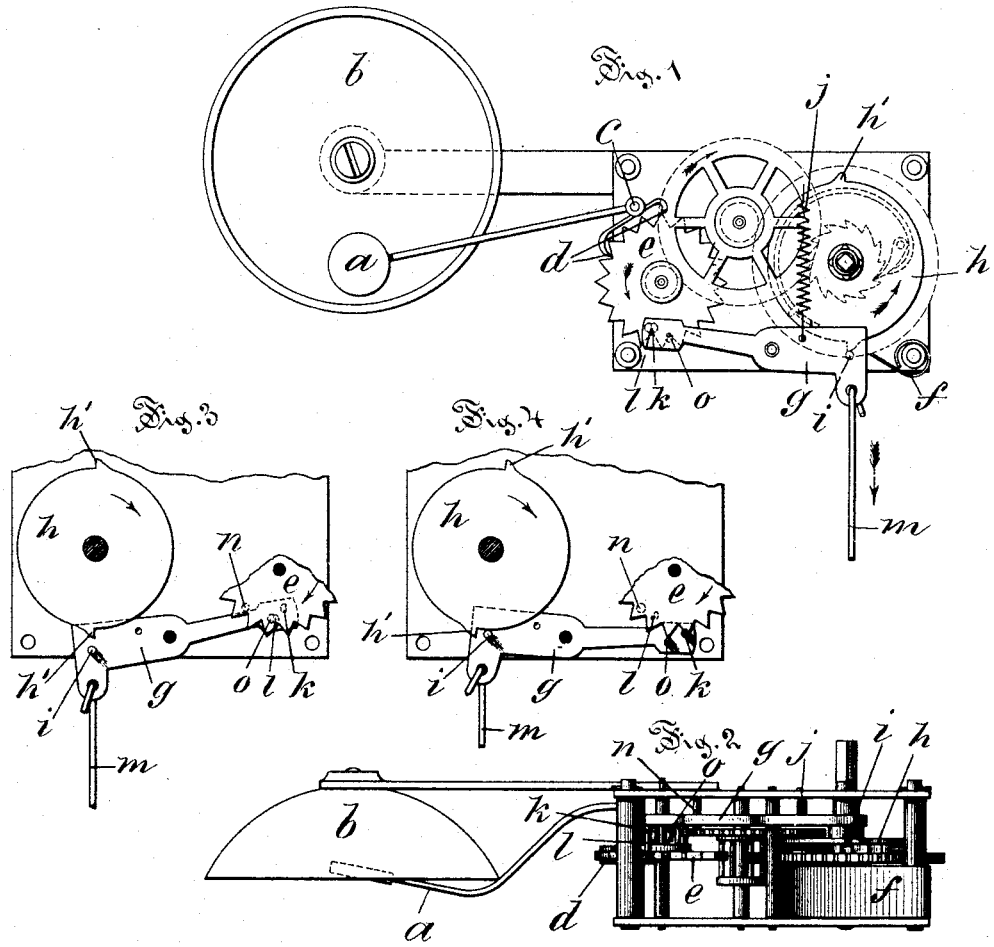
(No Model.)

L. HUBBELL.

CLOCK ALARM.

No. 342,205. Patented May 18, 1886.



Witnesses

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UNITED STATES PATENT OFFICE.

LAPORTE HUBBELL, OF FORESTVILLE, CONNECTICUT.

CLOCK-ALARM.

SPECIFICATION forming part of Letters Patent No. 342,205, dated May 18, 1886.

Application filed February 18, 1886. Serial No. 192,325. (No model.)

To all whom it may concern:

Be it known that I, LAPORTE HUBBELL, of Forestville, in the county of Hartford and State of Connecticut, have invented a certain new and useful Improvement Pertaining to Alarm Attachments for Clocks, of which the following is a description, reference being had to the accompanying drawings, where—

Figure 1 is a front view of an alarm attachment embodying my improvement, with the front plate removed. Fig. 2 is an edge view of the same (entire) alarm attachment. Fig. 3 is a view from the inner side of the cam-wheel *h*, tripping-lever *g*, and a portion of the escapement-wheel *e*, hereinafter referred to, the parts being in the position they occupy at the beginning of the tripping movement. Fig. 4 is a detail view, the same as Fig. 3, except that the parts are in the position they occupy while the alarm is sounding.

As the title hereinbefore given to this improvement sufficiently indicates, it is in the nature of an alarm attachment for clocks. It finds especial utility as an alarm attachment for eight-day clocks, or any other clock running a plural number of days.

The drawings show the attachment only.

The letter *a* denotes the striking arm or pendulum, and *b* denotes the bell. This striking arm or pendulum is practically one, with its pivot-shaft *c* and the escapement-pallets *d* upon said shaft.

The letter *e* denotes the rotating escapement-wheel spurred at its periphery and in rotation co-operating with the escapement-pallets *d d*, to give the hammer *a* its requisite vibration for sounding an alarm. This escapement-wheel is driven by the spring *f*, operating through a suitable train of clock-gearing. The arrow upon the escapement-wheel shows the direction in which the spring drives this wheel in sounding an alarm.

The letter *g* denotes a pivoted tripping-lever which co-operates at one end with the escapement-wheel *e* and at the other end with the cam-wheel *h*, which, when the escapement is released, is driven by the spring *f* in the direction indicated by the overlying arrow, but remains rotarily stationary while the spring is being wound up. This cam-wheel *h* is a disk bearing on its periphery one or more of the cams *h'*. The tripping-lever *g* bears upon one side, near the end which is next the cam-wheel, the cam-pin *i*. The light spring *j* holds the cam-pin *i* to contact with the periphery of the cam-wheel. When the escapement is released, the cam-pin *i* is in contact with the periphery of the then rotating cam-wheel *h*. When the cam *h'* reaches this cam-pin, it pushes this cam-pin outward until the cam-pin rests upon the end of the cam. The lever *g* is of course correspondingly moved, and when the cam-pin *i* is upon the extremity of a cam, *h'*, the trip-pin *k*, situated at or near the opposite end of this lever, is in the path of the escapement-pin *l*, which is borne upon the side of the escapement-wheel, thereby preventing the escapement-wheel from rotating and stopping the sounding of the alarm.

The letter *m* denotes a pull-wire operated at one end by the ordinary alarm-setting mechanism of a clock. At the set and determined time this ordinary alarm-setting mechanism operates to give a pull upon this pull-wire in the direction indicated by the arrow, and the result is that the trip-pin *k* is thereby moved out of the path of the escapement-pin *l*, whereby the escapement-wheel is released, starting the alarm, and the alarm continues in the rotation of the cam-wheel *h*, and cam *h'* is brought under the cam-pin *i*, throwing the trip-pin *k* again into the path of the escapement-pin *l*, thereby stopping the rotation of the escapement-wheel, and, of course, the sounding of the alarm.

The letter *o* denotes an auxiliary trip-pin—that is, a pin auxiliary to the regular trip-pin *k*—against which auxiliary trip-pin the escapement-pin *l* strikes when it is first released from contact with the trip-pin *k*, thereby creating a short interval of rest in the escapement-wheel, desirable for the proper operation of the parts.

The letter *n* denotes a stop for one end of the trip-lever.

I claim as my improvement—

1. In combination, the escapement-wheel bearing the pin *l*, the tripping-lever bearing the pins *i k*, and the cam-wheel provided with cam or cams *h'*, all substantially as described, and for the purpose set forth.

2. In combination, the escapement-wheel *e*, provided with pins *l*, the tripping-lever *g*, provided with pins *i k o*, and the rotating cam-wheel provided with cam or cams *h'*, all substantially as described, and for the purpose set forth.

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