(No Model.)

W. W. HARRIS.

ALARM CLOCK.

No. 538,732. Patented May 7, 1895.

Fig. 1.

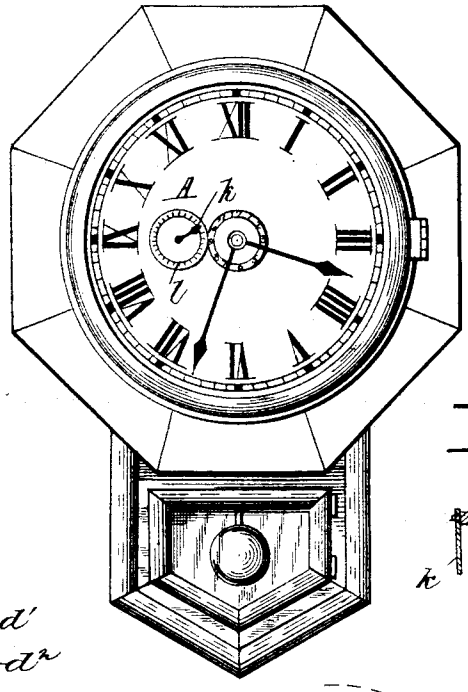


Fig. 5.

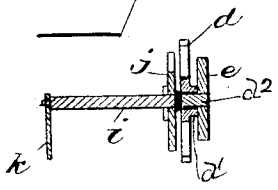


Fig. 4.

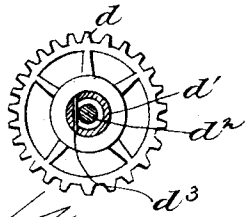


Fig. 3.

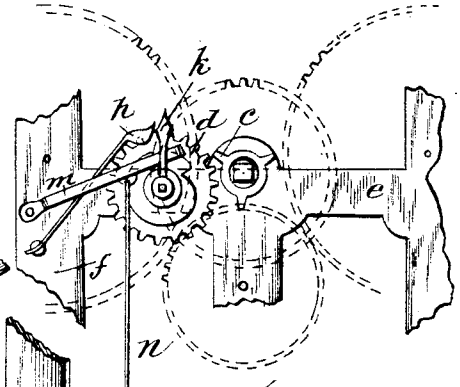
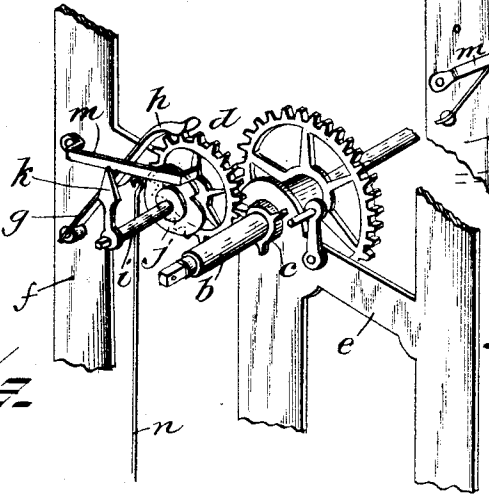


Fig. 2.



WITNESSES

F. L. Ourand

Annie A. Lansdale.

INVENTOR

W. W. Harris

John S. Duff Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM W. HARRIS, OF EL DORADO, ARKANSAS.

ALARM-CLOCK.

SPECIFICATION forming part of Letters Patent No. 538,732, dated May 7, 1895.

Application filed September 14, 1894. Serial No. 523,014. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. HARRIS, a citizen of the United States, residing at El Dorado, in the county of Union and State of Arkansas, have invented certain new and useful improvements in alarm attachments to clocks, useful to notify when any clock is run down and when it needs to be wound up; and I do hereby 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.

My invention is an attachment to time clocks which indicates when the clock is about run down and needs to be wound up either by means of an indicator on a dial, an alarm attachment or both, hereinafter described in this specification and claims hereto attached.

In the accompanying drawings, Figure 1 is a face view of an alarm-clock bearing my attachment or invention, which, for the purposes of description, I will indicate by letter A. Figs. 2, 3, and 4 are detail views. Fig. 5 is a sectional view showing how the parts *d*, *d'*, d^2, and *i* are connected.

My said invention consists in attaching to the sleeve *b*, (Fig. 2) a cog wheel *c*. This cog wheel turns with said sleeve and has one, two or more cogs as may be required; the number of cogs being more or less according to the number of days the clock is designed to run and the size of the wheel *d*, and number of cogs on the same. The wheel *d*, is rigidly secured to hollow shaft *d'*, (Fig. 4.) Said shaft is sleeved on a post d^2, so that it may revolve and is held on said post by a pin d^3. Said post is secured to the cross bar *e*, (Fig. 2) of the frame work of the clock. The pin d^3 extends only through hollow shaft *d'*. Said wheel *d*, is located so that its cogs will mesh with the cogs of the wheel *c*.

Secured to an upright bar *f*, (Fig. 2,) of the frame work of the clock is a spring bar *g*, having a releasing pawl *h*, which fits over the cogs of the wheel *d*, and allows it to move but one notch at a time.

The sleeve *d'*, has soldered on its outer end an extension shaft *i*, on which is rigidly secured an alarm wheel *j*, and on the end of said extension is secured an indicator *k*, which points to the figures on dial *l*, (Fig. 1.)

To the upright beam *f*, is pivoted an alarm catch *m*, having a pendant *n*, the purposes of which need not be explained.

The cog wheel *d*, has as many cogs on its periphery as may be necessary, the number of cogs being more or less according to the number of days the clock is designed to run and the number of cogs on the wheel *c*.

Whether the clock be designed to run one day, eight days or thirty-two days the indicator *k*, makes but one revolution on the dial *l*, the number of cogs on the wheel *c*, and *e*, being arranged for this special purpose and to meet this special end. Thus, if the clock is to run only thirty six hours the cogs on the respective wheels are so numbered that when the short hand shall have made three revolutions, the indicator will have made just one and will be just ready to mark the last figure on the dial plate *l*, in which case the wheel *c*, shall have but three cogs and the wheel *d*, but nine. Thus three revolutions of the wheel *c*, will give the wheel *d*, but one revolution, and if the device has an alarm attached it will throw the alarm just at the moment or a little before the indicator reaches the last figure on the dial plate. If the clock be an eight day clock the indicator will make but one revolution while the short hand of the clock makes sixteen and the cogs on the wheels *c*, and *e*, will be arranged accordingly and if the clock be a thirty two day clock the indicator will make but one revolution while the short hand of the clock will make sixty four and the cogs of the wheel on the clock will be arranged accordingly. The releasing pawl *h*, bears upon the cogs of the wheel *d*, and when said wheel is moved but one notch by wheel *c*, it holds it in position until it is moved another notch by said wheel.

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

1. In combination with a time clock, substantially as shown and described, the wheel *c*, rigidly secured on the sleeve *b;* sleeve *d'*, bearing wheel *d*, and journaled to the frame of said clock in such position that the cogs of said wheel *d*, will mesh with the cogs of the wheel *c;* extension *i*, rigidly secured to the outer end of sleeve *d'*, and extending outwardly from the face of wheel *d;* indicator *k*,

secured on the outer end of said shaft; and the releasing pawl *h*, secured to the bar *f*, in such position as to hold said wheel *d*, from moving except when operated by wheel *c*, substantially as shown and described and for the purposes set forth.

2. In combination with a time clock, substantially as shown and described, the wheel *c*, rigidly secured on the sleeve *b*; sleeve *d'* bearing wheel *d*, and journaled to the frame of said clock in such position that the cogs of said wheel *d*, will mesh with the cogs of the wheel *c*; extension *i*, rigidly secured to the outer end of sleeve *d'*, and extending outwardly from the face of wheel *d*; indicator *k*, secured on the outer end of said shaft; releasing pawl *h*, secured to the bar *f*, in such position as to hold said wheel *d*, from moving except when operated by wheel *c*; alarm wheel *j*, rigidly secured on extension *i*, and alarm catch *m*, provided with pendant *n*, pivoted to the frame of said clock, substantially as shown and described and for the purposes set forth.

3. In combination with a time clock, substantially as shown and described, the wheel *c*, secured on the sleeve *b*; wheel *d*, journaled to the frame of said clock in such position that its cogs will mesh with the cogs of wheel *c*; extension *i*, extending outwardly from the face of said wheel *d*; alarm wheel *j*, rigidly secured on said extension; and alarm catch *m*, provided with pendant *n*, pivoted to the frame of said clock; and spring *g*, having the releasing pawl *h*, secured to said frame, substantially as shown and described and for the purposes set forth.

4. In combination with a time clock, substantially as shown and described, the cog wheel *c*, secured to the sleeve *b*; cog wheel *d*, journaled to the frame of said clock in such position that its cogs will mesh with the cogs of wheel *c*; extension *i*, extending outwardly from the face of wheel *d*, and arranged to rotate with the same, and bearing on its outer end indicator *k*; the wheels *c* and *d*, being of such relative size and bearing such relative number of cogs that the indicator *k*, will make but one revolution while the clock is running down, substantially as shown and described and for the purposes set forth.

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

WILLIAM W. HARRIS.

Witnesses:
W. M. WOOD,
W. C. MCCAIN.