W. W. BASS.

CALENDAR ATTACHMENT FOR CLOCKS.

APPLICATION FILED JULY 22, 1914.

1,139,474. Patented May 18, 1915.

Fig. 1.

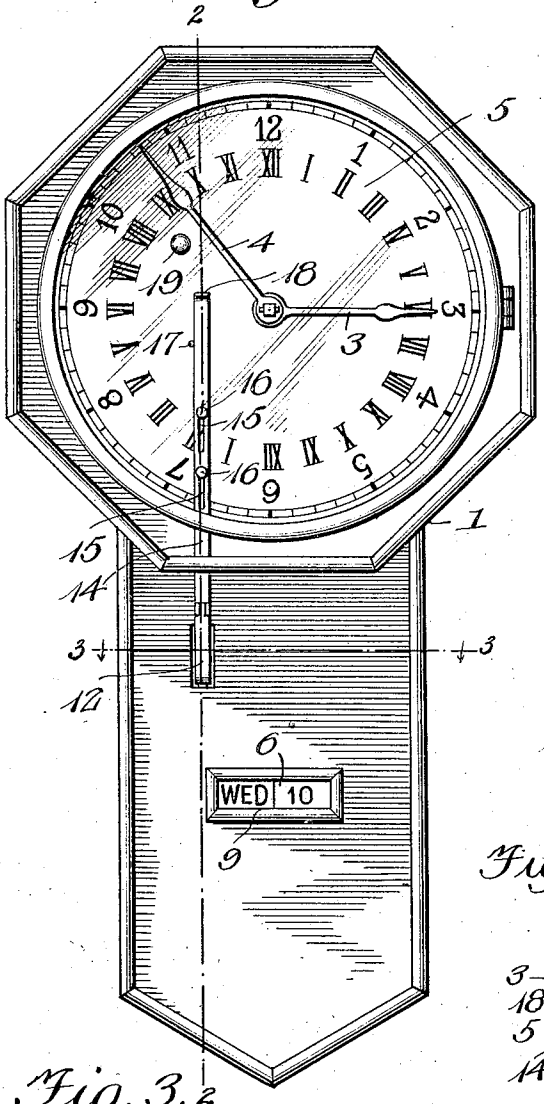


Fig. 2.

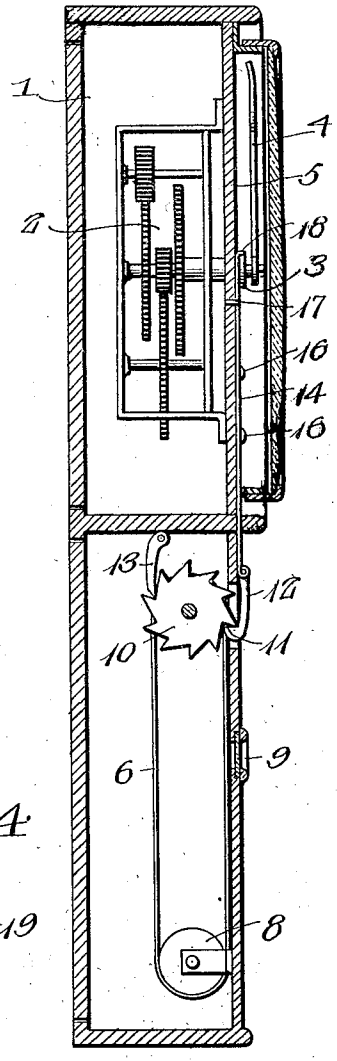


Fig. 4.

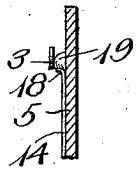
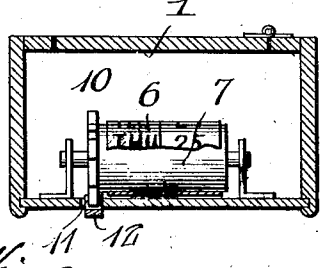


Fig. 3.



Witnesses

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CALENDAR ATTACHMENT FOR CLOCKS.

1,139,474. Specification of Letters Patent. Patented May 18, 1915.

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To all whom it may concern:

Be it known that I, WILLIAM W. BASS, a citizen of the United States, residing at Middle Inlet, in the county of Marinette and State of Wisconsin, have invented new and useful Improvements in Calendar Attachments for Clocks, of which the following is a specification.

This invention relates to a calendar attachment for clocks, the main object of the invention being to provide a calendar mechanism which will be properly operated at predetermined times by the clock mechanism to shift the indicating element of the calendar to position to indicate the month, day numerals and day of the week on which it occurs.

A further object of the invention is to provide coacting calendar clock work mechanism operating on what I call the slow hour intercalation, using as a basis a division of each year into thirteen months and of twenty-eight days each, and in which the clock mechanism is preferably provided with a dial and hands for indicating the full twenty-four hours of a day, the calendar being regulated for a full three hundred and sixty-five days indicating action by simply setting it back one full day at a predetermined time in the course of a year.

A still further object of the invention is to provide a calendar mechanism which is simple of construction, reliable and efficient in action, and inexpensive of production.

The invention consists of the features of construction, combination and arrangement of parts herein fully described and claimed, reference being had to the accompanying drawing in which:—

Figure 1 is a front elevation of a clock embodying my invention. Fig. 2 is a vertical section on the line 2—2 of Fig. 1. Fig. 3 is a horizontal transverse section on the line 3—3 of Fig. 1. Fig. 4 is a detail view illustrating the action of the trip member.

Referring to the drawing, 1 designates a suitable casing in which is inclosed a clock work mechanism 2, including the hour and minute hands 3 and 4 and the dial 5. As shown in the present instant, the dial is provided with two sets of hour numerals, one of the usual character, indicating a twelve hour sweep and the other dividing the dial into two twelve hour periods for a twenty-four hour sweep. It is, of course, obvious that the hour hand moves once around the face of the dial during a day's period, the second-named arrangement of numerals being merely intended, when employed, for better familiarizing the user with the slow hour system of intercalation on the basis of which the calendar is operated.

The calendar mechanism herein disclosed comprises an endless indicating web or strip, bearing thereon in properly related rows or columns the names of the days of the week in four consecutive divisions, such calendar indicia being based on an intercalation of thirteen months in a year and twenty-eight days to each month, the indication for the odd or three hundred and sixty-fifth day being provided for in the manner hereinafter described. The web 6 is mounted upon upper and lower rolls 7 and 8, suitably journaled in the casing, which is provided with an observation opening 9, through which the current week day and month day indicia is shown.

The upper roll 7 has attached thereto a ratchet wheel 10 which is engaged by the toothed end 11 of a vertically disposed dog 12, the said tooth being adapted on the upward movement of the dog to engage one of the teeth of the ratchet wheel and turn said wheel forwardly a distance of one tooth, and on the downward movement of the dog to engage the next adjacent ratchet tooth. A check pawl or dog 13 may be provided for holding the ratchet wheel against retrograde rotation. The dog is pivoted to a vertically movable actuating bar or strip 14 having guide slots 15 therein slidably engaging guide members 16 on the casing or face of the dial, a guide pin 17 also being provided for engagement with one of the longitudinal edges of the bar to hold the same against lateral movement under pressure of the hour hand.

The upper end of the bar 14 is provided with an outwardly bent flange or lip 18, which is adapted to be engaged by a portion of the hour hand 3 once on each revolution of the hour hand around the dial. As the hand 3 moves upwardly it engages the lip, carrying the bar 14 upward with it, so that the dog will be operated to turn the ratchet wheel a distance of one tooth and correspondingly move the indicating web once each twenty-four hours, in the use of slow hour clock mechanism of the character specified, wherein the coacting dial indica-

tions are separated into two consecutive twelve hour divisions. As the bar reaches the limit of its upward movement the hand 3 comes in contact with a rounded boss, stud or trip member 19 over which the hand slides and which presses the hand out of the plane of the lip 18, thereby freeing the actuating bar and dog which drop by gravity back to normal position, ready for the succeeding web shifting operation.

It will be understood from the foregoing description that the indicating web will be successively shifted at the end of each twenty-four hours period to bring into display position the name of the current day of the week and the associated month numeral, and that with the arrangement described, based upon a division of the year into thirteen months of twenty-eight days each, the web will be moved from the first to the twenty-eighth indicated position, and for subsequent repetitions of the same. It will, of course, be understood that under such intercalation, in order to provide for an indication of the odd or three hundred and sixty-fifth day, the calendar web will be turned back a single step at a predetermined time during the course of the year. By simply varying the number and distance between the teeth on the ratchet wheel, and the arrangement of the indicia, on the moving web, the calendar mechanism may be employed for ordinary calendar indications, the feed dog being moved twice during a twenty-four hour travel of the hour hand around a dial bearing the ordinary indications to feed up the web one full degree of shifting movement. With this arrangement the calendar may be set back whenever necessary so that it will properly display the current day month numerals. While these modes of use are specified simply for the purpose of stating certain capabilities of the invention, it is being understood that the invention is based upon the actuating mechanism, and that modifications thereof within the scope of the appended claims may be made without departing from the spirit of the invention.

I claim:—

1. A device of the character described comprising a clock work mechanism including a movable hand, an endless indicating web, pawl and ratchet mechanism for shifting said web, a bar carrying the pawl and adapted to be engaged by the hand and moved to shift said pawl on its actuating motion, and means for moving the hand out of engagement with the bar to release the same for return to normal position.

2. A device of the character described including a clock work mechanism having an hour hand, an endless indicating web, shifting mechanism therefor including a ratchet wheel, a feed dog for intermittently turning said ratchet wheel, a sliding bar connected with the dog and provided with a projecting lip adapted to be engaged by the hour hand to transfer motion to said bar, and a trip member for shifting the hand out of engagement with said lip.

In testimony whereof I affix my signature in presence of two witnesess.

WILLIAM W. BASS.

Witnesses:
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M. T. Levi.