

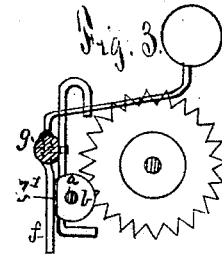
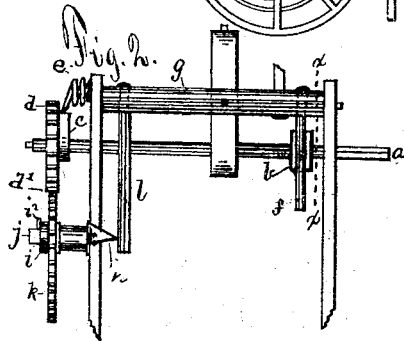
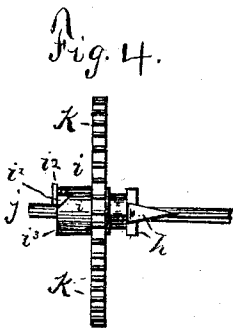
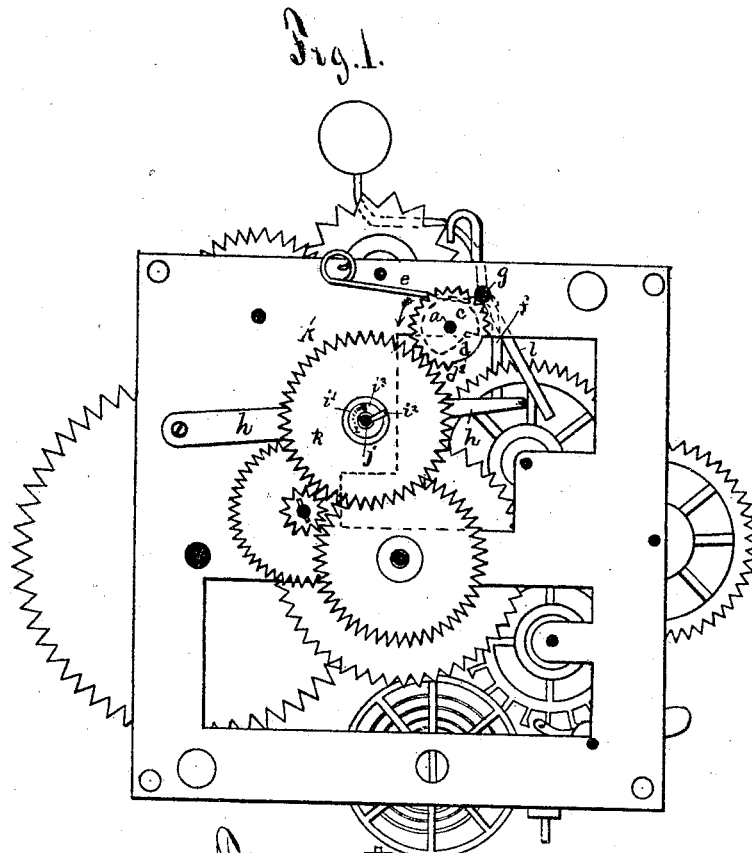
(No Model.)

T. L. BISSELL.

ALARM CLOCK.

No. 321,415.

Patented July 7, 1885.



Witnesses:  
J. Charleston Ingraham  
Sid H. Nealey

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Titus Lucretius Bissell

# UNITED STATES PATENT OFFICE.

TITUS LUCRETIVS BISSELL, OF CHARLESTON, SOUTH CAROLINA.

## ALARM-CLOCK.

SPECIFICATION forming part of Letters Patent No. 321,415, dated July 7, 1885.

Application filed December 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, TITUS LUCRETIVS BISSELL, a citizen of the United States, residing at Charleston, in the county of Charleston and State of South Carolina, have invented certain new and useful Improvements in Time Alarm-Clocks; and I do 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 use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention has relation to improvements in time alarm-clocks; and it consists of an attachment for holding the alarm, and thereby enabling me to set the alarm at and for any time.

The ordinary alarm-clock, after having rung off at any certain hour, cannot be reset immediately for the same hour, but will have to run for about two hours to allow the lever *h*, which holds the alarm, to work into place. Thus, if at five o'clock p. m. I wish to set my alarm for 5 a. m., I will have to wait until 8 p. m. before I can set it. Again, if at 5 p. m. I wish to set the alarm at 6, 7, or 8 a. m., in the ordinary alarm-clock it would ring off at 6, 7, or 8 p. m.; but my attachment, being thrown into gear with the alarm-gearing, holds the alarm until the clock passes these hours and works the alarm-lever into place. My improved time alarm-clock is intended to be used as a part of an "automatic time stock-feeder;" hence the importance of this attachment will be seen. If my stock have been fed at 6 p. m., and I want immediately to refill the feed-boxes and set the feeder to feed again at 6 a. m., I cannot afford to wait for two hours (until 8 p. m.) to reset it, as I would have to do with the present alarm-clock, but by turning on my attachment I can immediately reset it for 6 a. m. If at 5 p. m. I wish to set my feeder to feed at 6 a. m., I can refill the feed-boxes and turn on my attachment, and it will hold the alarm over the 6 p. m. until 6 a. m.

My attachment when at rest does not interfere with the regular working of the clock, but is thrown into gear at will.

In the accompanying drawings, Figure 1 is

a face view of the gearing of an alarm-clock with my improvement attached. Fig. 2 is an edge view of part of same, showing my improvement. Fig. 3 is a sectional view of Fig. 2 cut through at the line *xx*. Fig. 4 is an edge view of operating wheel *k*, eccentric sleeve *i*, and pin *i'*.

My invention is described as follows: My attachment consists of the additional shaft *a*, cam-wheel *b*, eccentric *c*, pinion-wheel *d*, spring *e*, and rod *f*. In the alarm-clock to which my improvement is attached, the lever *h*, which holds the alarm from going off until the hour set, is pressed down in place by an eccentric sleeve, *i*, on shaft *j*. This sleeve is rigidly secured to an operating-wheel, *k*. This sleeve *i* has on its outer end an incline, *i'*. In the outer end of the shaft *j* is a pin, *i''*. When we set the alarm we turn this shaft *j* until the pin *i''* rides up the incline *i'* and mounts the plane *i<sup>3</sup>* of the sleeve. This presses the sleeve back, and consequently the lever *h* also, until its free end comes in front of the rod *l* and holds the alarm from going off. When the gearing of the clock carries the operating-wheel *k* round until the pin *i''* drops off of plane *i<sup>3</sup>* into the depression at the foot of the incline *i'*, the lever *h* flies back, relieves rod *l*, and the alarm rings off. In order to set the alarm again, we must again turn the pin *i''* round until it again mounts the plane *i<sup>3</sup>*. As this incline is one-sixth of the distance round the sleeve *i*, the sleeve must be turned two hours in time, or one-sixth of the circumference, before it (the pin *i''*) will mount upon the plane *i<sup>3</sup>*. Consequently, if the alarm has gone off at six o'clock, we are not able to reset it earlier than eight o'clock. Just here my attachment comes into play. To the shaft *g*, which operates the hammer, I attach a rod, *f*. This rod impinges against the periphery of the cam-wheel *b*, and holds the alarm from going off until the flat side *b'* of said cam-wheel is turned round opposite said rod *f*, in which case said rod is allowed to vibrate and the alarm to operate. This cam-wheel is rigidly attached to shaft *a*. To the outer end of the shaft *a* is also rigidly attached a pinion, *d*, having about five of its teeth cut away. The teeth of this pinion *d* meet with the teeth of operating-wheel *k*. On the end of this shaft *a* is also rigidly attached

an eccentric, *c*. When the pin *i*<sup>2</sup> is in the depression at the base of the incline *i*<sup>1</sup>, I give the shaft *a* a slight turn in the direction of the arrow. Then the spring *e*, operating on the eccentric *c*, throws the first tooth, *d*<sup>1</sup>, in mesh with the operating-wheel *k*, which brings the circular part of the cam-wheel *b* (see Fig. 3) in contact with the rod *f*, and prevents the alarm from ringing off until the pinion *d* is turned round to the space where the teeth are cut away. This brings the flat space of cam-wheel round opposite to rod *f*, and allowing it to vibrate, and the spring *e*, pressing against the round part of the eccentric *c*, keeps the pinion *d* in position and out of gear with the movement of the clock until thrown beyond the center by the hand, at which time the spring *e* acts on the point of the eccentric *c*

and throws it into gear with the operating-wheel *k*.

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

In combination with an alarm-clock as above described, the combination of pinion *d*, meshing with wheel *k* and rigidly secured on the outer end of shaft *a*, eccentric *c*, spring *e*, cam-wheel *b*, also rigidly secured on shaft *a*, and rod *f*, extending downward from shaft *g*, all substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

TITUS LUCRETIVS BISSELL.

Witnesses:

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JNO. C. INGRAM.