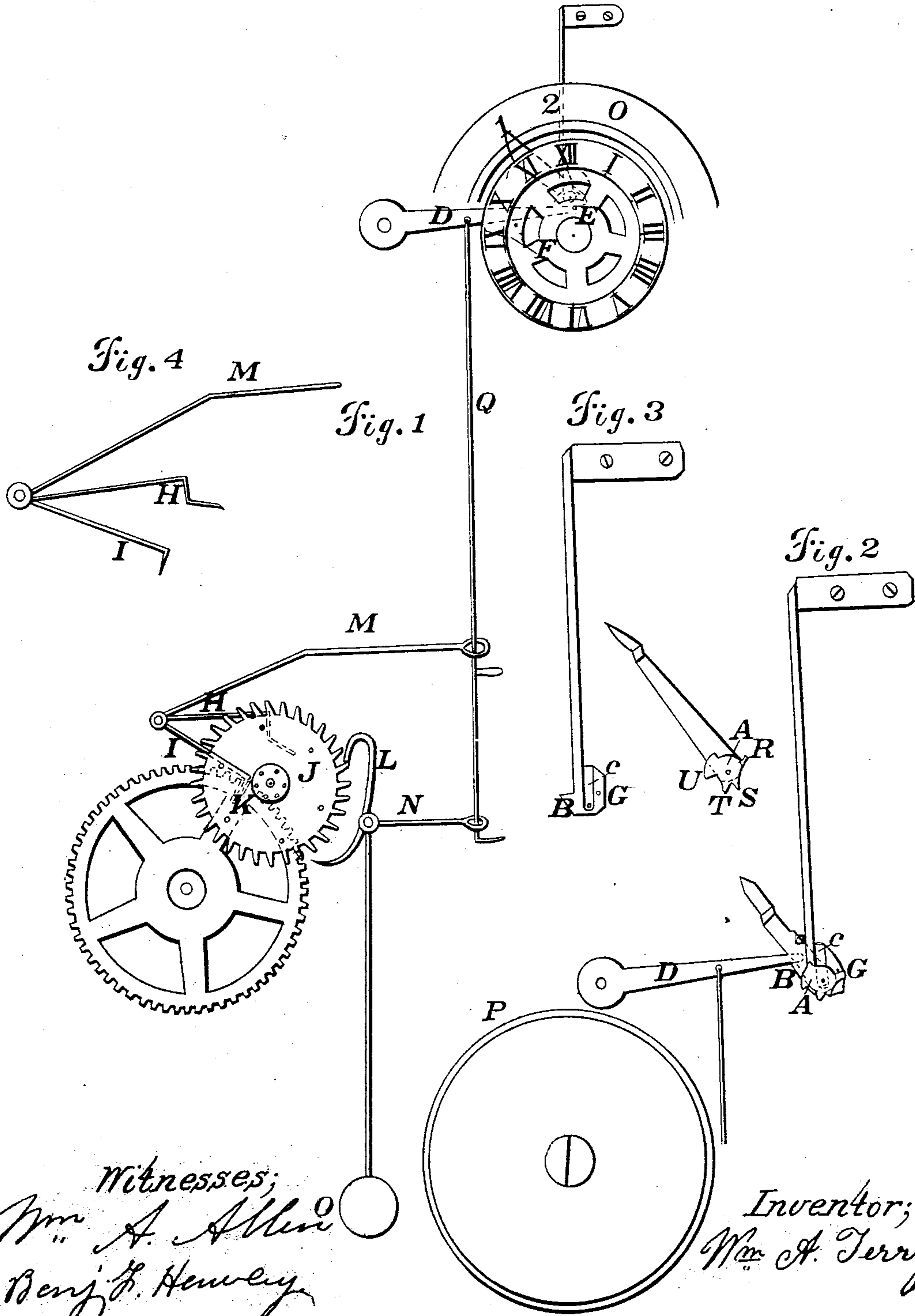


W. A. TERRY.

Alarm Clock.

No. 70,376.

Patented Oct. 29, 1867.



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WILLIAM A. TERRY, OF BRISTOL, CONNECTICUT.

Letters Patent No. 70,376, dated October 29, 1867.

IMPROVEMENT IN ALARM-CLOCKS.

The Schedule referred to in these Letters Patent and making part of the same.

I, WILLIAM A. TERRY, of Bristol, Hartford county, Connecticut, have invented a new Repeating Alarm for Clocks, of which the following is a full description, referring by letters to the annexed drawings.

The object of my invention is to make an alarm for an eight-day or other clock, which shall repeat the alarm once in twenty-four hours without requiring to be wound up oftener than the clock itself, which can be set to go off at any required hour, or be prevented from going at all if desired.

My invention consists of a common alarm, either detached from or attached to the clock itself, with main wheel, crown-wheel, verge, hammer, and bell, with the addition of lock-work, pins in the crown-wheel, and a slot or slots in the main wheel; also a common alarm-dial and latch or fall, with the addition of a spring-catch, an index, and the substitution of pins in the dial for the usual cam.

In the drawings the same parts are indicated by the same letters in all the figures; but, to avoid confusion, the letters are not all repeated in the different figures.

Figure 1 shows the essential parts of my invention in their connection with the clock.

Figure 2 shows the spring-catch enlarged, with the index and latch.

Figure 3 shows the catch and index separated.

Figure 4 shows the lock-work of the alarm separately.

The operation of my invention is as follows: The dial should be turned so that the figure representing the hour at which it is desired the alarm shall go off shall be under the short hand of the clock. Then if it is to go within the first twelve hours, set the index at 1; if in the second twelve, set it at 2. If from sickness or other cause it should be desired to prevent the alarm from going, turn the index to the 0.

Caution.

The index should not be turned after the alarm has gone off until it has been replaced at 2 by the clock, which will be within one or two hours, after which it may be freely moved, as it is then detached from the clock. The alarm may be set at any time, excepting at and soon after the hour indicated by the dial at the time.

If the index points at 2, at the first revolution of the short hand of the clock, as it approaches the hour indicated by the dial, the pin E (fig. 1) in the dial comes in contact with the tooth S (fig. 3) of the index A, which is thereby moved from 2 to 1 (fig. 1.) The index is held in place, but allowed to move freely, by the pressure of the friction-spring C (fig. 2.)

At the second revolution, as the hour approaches at which the alarm is set, the pin E (fig. 1) comes in contact with the tooth T (fig. 3) of the index, and as the projection R (fig. 3) of the index is in contact with the stop-pin G (fig. 2) of the catch, the index cannot be moved farther, consequently the catch B (fig. 2) is itself moved away from the latch D, (fig. 2,) which falls, setting free the alarm. As the alarm moves off, the pins in the crown-wheel J (fig. 1) come in contact with the lift end of the combined lift and stop hook H, (fig. 1,) thus lifting the count-hook I (fig. 1) over the teeth of the main wheel, and allowing it to fall in the spaces between the teeth, until it comes to the slot K, (fig. 1,) into which it falls, bringing the stop-hook of H (fig. 1) in contact with a pin in the crown-wheel J, (fig. 1,) thus stopping the alarm. O and P (fig. 1) represent the hammer and bell.

As the clock moves on, the pin F (fig. 1) in the dial raises the latch D, (fig. 1,) the end of which comes in contact with projection U (fig. 3) of the index, moving it from 1 to 2, (fig. 1,) at the same time crowding back the spring-catch B (fig. 2) until the latch is raised above the catch, which then springs back to its place, holding D (fig. 2) in position entirely detached from the clock. As D (fig. 1) is raised, the stop-hook H (fig. 1) is lifted away from the pin which holds the alarm by the wires Q and M (fig. 1;) at the same time the wire N (fig. 1) of the verge-shaft is raised, holding the upper pallet of the verge L (fig. 1) against a tooth of the crown-wheel, preventing the alarm from starting until D (fig. 1) has again fallen. When the index is turned so as to point at 0, the teeth T and S (fig. 3) are moved away from the circle described by the pin E, (fig. 1;) consequently the alarm will not go off as long as the index remains in this position.

The advantages I claim by this arrangement, are—

First. An alarm for an eight-day, thirty-day, year, or other clock, by the use of a suitable spring and train, which shall repeat the alarm every twenty-four hours, at any desired hour, without requiring any

attention until the clock requires winding. The common alarm must be wound within twelve hours of every discharge.

Second. The convenience of silencing the alarm in case of sickness, accident, or other cause. The common alarm cannot easily be silenced after it is wound up.

Third. Detaching the alarm from the clock by means of the spring-catch, thus preventing the constant friction and drag on the clock caused by the pressure of the latch or substitute on the cam in the common alarm.

Fourth. The convenience of setting the alarm at any time of the day or night, instead of being confined to the twelve hours just previous to the going off of the alarm, as is common.

Fifth. Economy in the substitution of pins in the dial in the place of the usual cam.

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

1. The spring-catch D, (fig. 2,) made as in the drawings, or swinging on a pin or centre, with separate springs or any other manner, to operate substantially as described.

2. The alarm-index A, (fig. 2,) by means of which the alarm can be set to go off at any hour of either twelve of the twenty-four, or be prevented from going at all when desired, or any substitute operating in a similar manner.

3. The pins E and F (fig. 1) in the alarm-dial.

4. I do not claim the use of the slot K, (fig. 1,) the pins in the wheel J, (fig. 1,) or the lock-work I and H (fig. 4) taken separately, or for other purposes, as I am aware they have been previously used; but I claim the arrangement and combination of them, substantially in the manner and for the purpose described.

WM. A. TERRY.

Witnesses:

WM. A. ALLEN,
BENJ. F. HAWLEY.