Nov. 20, 1956 K. O. SCHMIDT 2,770,902

SEMI-AUTOMATIC PREPETUAL CALENDAR

Filed Jan. 24, 1955 2 Sheets-Sheet 1

Fig. 1

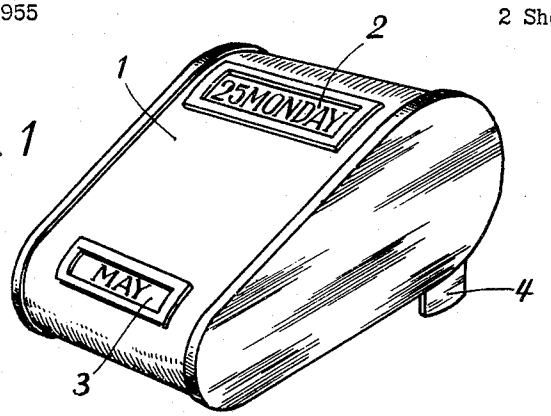


Fig. 2

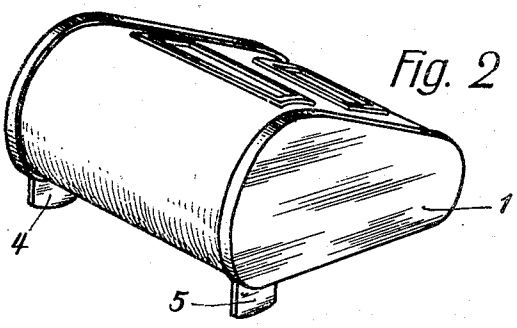
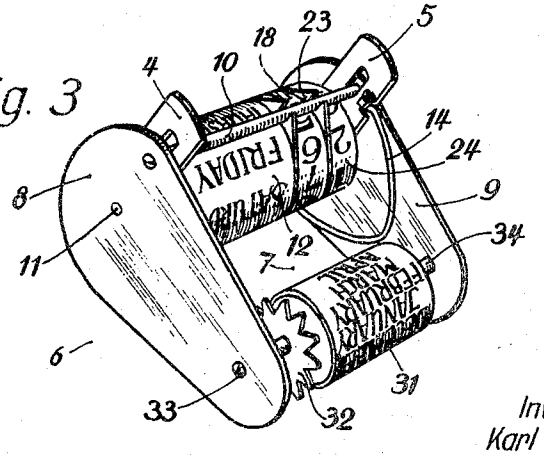


Fig. 3



Inventor
Karl Otto Schmidt

Karl Otto Schmidt

Nov. 20, 1956 K. O. SCHMIDT 2,770,902

SEMI-AUTOMATIC PREPETUAL CALENDAR

Filed Jan. 24, 1955 2 Sheets-Sheet 2

Fig. 4

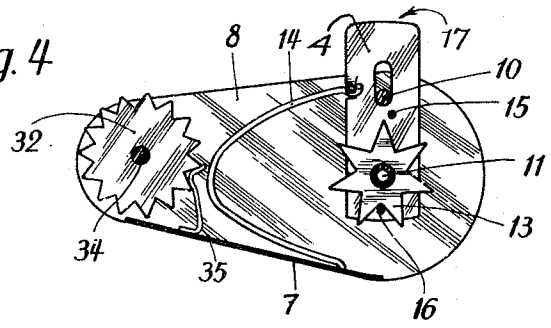


Fig. 5

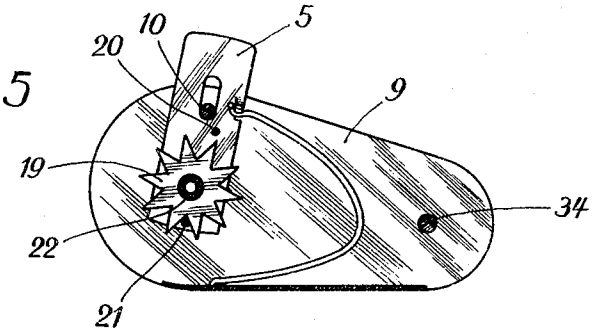
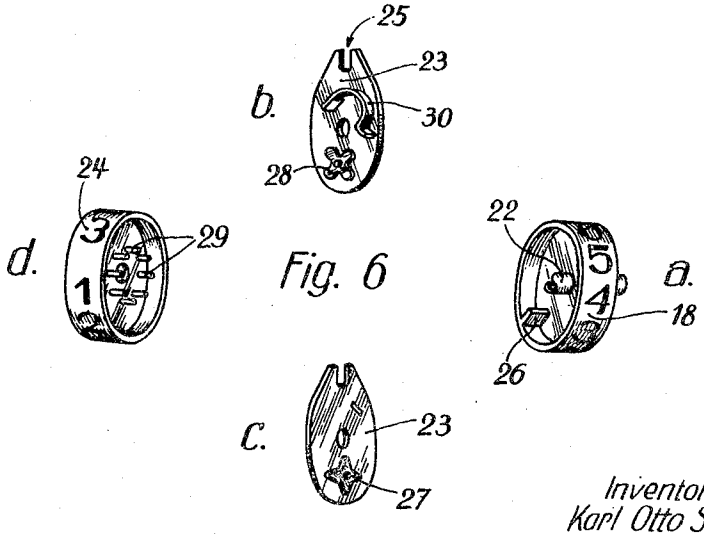


Fig. 6



Inventor
Karl Otto Schmidt

Karl Otto Schmidt

United States Patent Office

2,770,902

Patented Nov. 20, 1956

2,770,902

SEMI-AUTOMATIC PERPETUAL CALENDAR

Karl Otto Schmidt, Idar-Oberstein, Germany

Application January 24, 1955, Serial No. 483,515

1 Claim. (Cl. 40—111)

Perpetual calendars are known in which the setting of the days of the week and of the month and of the months is effected by hand separately or is effected simultaneously by the use of comparatively complicated gearing, taking into account irregularity of the number of days in each month and in a year.

The subject of the present invention is a perpetual calendar which with a few simple structural elements provides a convenient daily service while making use of an additional adjustment at the beginning of the month.

In the accompanying drawing illustrating an embodiment of the invention, Fig. 1 is a perspective front view of the calendar and Fig. 2 a perspective rear view. Fig. 3 is a view seen from below of the calendar with its cover omitted. Fig. 4 shows a view of the inside of the right hand wall, Fig. 5 shows a view of the inside of the left hand wall and Fig. 6 is a perspective view of the gearing between the numbers representing the days of the month with the parts separated.

As shown in Figs. 1 and 2 the desk shaped casing **1** of the perpetual calendar has two windows **2, 3** behind which the day of the week and month and the names of the months are visible. The calendar rests on two supports or legs **4, 5**. The frame **6** enclosed by the casing (Fig. 3) carries all the structural parts. It consists of the middle member **7** and two side walls **8, 9** at right angles thereto which are stiffened by strut **10**. A spindle **11** is mounted on the side walls **8, 9**. On it is loosely mounted a roller **12** indicating the days of the week. It is rigidly connected with a seven-toothed pinion **13** (Fig. 4). The support **4** is located between the pinion and the side wall **8** and is guided in two slots by strut **10** and spindle **11**. The supports are pressed outwards by means of spring **14**.

Two pins **15, 16** mounted in a suitable position in the support **4** control the setting and stoppage of the roller **12** marked with the days of the week. On pressing on the support **4** in the direction of the arrow **17** against the action of the spring **14** the pin **15** slides along a flank of a tooth and rotates pinion **13** through half a tooth division while pin **16** at the same time releases the pinion. When the support **4** is returned by the spring **14** into inoperative position, the pin **16** turns the pinion **13** through a further half tooth division and again stops pinion **13** and roller **12**.

The setting of the units of the days of the month shown on roller **18** is effected by a similar arrangement by means of support **5** (Fig. 5). The pinion **19** which is corresponding to pinion **13**, is provided with ten teeth; it is being rotated and stopped by pins **20** and **21** and is connected by a sleeve **22** with the roller **18**.

In Fig. 6 is shown under *a* the roller **18** with the sleeve **22**, on the left hand of which is mounted the ten-toothed pinion **19**. Between roller **18** and pinion **19** are located the disc **23** and roller **24** (Fig. 6, *b* and *d*). Disc **23** fits with its slot **25** over strut **10** and is thus prevented from rotating. Fig. 6*b* indicates that side of disc **23** which faces roller **24**, Fig. 6*c* the side facing roller **18**.

After each full rotation of the roller **18** the driving member **26** mounted on its inner side engages a tooth of the star wheel **27** which is thereby moved through a quarter of a revolution. The star wheel **27** and the feed wheel **27** are mounted one at each side of disc **23** on a common axis which is rotatable in a bore in the disc **23**. The feed wheel **28** engages through its 8 pins **29** with roller **24**. On a complete revolution of roller **18** roller **24** is moved through an eighth of a revolution. As on its periphery the succession of numbers 0 (white), 1, 2, 3 is shown twice it is rotated by a tenth. A blade spring **30** secured to the disc **23** and acting on the pins **29** holds the roller **24** in its position.

The roller **31** (Fig. 3) with the names of the month thereon is mounted together with a toothed wheel **32** on a further axis **34** mounted in the bore **33** (Fig. 3). A blade spring **35** serves to hold it. The wheel **32** is accessible through a slot in the casing from the exterior and is moved monthly by hand.

The operation of the perpetual calendar is as follows:

Starting from the first day of the month pressure is applied once daily to the outer side of the casing as a result of which supports **4, 5** are pressed inwards and the days of the week and month moved through one division. On each tenth day the roller **24** is also displaced by means of the parts **26 . . . 29**. At the end of the month by actuating the support **5** several times the necessary new setting can be obtained.

What I claim is:

Inside a semi-automatic desk calendar in desk form, two supports or legs resting on springs movable parallel to their long-axis and provided with two pins each, one of said pins mounted slightly aside from the long axis of said supports, two pinions provided with 7 and 10 teeth respectively adapted to be rotated by said pins one tooth by the up and down movement of said supports and then arrested, two rollers rigidly connected each to one of said pinions and marked respectively with the days of the week and the unit figures; a third roller marked with twice the succession of numbers 0 or blank, 1, 2, 3, rotated by a gear consisting of 8 pins on the inside of said third roller, a coupling disc, a star wheel and a feed wheel both with four cogs mounted with a common axis eccentrically to the roller axis on said coupling disc, and a projection on the inside of said first-numbered roller; a fourth roller marked with the names of the months and rotatable independently from said three rollers, and spring devices for arresting said third and fourth rollers.

References Cited in the file of this patent

UNITED STATES PATENTS

389,212	Fowle	Sept. 11, 1888
490,610	Wallin	Jan. 24, 1893
490,618	Wallin	Jan. 24, 1893
553,427	Rosenfeld	Jan. 21, 1896