(No Model.)

J. WALLIN.

CALENDAR.

No. 490,618. Patented Jan. 24, 1893.

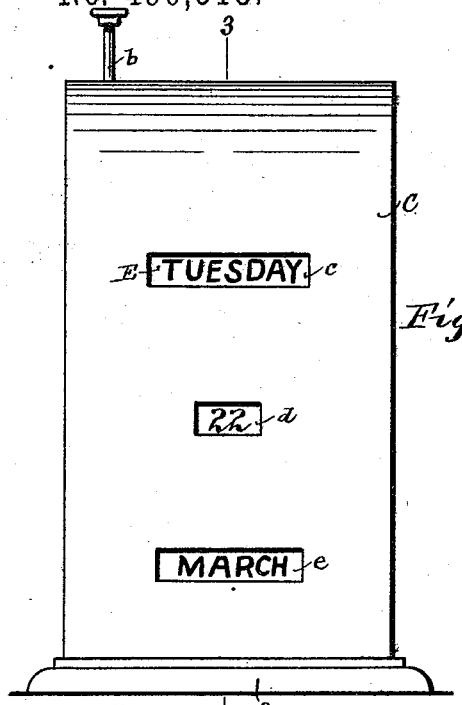

Fig. 1.

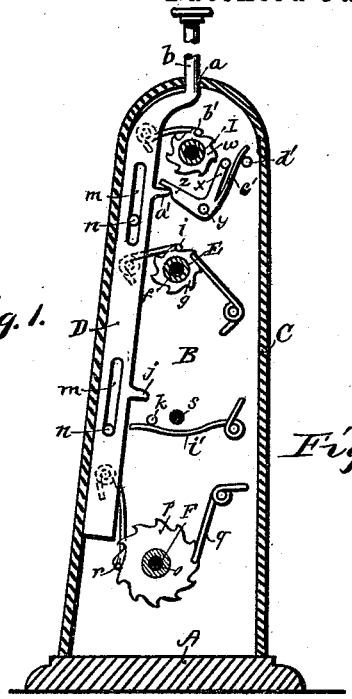

Fig. 5.

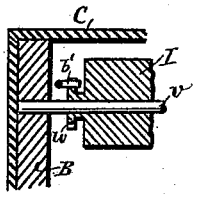

Fig. 6.

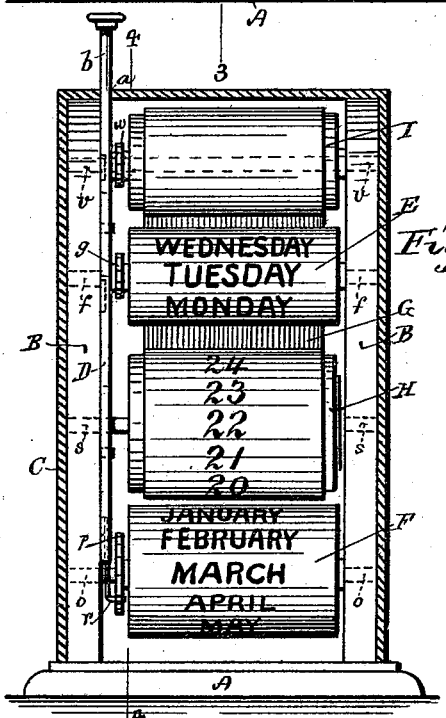

Fig. 2.

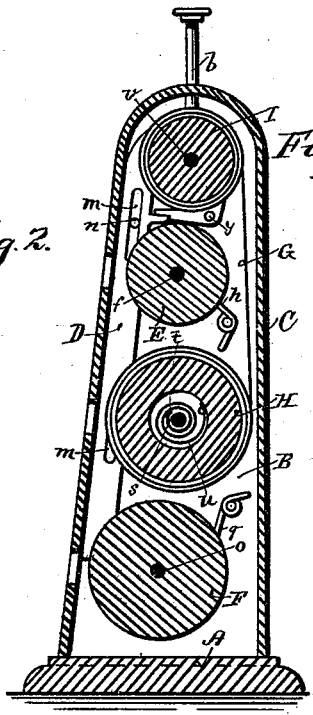

Fig. 3.

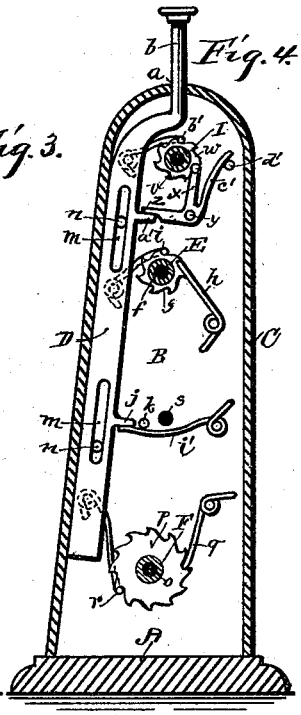

Fig. 4.

Witnesses.

Charles Hannigan.

James W. Brennan

Inventor.

Joseph Wallin

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UNITED STATES PATENT OFFICE.

JOSEPH WALLIN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO CHARLES O. DANFORTH, OF SAME PLACE.

CALENDAR.

SPECIFICATION forming part of Letters Patent No. 490,618, dated January 24, 1893.

Application filed April 2, 1892. Serial No. 427,526. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WALLIN, a subject of the King of Sweden and Norway, residing at Boston, in the State of Massachusetts, have invented a new and useful Improvement in Calendars, of which the following is a specification.

My invention relates to that class of calendars in which revoluble rolls are employed, the positions of which are to be changed every day, and my invention consists in the improved mechanism for operating the rolls, as hereinafter fully set forth.

Figure 1, represents the front view of a calendar embodying my improvement. Fig. 2, represents a central vertical section taken through the outer case, the previously concealed parts being shown in elevation. Fig. 3, represents a vertical section taken in the line 3, 3, of Fig. 1. Fig. 4, represents a vertical section taken in the line 4, 4, of Fig. 2, showing the operating bar in its normal position. Fig. 5, represents the same section with the operating bar in its raised position. Fig. 6, is a detail section showing a portion of the upper roll.

In the accompanying drawings, A represents the supporting base which may be made of wood, and B, B, opposite wooden standards for supporting the several rolls, which are arranged one above the other as shown in Fig. 3, and over the standards B, B, and the rolls, is placed the cover or case C, which is provided with the perforation *a*, adapted to receive the shank *b* of the operating bar D, and with the side openings *c*, *d* and *e*. The consecutive days of the week are marked upon the periphery of a roll E, which turns loosely upon the fixed spindle *f*, held in the standards B, B, the said roll being provided with the ratchet wheel *g* of seven teeth, which ratchet wheel is held in its turned position, by means of the spring actuated pawl *h*, attached to the side of the standard B; and the roll E is turned for the space of one tooth of the ratchet-wheel *g*, by means of the spring actuated catch *i*, secured in a recess at the side of the operating bar D, the said bar being held in its normal position, by means of the spring *i'*, which engages with the projecting lip *j*, of the bar D, the upward movement of the spring *i'* being limited by the stop pin *k*. The bar D is provided with the slots *m*, *m*, adapted to receive the fixed pins *n*, *n*, which serve to hold the bar in position at the side of the standard B, and may also serve as a stop to its movement, in the downward direction, against the resilience of the returning spring *i'*; and the downward movement of the operating bar D, will serve to turn the ratchet wheel *g*, one tooth. The consecutive months of the year are marked upon the periphery of the roll F, which is arranged to turn loosely upon a fixed spindle *o*, held in the standards B, B, the said roll being provided with the ratchet wheel *p* of twelve teeth, which is held in its turned position by means of the spring actuated pawl *q*, attached to the side of the standard B; and the roll F may be turned for the space of one twelfth of a revolution by means of the spring catch *r* attached to the recessed inner side of the bar D, which catch will be brought into action upon a special elevation of the said bar. The consecutive numbers for the days of the month, are marked upon a ribbon G, which is attached to the periphery of the two rolls H and I, the roll H being arranged to turn loosely upon the fixed spindle *s* to which is secured the inner end *t* of a helical spring *u*, the outer end being secured to the roll H, so that when the ribbon G is being unwound from the roll H, the tension of the spring *u* will be gradually increased. The ribbon G is unwound from the spring-actuated roll H, by means of the roll I, which turns loosely upon the fixed spindle *v*, and is provided with the ratchet wheel *w* of seven teeth, the said ratchet wheel being held in its turned position, by means of the spring-actuated pawl *x*, pivoted to the standard B at the point *y*, and provided with a disengaging arm *z*, which by engagement with the lip *a'*, of the bar D, upon the special upward movement of said bar above its normal position, as shown in Fig. 5, will cause the disengagement of the said pawl from the teeth of the wheel *w*, the spring *c'*, of the pawl *x* being made to rest against the fixed pin *d'*; and the said wheel *w* and roll I, will be turned for the space of one tooth upon the down-

ward movement of the bar D, by means of the spring actuated catch b', which is secured in a recess made in the side of the said bar.

The operation of the calendar will be as follows: The operating bar D being first raised as shown in Fig. 5, so that the pawl x will be thrown out of engagement with the ratchet wheel w, the spring u will serve to wind the ribbon G upon the roll H, so that the figure 1, will appear at the opening d, thus indicating the first day of the month. The rolls E and F are then to be properly set, so that the proper day of the week will be indicated at the opening c, and the proper month of the year at the opening e; then each consecutive downward movement of the bar D, day after day, will serve to indicate the day of the week, and the day of the month, at the openings c and d; and at the end of the month, upon raising the bar D above its normal position, as shown in Fig. 5, the pawl x will be raised from the wheel w, and the spring u will cause the roll H to turn, and unwind the ribbon G from the roll I, so that the figure 1 will be again presented at the opening d to commence the new month, and in the meantime, the said extra upward movement of the operating bar D, will have caused the turning of the roll F, so as to indicate the new month at the opening e.

I am aware that it is not new to construct a calendar having an outer case provided with the several openings, and with rolls, which are separately operated by means of distinct ratchet movements; but in my invention the several rolls are operated collectively from a single bar, which also serves to cause the adjustment of the ribbon to its initial position.

I claim as my invention:

1. The combination with the case A, provided with the openings c, d and e, the rolls E, F and I, provided with the ratchet wheels g, p and w, respectively, the spring actuated roll H, and the ribbon G, of the operating bar D, provided with the catches i, r and l, for operating the rolls E, F and I, substantially as described.

2. The combination with the spring actuated roll H, the roll I, ratchet wheel w, pawl x, and ribbon G, of the operating bar D, provided with the catch I, adapted to turn the ratchet wheel w in one direction, and the engaging lip a', adapted to raise the pawl x, to allow the unwinding of the ribbon from the roll I, substantially as described.

3. The combination with the roll E, provided with the ratchet wheel g, and the roll F, provided with the ratchet wheel p, of the operating bar D, provided with the catch i, for operating upon the ratchet wheel g of the roll E, and the catch r, for operating upon the ratchet wheel p of the roll F, upon a special movement of the bar D from its normal position, substantially as described.

4. The combination with the roll F, provided with the ratchet wheel p, the spring actuated roll H, the roll I provided with the ratchet wheel w, and the pawl x, of the operating bar D, provided with a catch l adapted to operate the roll I upon the normal movement of the said bar, and with a catch r, adapted to operate the roll F upon a special movement of the said bar from its normal position, substantially as described.

JOSEPH WALLIN.

Witnesses:
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E. W. JAMES.