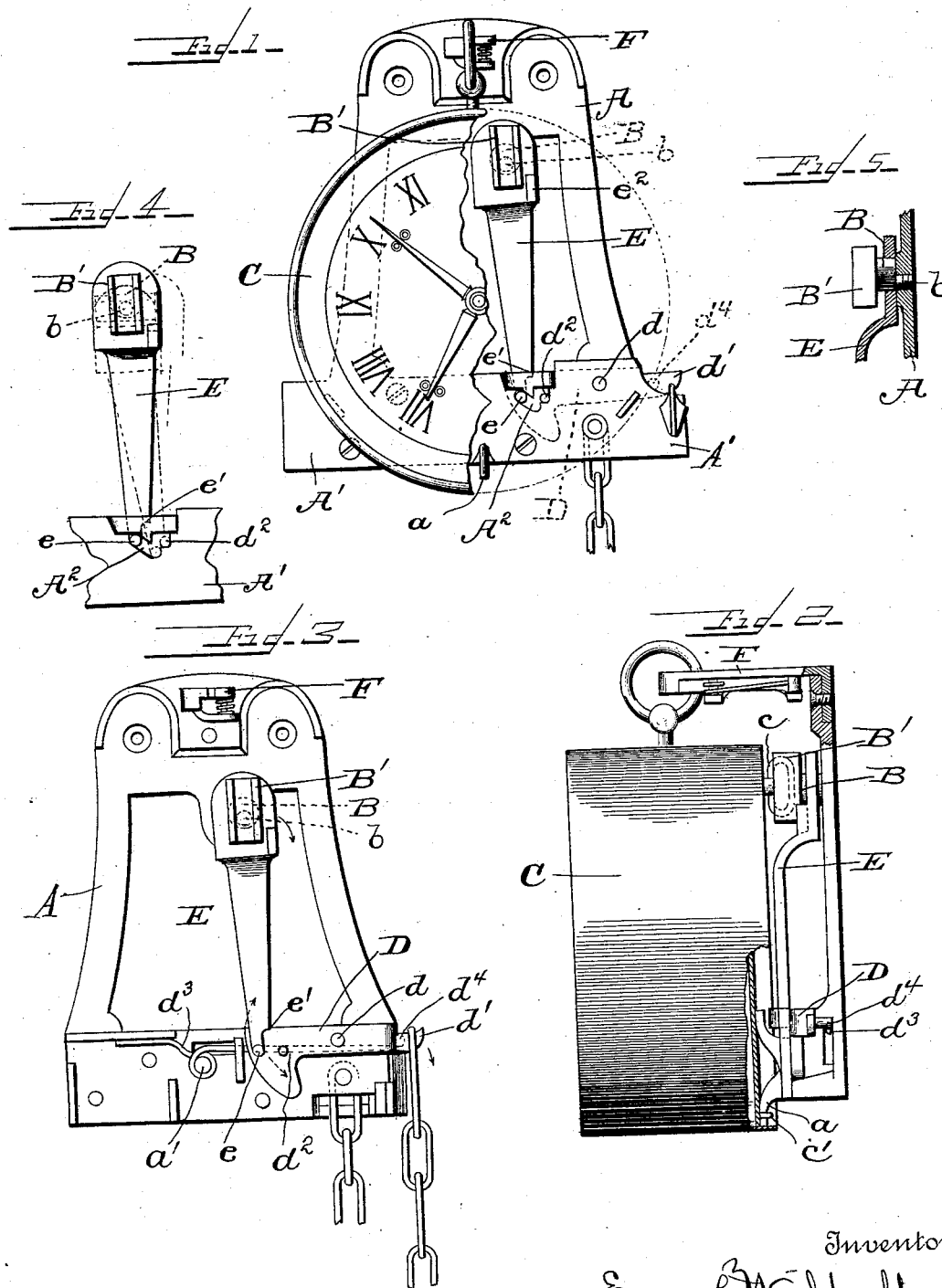


(No Model.)

E. C. WALDURFF.
TIME TRIP LEVER MECHANISM.

No. 489,350.

Patented Jan. 3, 1893.



Witnesses

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TIME TRIP-LEVER MECHANISM.

SPECIFICATION forming part of Letters Patent No. 489,350, dated January 3, 1893.

Application filed June 1, 1892. Serial No. 435,225. (No model.)

To all whom it may concern:

Be it known that I, EUGENE C. WALDURFF, a citizen of the United States, residing at the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Trip-Lever Mechanisms, of which the following is a specification.

My invention is an improvement in trip lever mechanisms and consists in the novel features of construction and combination of parts hereinafter fully described reference being had to the accompanying drawings which illustrate one form in which I have contemplated embodying my invention, and said invention is fully disclosed in the following description and claims.

One object of my invention is to provide a construction of trip lever mechanism which can be operated by the alarm arbor of an ordinary clock without altering the construction or interfering with the mechanism of the clock.

In the accompanying drawings Figure 1 is a front view of a trip lever mechanism embodying my invention a portion of the clock being broken away to show the parts located behind. Fig. 2 is a side view of the trip lever mechanism and clock. Fig. 3 is a front view of the trip lever mechanism the front plate being removed to show the parts located beneath. Figs. 4 and 5 represent details of parts of the mechanism.

A represents the attaching plate which forms the main frame of the device and is provided with suitable apertures by which it may be screwed or otherwise secured to a suitable support. The plate A is provided with a circular cam or eccentric B secured revolutely to the plate A and for convenience in manufacturing I prefer to provide the eccentric B with the eccentric screw threaded lug *b* see Fig. 5, which engages a screw threaded hole in the plate A and holds the eccentric in place while permitting the amount of revolution required. The eccentric B is provided with a recessed socket to receive the winding stem *c* of the alarm arbor of a clock C, so that the arbor and eccentric will revolve together, when placed in engagement with each other. The plate A is provided with suitable means for securing the clock in operative position. In this instance I have shown said plate provided

with a projection *a* (see Figs. 1 and 2) for engaging an aperture *c'* in a suitable part of the clock frame and said plate A is also provided with a spring catch *F* of any preferred construction which snaps into the ring of the clock. When the clock is in operative position the winding stem *c* will engage the socket or recess *B'* which is secured to the eccentric B. The lower part of plate A is provided preferably with a face plate *A'* secured thereto by screws between which and said plate A is located the trip lever D pivoted at *d* and provided at its outer end with a hook or arm *d'* upon which is hung the chain or weight to be tripped or released. The trip lever D is also provided with a locking lug or stud *d*² located at the end opposite the hook *d'*. The trip lever is provided with a spring *d*³ (see Fig. 3) which engages a supporting lug *a'* secured to the plate A and has one end engaging a lug *d*⁴ adjacent to the outer end of the lever D so that the outer end of said lever is normally held up in its highest position. A locking lever E is provided at one end with a circular aperture to engage the cam or eccentric B, and the other end of said lever is provided with a guiding lug *e* which engages an inclined slot *A*² in the plate *A'*. The inclined slot *A*² is so located that when the cam or eccentric raises the locking lever to its highest point, the lug *e* will engage the upper end of the slot and when the eccentric is turned, it will move the locking lever downward and the inclined slot will cause the lower end of the locking lever to move laterally so as to bring a shoulder *e'* with which lever E is provided into locking engagement with the locking stud *d*² of the trip lever D thereby locking it in position, as shown in Figs. 1, 3 and 4. When the eccentric is turned to raise the locking lever the lug *e* will be engaged by the slot *A*² and carry the locking lever laterally out of engagement with the locking stud of the trip lever, thereby releasing the trip lever, and the weight which it supports will cause the lever to tilt on its pivot and release the weight, as will be readily understood. When the eccentric has turned far enough to bring the guiding lug *e* to the top of the slot *A*², the socket *B'* will strike a lug *e*² on the locking lever and stop the movement of the

said socket and eccentric, and prevent the eccentric stud *b* from being unscrewed from the frame.

The operation of my improved device is as follows: The clock is removed from engagement with the plate A and the eccentric cam is turned so as to depress the locking lever and lock the trip lever in position. The alarm of the clock is then wound and the alarm set for the hour when it is desired to release the lever. The clock is then placed in engagement with plate A with the stem *c* of the alarm arbor in engagement with the socket B' of the eccentric. The chain, weight or other device to be released is then connected with the trip lever. When the alarm mechanism of the clock is released, the alarm arbor and stem will revolve and turn the eccentric which will raise the locking lever and by means of the inclined slot and guiding lug the lower end of said lever will be moved laterally so that the shoulder *c'* will disengage the locking lug *d*² of the trip lever and cause said trip lever to release the chain or weight which it supports.

What I claim and desire to secure by Letters Patent is:—

1. In a trip lever mechanism the combina-

tion with a pivoted trip lever, of a locking lever having a part for engaging said trip lever, an inclined guide engaging a part connected with said locking lever, having its ends at different distances from said trip lever and a cam adapted to be operated by a part connected with a clock for positively moving said locking lever longitudinally with respect to said inclined guide whereby said locking lever will be drawn laterally out of engagement with the trip lever, by said inclined guide, substantially as described.

2. In a trip lever mechanism the combination with the trip lever, of a locking lever provided with a locking shoulder for engaging said trip lever and having a lug engaging an inclined guiding slot, of an eccentric adapted to be operated by a part connected with a clock, engaging said locking lever, for moving the same longitudinally whereby the inclined slot will cause said locking lever to move laterally and disengage the trip lever, substantially as described.

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Witnesses:

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