand sleeve and gear in section. Fig. 4, is a side elevation of a clock frame with the special alarm mechanism attached thereto, part of the bell-shell being broken away. Fig. 5, is an enlarged detail of a portion of the special alarm mechanism of Fig. 4, showing the alarm stop put into operative position.

A, is a plate which conceals the time mechanism of the clock. This time mechanism drives the minute hand of the clock by revolving the minute-hand shaft 1 at a prescribed rate of speed. Upon the minute-hand shaft 1 is mounted the long or minute-hand 2 (Fig. 3). A pinion 3 is fastened to the minute-hand shaft 1 and this drives a reduction gear 4 to which is fast a reduction pinion 5 which meshes with the large hour-hand gear-wheel 6. This hour-hand gear-wheel 6 is fixed to the hour-hand sleeve 7 and to this sleeve is fast the small or the hour-hand 8.

The above is the usual form of construction.

My invention consists in attaching to the reduction-shaft 10 a cam wheel 9, which operates the special alarm mechanism while allowing the withdrawal of the stop member 11 from an arm 12, which is connected with the vibratory hammer 13. The stop member 11 is a spring bar which is yield-

ingly held on the side of the cam wheel 9 near its periphery. The periphery of the cam wheel is notched as at 14, there being three notches equally spaced. The distance between these notches represents an hour's travel of the reduction gear-wheel 4. Where it is desired to have the alarm sounded at other periods than the hour periods, these notches would be spaced along the reduction gear wheel at distances equal to the travel of the reduction gear during such period.

When the stop member 11 is riding on the surface of the cam wheel 9, as shown in Fig. 1, the edge 11^a is protruded into the path of the arm 12 so that that member is prevented from movement. However, when the stop member 11 drops into the notch, as shown in Fig. 2 and in Fig. 4, the spring action of the spring bar or stop 11 withdraws it from the path of the arm 12, it dropping below such arm (see Fig. 4). This allows the arm 12, which is fast to the hammer-shaft 15, to vibrate and hence allows the hammer 13 to vibrate. The hammer-shaft 15 carries a double hook bar 16, which has a hook at each end. The hooks alternately engage in the notches of the toothed wheel 17, so that when the toothed wheel 17 revolves, the double hook bar is rocked in a familiar manner and the alarm sounded. The toothed wheel 17 is fast to a shaft which carries the alarm pinion 18 which meshes with the alarm gear-wheel 19 that is fast to a shaft to which the coil spring 20 is attached at one end and at the other end attached to a stud 21.

The mechanism last described is a conventional form of alarm mechanism and is in itself no part of my invention except in combination with the other mechanism.

The alarm would sound until the spring 20 unwound, were it not that I have provided a means for stopping it when desired. This comprises a sliding stop pin 22, which is held by brackets 23 and 24 that are turned up from the ends of the plate 25. This plate 25 is screwed to the plate A. In the position shown in Figs. 1, 2, and 4, the stop pin is not in operative position, but by merely sliding the pin inward, the conical end lifts the stop member 11, as shown in Fig. 5 and hence again brings it into the path of the arm 12 and stops the alarm mechanism.

In order to provide against accidental failure to withdraw the stop pin after the

alarm has been stopped, I provide means for automatically displacing this pin. This comprises studs 26 located on the periphery of the cam wheel 9 about midway between the notches, hence before the next succeeding notch of the cam wheel arrives at a location under the stop member 11, the stud 26 strikes the stop pin 22 and moves it out of the way, so that the alarm is free to sound when the stop again drops in the notch.

What I claim is:—

1. The combination with time mechanism of alarm mechanism, a cam wheel driven by the time mechanism, a stop member riding on the surface of said cam wheel so that ordinarily it engages with the alarm mechanism, but at set periods withdraws from engagement therewith, a stop pin for throwing the stop member into engagement again, with the alarm mechanism when it is temporarily withdrawn and a pin on the cam wheel for throwing out of engagement the stop pin before the next period for sounding the alarm arrives, substantially as described.

2. The combination with time mechanism of a cam wheel driven thereby, having notches therein, a stop member in the form of a spring bar riding on the surface of said cam wheel, alarm mechanism ordinarily held out of operation by reason of the

spring bar riding on the high portion of the cam wheel, so that it is held in engagement with the alarm mechanism, the said spring bar, however, adapted to drop in the notches of the cam wheel and out of engagement with the alarm mechanism at stated periods, substantially as described.

3. The combination with time mechanism of a cam wheel provided with notches in its side and driven by the time mechanism, a stop member in the form of a spring bar riding on the side of the cam wheel, alarm mechanism adapted to be prevented from operating by the engagement of the spring bar with it when the spring bar is riding on the high portions of the cam wheel, but allowed to operate by the disengagement of the spring bar when the same drops into the notches of the cam wheel at set periods, a sliding stop pin for returning the spring bar to engagement with the alarm mechanism when it is dropped into a notch and a pin on the periphery of the cam wheel for automatically disengaging the stop pin before the next period for sounding the alarm arrives, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

VERN B. TEACHOUT.

Witnesses:

STUART C. BARNES,
VIRGINIA C. SPRATT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."