E. C. COVELL & M. M. ROBINSON.

Lockwork-Attachment for Clocks.

No. 168,620. Patented Oct. 11, 1875.

Fig. 1.

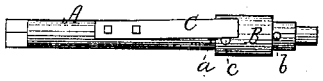


Fig. 2.

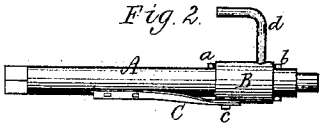
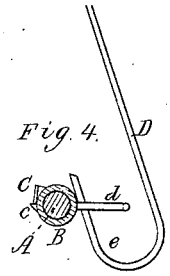


Fig. 3.

Fig. 4.



Witnesses.
S. W. Piper.
L. N. Miller

Edgar C. Covell.
Mark M. Robinson.
by their attorney.
R. H. Eddy

UNITED STATES PATENT OFFICE.

EDGAR C. COVELL AND MARK M. ROBINSON, OF LACONIA, N. H.

IMPROVEMENT IN LOCKWORK ATTACHMENTS FOR CLOCKS.

Specification forming part of Letters Patent No. **168,620**, dated October 11, 1875; application filed September 21, 1875.

To all whom it may concern:

Be it known that we, EDGAR C. COVELL and MARK M. ROBINSON, of Laconia, of the county of Belknap and State of New Hampshire, have invented a new and useful Improvement in Clocks: and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side view, Fig. 2 a top view, Fig. 3 a longitudinal section, and Fig. 4 a transverse section, of the central or minute-hand arbor of a clock with our invention applied thereto.

In carrying out our said invention we apply to the said arbor, shown at A, a tube or sleeve, B, to turn freely thereon, such tube or sleeve being kept in place by pins *a b* going through the arbor diametrically. From the periphery of the sleeve a small stud, *c*, and a bent arm, *d*, are extended in manner as shown. Furthermore, there is fixed to the arbor a spring, C, which, near its free end, rests upon the sleeve. The spring, where extending over the sleeve, is tipped or bent laterally, so that one edge of it may bear on the sleeve, and the opposite edge be raised above it a distance greater than that of the extension of the stud *c* beyond the sleeve.

From the above it will be seen that when the arbor is revolved one way the spring will be carried against the stud, and will bear against it, so as to cause the sleeve to be revolved with the arbor, but while the arbor is being revolved in the opposite direction the spring, in coming in contact with the stud, will slip over it without revolving the sleeve. The lower arm of the lever, for throwing up the catch-pawls of the pin-wheel and the locking-plate of the great gear-wheel of the striking mechanism of a clock, is shown at D. This arm we bend in the form of a hook, as shown at *e*, in order that while the sleeve B may be in revolution with the arbor in one direction the bent arm *d* may catch upon or into the hook and be held by it, so as to stop the further revolution of the sleeve in such direction, the arbor continuing to turn in said direction. On revolving the arbor in an opposite way the sleeve will be caught by the spring and carried around, and in course of its revolution its bent arm *d* will be brought against the arm D so as to force it upward in a manner to cause the pawls of the pin-wheel and locking-plate to be thrown up out of engagement with such wheel and plate, in order that the striking mechanism may cause the hammer to sound the bell the required hour.

Our invention admits of the minute-hand being set back without interfering with the striking part of the clock. In fact, it can be set back while the clock may be striking. It can be set back one minute or one hour, and the clock will strike correctly when it may next strike the hour. The invention can be applied to one day as well as to eight, or more, day clocks.

We claim as our invention—

In a clock the combination of the locking-spring C and the rotary sleeve B, its stud *c*, and bent arm *d*, with the minute-hand arbor A and the hooked arm D of the lever for operating the pawls of the pin-wheel and locking-plate of the striking apparatus, all being constructed and arranged substantially as specified and represented.

EDGAR C. COVELL.
MARK M. ROBINSON.

Witnesses:
FRANK H. CHAMPLIN,
CHARLES K. SANBORN.