

Patented July 30, 1867.



United States Patent Office.

CHARLES M. CLINTON AND LYNFRED MOOD, OF ITHACA, NEW YORK.

Letters Patent No. 67,166, dated July 30, 1867.

IMPROVEMENT IN CALENDAR-CLOCKS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, CHARLES M. CLINTON and LYNFRED MOOD, of Ithaca, Tompkins county, New York, have invented a way of moving wheels of Calendar-Clocks; and we do hereby declare the following is a full and exact description thereof, reference being had to the annexed drawings and the letters thereon.

Our object is mainly to move accurately the thirty-one days' wheel. This we accomplish by two devices, first, the clutch operated through connecting parts by the escape in the time-movement, and second, a jointed self-acting tumbler on an arm of the cross-bar on the shaft of the thirty-one days' wheel. The first we make by a cog-wheel kept in place by a spring, so that, revolving, its teeth pass over a fixed stud in a forward but not backward direction; the second by the peculiar structure, position, and use of a tumbler having its fixed stud and an action on a projection from the long or main stop of the thirty-one days' wheel. This is seen in the figures, where—

Figure 1 is a front view of our thirty-one days' wheel and its attachments.

Figures 2 and 3 side views of our clutch cog-wheel.

Figure 4 a back view of the thirty-one days' wheel and tumbler, and

Figure 5 an enlarged view of the tumbler, and

Figure 6 is a view looking down on the thirty-one days' wheel and its stop, and the tumbler.

In fig. 1, A is the journal of the thirty-one days' wheel, and the end to which the pointer for the days of the month is attached; and B is the thirty-one days' wheel; and C is the rod connecting the time-escape, described in a patent, No. 66,003, granted us on the 25th day of June, 1867; and F is the balanced cross-bar on the shaft of the thirty-one days' wheel; and E is the clutch-cog wheel on the cross-bar F; and G is a pin that checks the downward motion of the clutch-cog wheel; and I is the spring of the clutch-cog wheel holding it in proper relation to the fixed stud J in the cross-bar F.

In fig. 2 the same parts are indicated by the same letters. The back parts of the cogs are bevelled so as to pass over the stud J. When the stud J is in an interval between the cogs no backward motion can take place, and when the rod C falls off the time-escape alluded to, the thirty-one days' wheel is moved forward by the clutch-cog wheel.

In fig. 3 the action of a bevelled cog of the clutch-cog wheel and of the stud J is seen on a larger scale.

In fig. 4 the back of the thirty-one days' wheel is seen, and the tumbler M. From the stop D is a projection, L, which has two uses, the one to fall into the intervals of the cogs of the thirty-one days' wheel and fix its motion, the other to receive the action of the tumbler M. In this figure the tumbler is seen retracted by the rod C and time-escape, and ready to act on the projection L and throw it over one or more teeth. The passage of one tooth is by the tumbler alone, and of two or more teeth by the perpetual month-wheel and hinged lever on the shaft of the thirty-one days' wheel, which parts are described in the patent alluded to above.

In fig. 5 a tumbler enlarged is seen, which throws the stop D over a tooth by a sort of elbow or toggle-joint action. The tumbler is controlled by its fixed stud O, fig. 4, and has a notch, P, to aid in its receiving the projection L when necessary.

The other uses of these devices are apparent to those skilled in the art to which it appertains.

Claim.

1. We claim the construction and use of the clutch-cog wheel E, when made of the several parts, and in the manner described, for the purpose of its combined use with and means of motion of the thirty-one or other similar wheel of a calendar-clock, thereby preventing the motion of the said wheel or wheels from being affected, or the said wheel or wheels from being misplaced by the position of the clock, as described.

2. We claim the specific combination of the cross-bar F, clutch-wheel E, held in place by its spring I, with bevelled teeth controlled and held by the stud J, the same making a whole, and acting on the wheel B or its substantial equivalent, as described.

3. We claim balancing the cross-bar F so that the motive power of the calendar shall be in the rod C and not in any use of the cross-bar as a weight lever.

4. We claim the specific device of the tumbler M, attached to any part of the cross-bar F, and acting by an elbow joint or lifting action on the stop D, as described.

5. We claim the projection L from the stop D for the purpose of a point of action on the stop D by the tumbler M, as described.

6. We claim regulating the action of the tumbler M by the stud O, when virtually made and acting as described.

7. We claim the combination of the wheel B, the stop D, projection L, tumbler M, stud O, and cross-bar F, or equivalents thereunto, the same making a whole, and being constructed and operated as described, thereby preventing the motion of the wheel B, or similar wheel, from being affected, or the wheel itself from being misplaced by the position of the clock, as set forth.

CHAS. M. CLINTON,
LYNFRED MOOD.

Witnesses:

EUGENE B. McWHORTER,
T. J. McELHENY.