

(No Model.)

A. M. LANE.

ALARM CLOCK.

No. 391,802.

Patented Oct. 30, 1888.

Fig. 1.

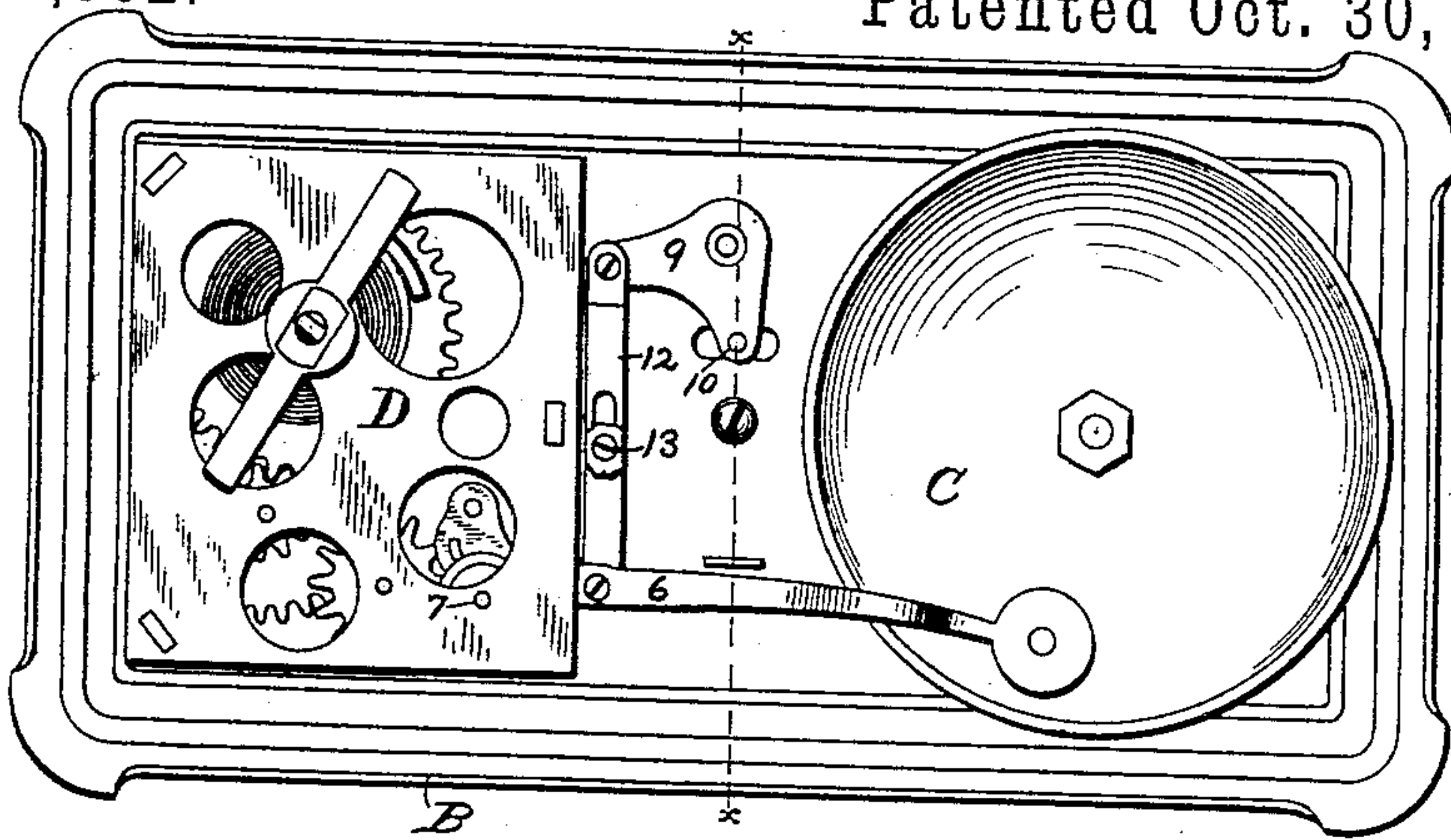


Fig. 2.

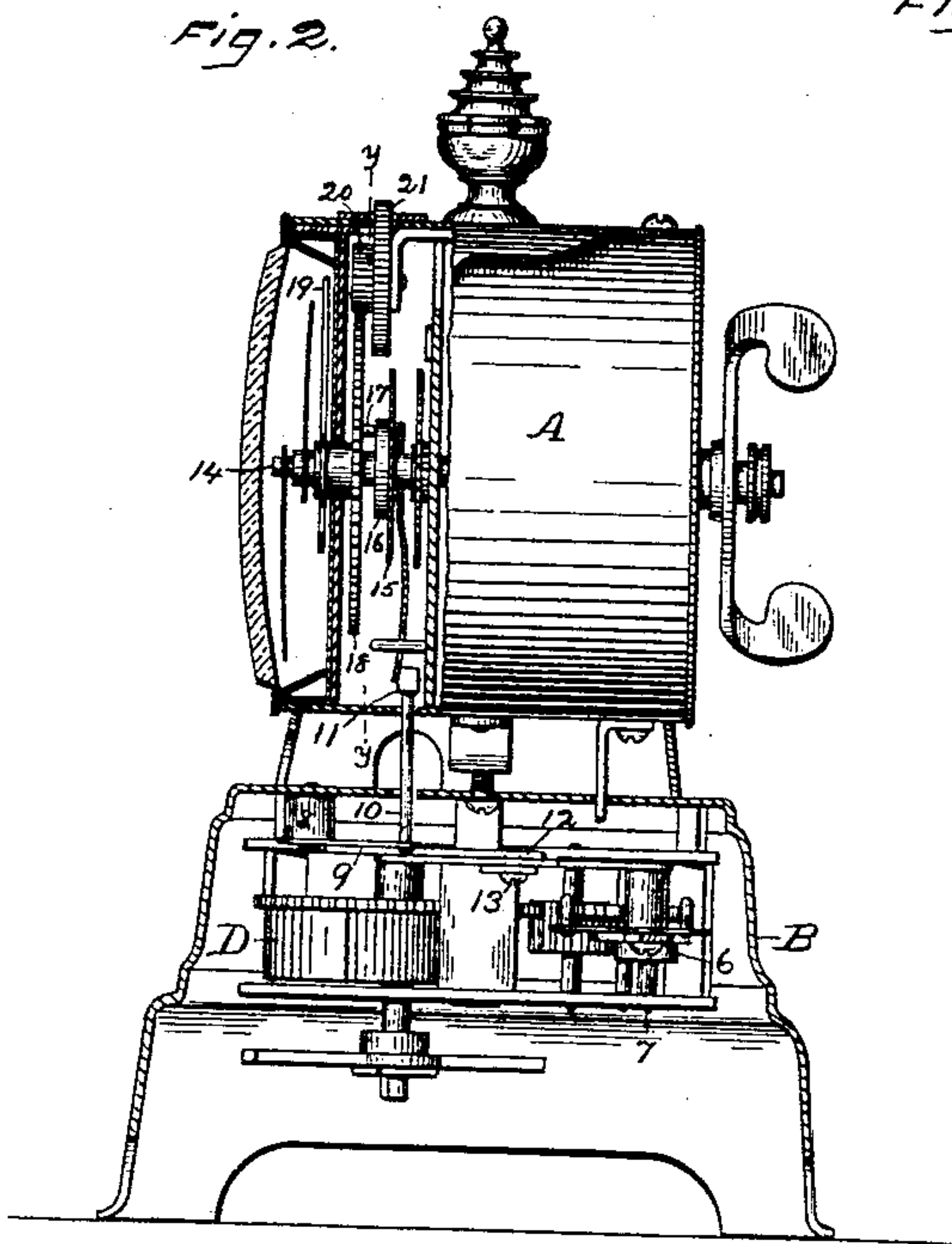


Fig. 3.

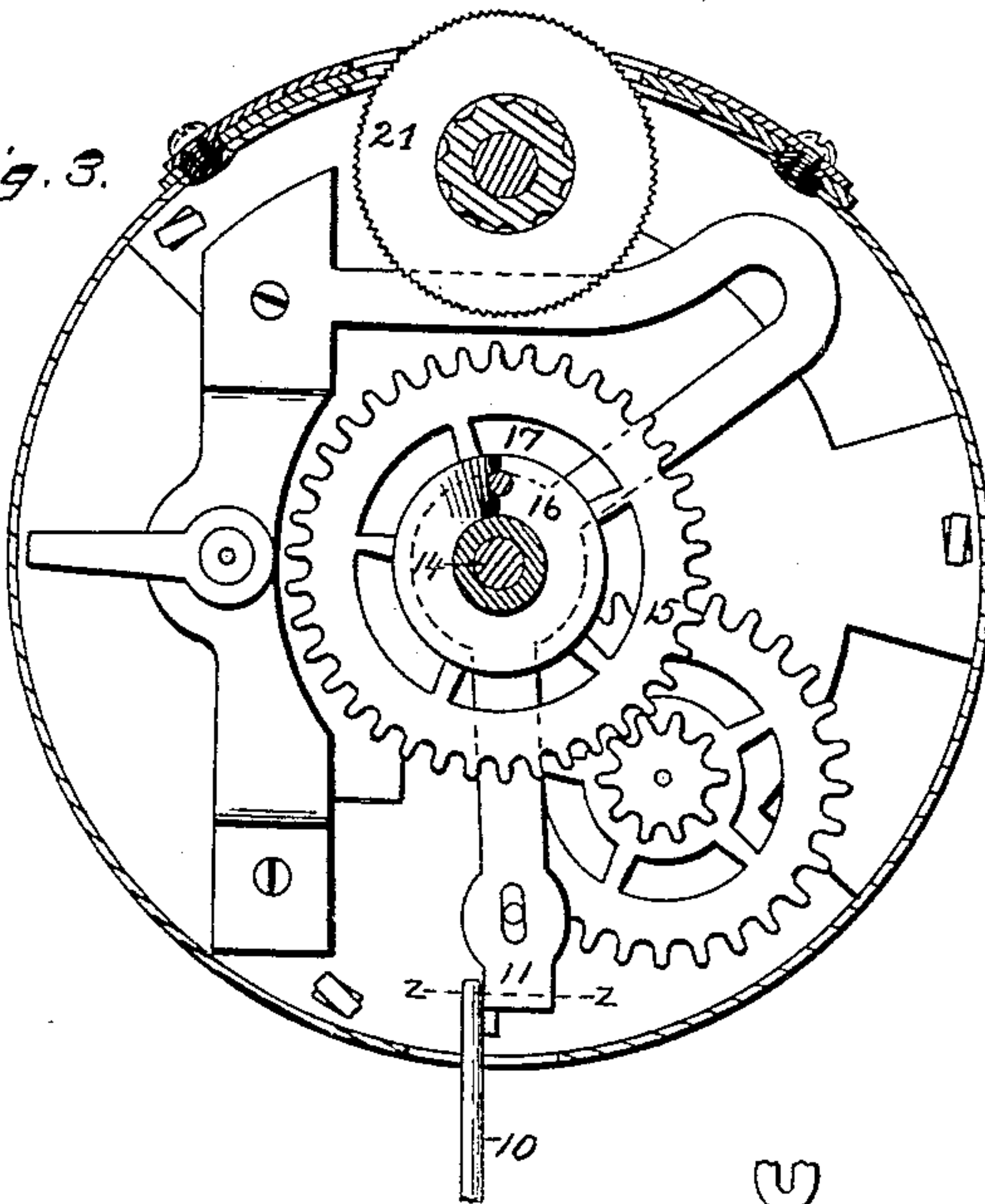


Fig. 4.

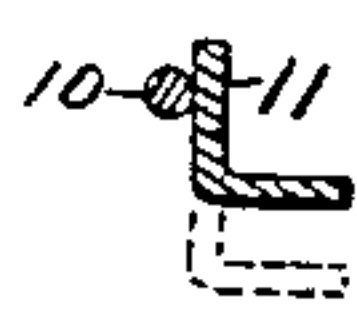
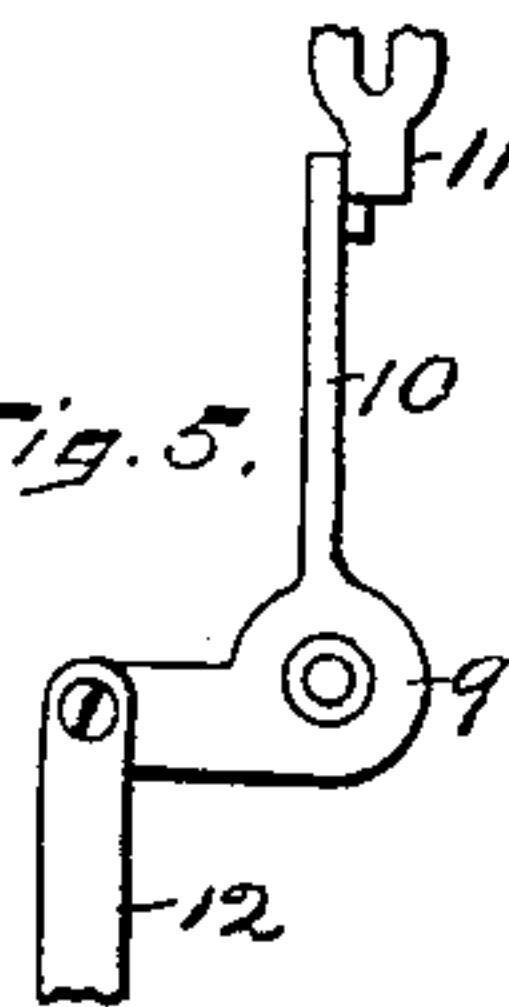


Fig. 5.



Witnesses.

John Edwards Jr.  
B. W. Welles.

Inventor.

Almeron M. Lane.  
By James Shepard  
Atty.



# UNITED STATES PATENT OFFICE.

ALMERON M. LANE, OF MERIDEN, CONNECTICUT.

## ALARM-CLOCK.

SPECIFICATION forming part of Letters Patent No. 391,802, dated October 30, 1888.

Application filed August, 9 1888. Serial No. 282,292. (No model.)

*To all whom it may concern:*

Be it known that I, ALMERON M. LANE, a citizen of the United States, residing at Meriden, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Alarm-Clocks, of which the following is a specification.

My invention relates to improvements in alarm-clocks of the class in which the alarm-movement is constructed separately from the clock-movement and located within a different part of the clock; and the object of my improvement is to so connect the alarm-movement with the holding and releasing mechanism of the clock as to more conveniently locate said parts, whereby they may be placed in a position to render the alarm more effective and to give a better appearance to the clock.

In the accompanying drawings, Figure 1 is a reverse plan view of my alarm-clock. Fig. 2 is a partial vertical section of the same on the line *xx* of Fig. 1. Fig. 3 is an enlarged horizontal section of a portion of the same on line *yy* of Fig. 2. Fig. 4 is a horizontal section of the vibrating arm and the holding and releasing arm on line *zz* of Fig. 3; and Fig. 5 is a front elevation of detached parts illustrating a slight modification.

A designates the clock-case containing the movement of an ordinary construction, and B the base upon which said clock-case is mounted. Underneath this base at one end I mount an alarm-bell, C, and at the other end an alarm-movement, D, which in the main is of an ordinary construction. This alarm-movement is mounted with its movement-plates in a horizontal position, and consequently the escapement or verge which carries the hammer 6 is upon a vertical shaft, 7.

Pivoted upon a suitable stud, 8, on the base B is a vibrating angle-lever, 9, having an upwardly-projecting rod or arm, 10, which extends at right angles to said angle-lever up into the movement of the clock by the side of the holding and releasing arm 11. I connect said angle-lever with the vibrating hammer-arm and verge by means of a link, 12, whose ends are pivoted, respectively, to said angle-lever and hammer-arm. In some cases

I may make the link adjustable by forming it of two pieces, one of which is slotted and the other of which receives the threaded end of a holding-screw, 13, whereby said two parts of the link may be adjusted one upon the other in the ordinary manner of a slot-and-screw adjustment; but such adjustability is not essential.

The holding and releasing arm 11 within the clock-case is a spring-arm with the portion which surrounds the center shaft, 14, of the clock-movement pressing against one of the dial-wheels 15, said wheel being so mounted as to slide longitudinally with the center shaft. Said wheel is also provided with a cam, 16, against which a pin, 17, on the setting-wheel 18 bears. The alarm-pointer 19 is connected with the hub of the setting-wheel, and the setting-wheel meshes into a pinion, 20, which is turned by moving the setting-button 21. When the hour arrives for which the alarm is set, the pin 17 slips off the shoulder of the cam 16 and permits the lower end of the holding-arm 11 to spring forward, thereby throwing it out of the path of the laterally-vibrating arm or rod 10, which arm or rod, by reason of its link-connection with the hammer-arm or verge and the angle-lever, necessarily vibrates laterally with the vibratory movement of the hammer.

In some cases it may be desirable to set the alarm-movement with its verge-shaft in a horizontal instead of a vertical position. In such a case I employ the angle-lever shown in [Fig. 5, in which the laterally-vibrating arm 10 is integral with the lever and projects upward in the same plane as said lever, instead of at right angles thereto. It is, however, connected with the alarm by the link 12, and the arm 10 extends up by the side of the holding and releasing arm 11, so that the operation is the same.

Heretofore I have made an alarm-clock without the link and angle lever, in which clock the laterally-vibrating arm or rod projected upwardly from the verge or hammer-arm to the holding and releasing arm of the clock, the alarm and clock movements, separately considered, being the same as herein shown and described.

I claim as my invention—

The combination of a clock-movement having the alarm holding and releasing mechanism, an alarm-movement, the angle-lever having a laterally-vibrating arm which extends  
5 to said holding and releasing mechanism, and the link 12, connecting said angle-lever with

the vibrating verge of said alarm-movement, substantially as described, and for the purpose specified.

ALMERON M. LANE.

Witnesses:

JAMES SHEPARD,  
JOHN EDWARDS, Jr.