(No Model.)

J. ZELLY.

CLOCK.

No. 372,780. Patented Nov. 8, 1887.

Fig. 1.

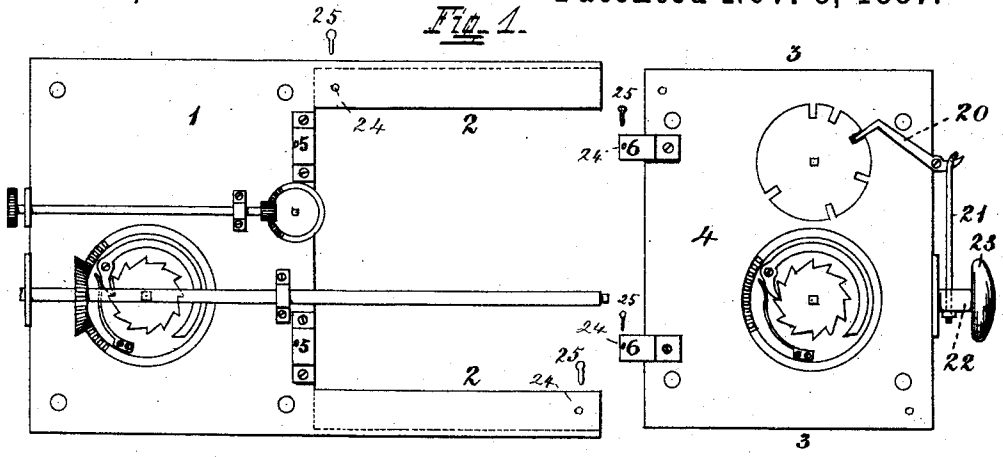


Fig. 3.

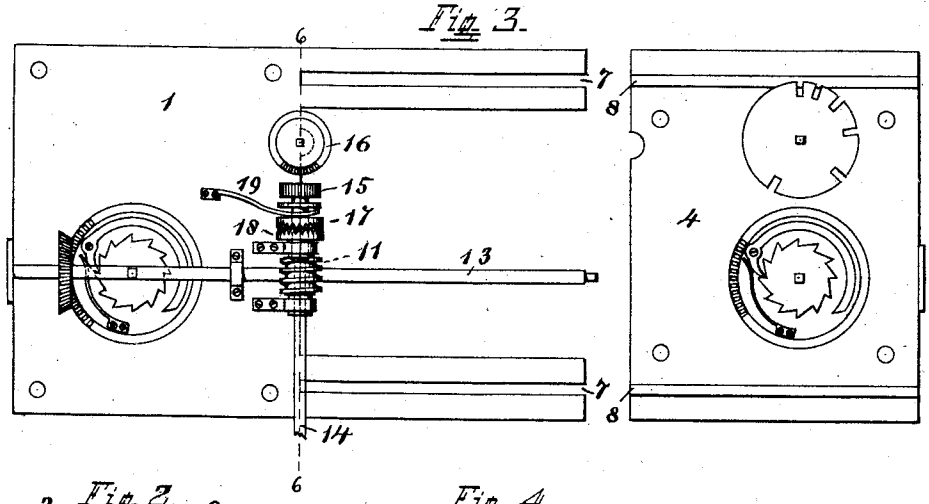


Fig. 2.

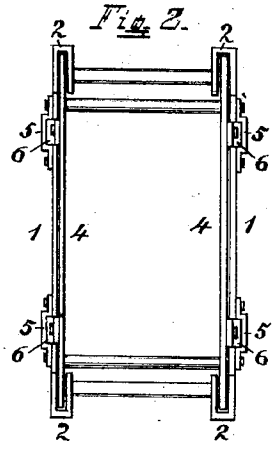


Fig. 4.

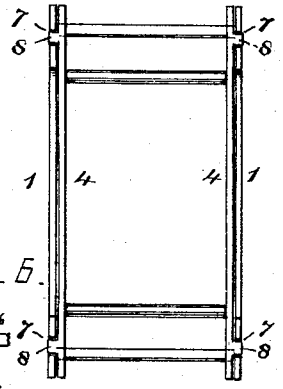


Fig. 5.

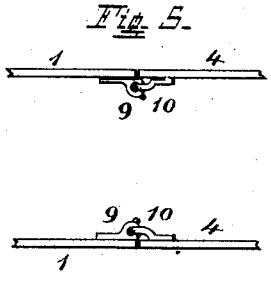
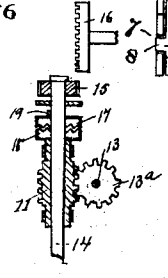


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN ZELLY, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO FREDERICK FISCHER, OF SAME PLACE.

CLOCK.

SPECIFICATION forming part of Letters Patent No. 372,780, dated November 8, 1887.

Application filed August 16, 1886. Serial No. 211,091. (No model.)

To all whom it may concern:

Be it known that I, JOHN ZELLY, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Improvement in Clocks and other Regulators, of which the following is a specification.

A leading feature of my invention is a construction of time-pieces which enables either the striking or the time movement to be detached for repair or other purpose without disturbing the other portions of the clock.

My invention, while applicable to time-pieces generally, is more especially designed for such as represented in my Patent No. 342,415, dated May 25, 1886, and also for such as represented in my application, Serial No. 211,090.

In the accompanying drawings, Figure 1 is a rear view of a time-movement frame and of a striking-movement frame detached. Fig. 2 is an end elevation of these two parts placed together. Fig. 3 is a similar view to Fig. 1 of a modification of the device shown in that figure. Fig. 4 is an end elevation of the parts of the device shown in Fig. 3, placed together. Fig. 5 represents still another modification. Fig. 6 is a detail sectional view of the winding and setting mechanism shown in Fig. 3.

1 may represent the time-movement frame of a clock. From this frame project grooved lugs or brackets 2, which receive the edges 3 of the frame 4 of the striking-movement. The same frame, 1, has staples or sockets 5, which receive pins or dowels 6, that project from the striking-movement frame. A modified form is shown in Fig. 3, in which lateral grooves 7 in the brackets of the time-movement frame receive lateral projections 8 from the frame of the striking-movement. Still another modification is represented in Fig. 5, in which eyes 9 on the time-movement frame receive hooks 10, that project from the striking-movement frame. A yet other modification of this part of my invention may consist in making the time, instead of the striking, movement the detachable member.

When my above-described invention is applied to a keyless clock, I may employ a worm, 11, which gears in a wheel (not shown) on a winding-shaft, 13, such as described either in my said patent or in my said application for patent. The said worm 11 is loose on the stem 14, so that when said stem is elevated sufficiently to bring the pinion 15 in gear with the wheel 16 on the minute-hand arbor the worm 11 is for the time being non-effective. When, on the contrary, the stem 14 is pulled down, so as to ungear pinion 15 from the wheel 16, a clutch, 17, on the pinion-shaft is thereby engaged with a clutch, 18, on the worm 11, which latter, then sharing the rotation of the pinion-shaft and the operating-stem 14, enables the operator to wind up either the time or striking movements, as explained in my said application. This winding device is especially applicable to such time-pieces, clocks, or other regulators as have strong springs or heavy weights.

20 represents a customary repeater attachment having a cord, 21, which connects to a windlass, 22, whose handle 23 is external to the movement-frame. The clutch-members may be held normally in contact by means of a spring, 19.

Orifices 24, which receive pins 25, enable secure retention of the striking-movement to its place in the brackets of the time-movement frame.

Either the grooved brackets 2 or the sockets 5 being employed, the other may be dispensed with, as either will afford a complete fastening—that is to say, the brackets may be used without the sockets or the sockets without the brackets.

I claim as new and of my invention in clocks—

1. The combination, with the time-movement frame 1, having the arms or brackets 2, of the striking-movement frame 4, received and guided between said arms, and pins for securing them together, substantially as set forth.

2. The combination, with a time-movement frame, 1, having arms or brackets 2, and the sockets 5, of the striking-movement frame 4, received between said arms, and having the pins or dowels 6 engaging said sockets, substantially as set forth.

In testimony of which invention I hereunto set my hand.

JOHN ZELLY.

Attest:
GEO. H. KNIGHT,
N. ROCKHOLD.