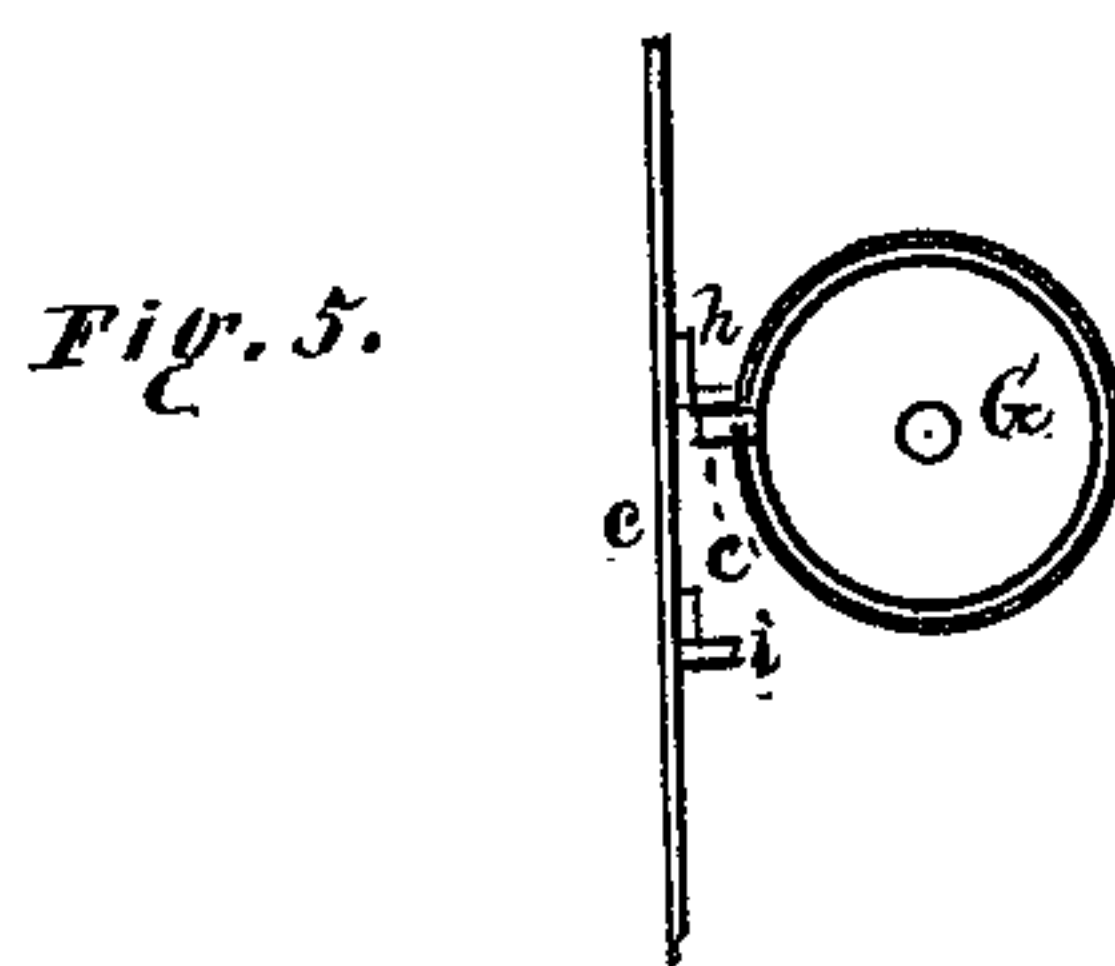
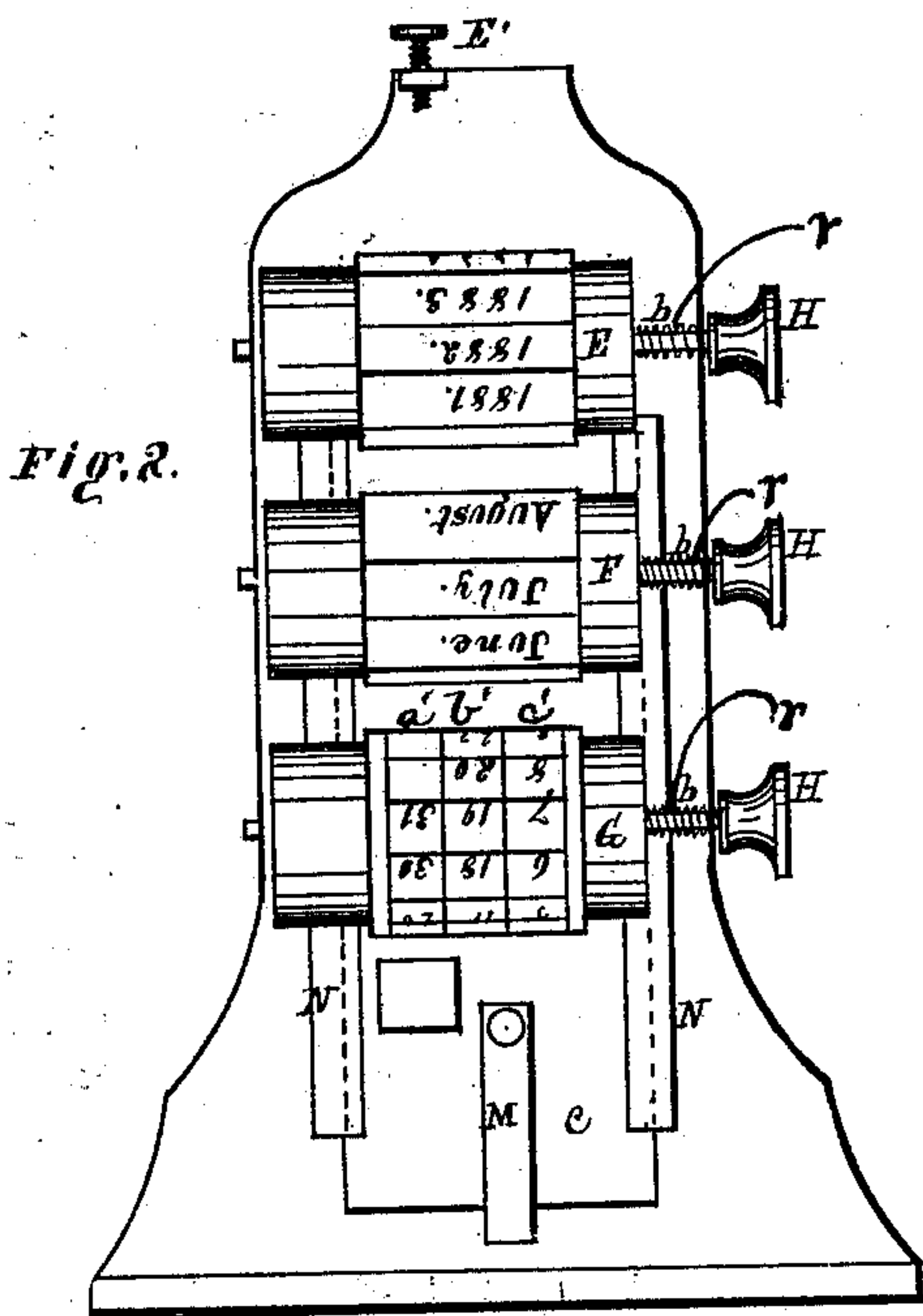
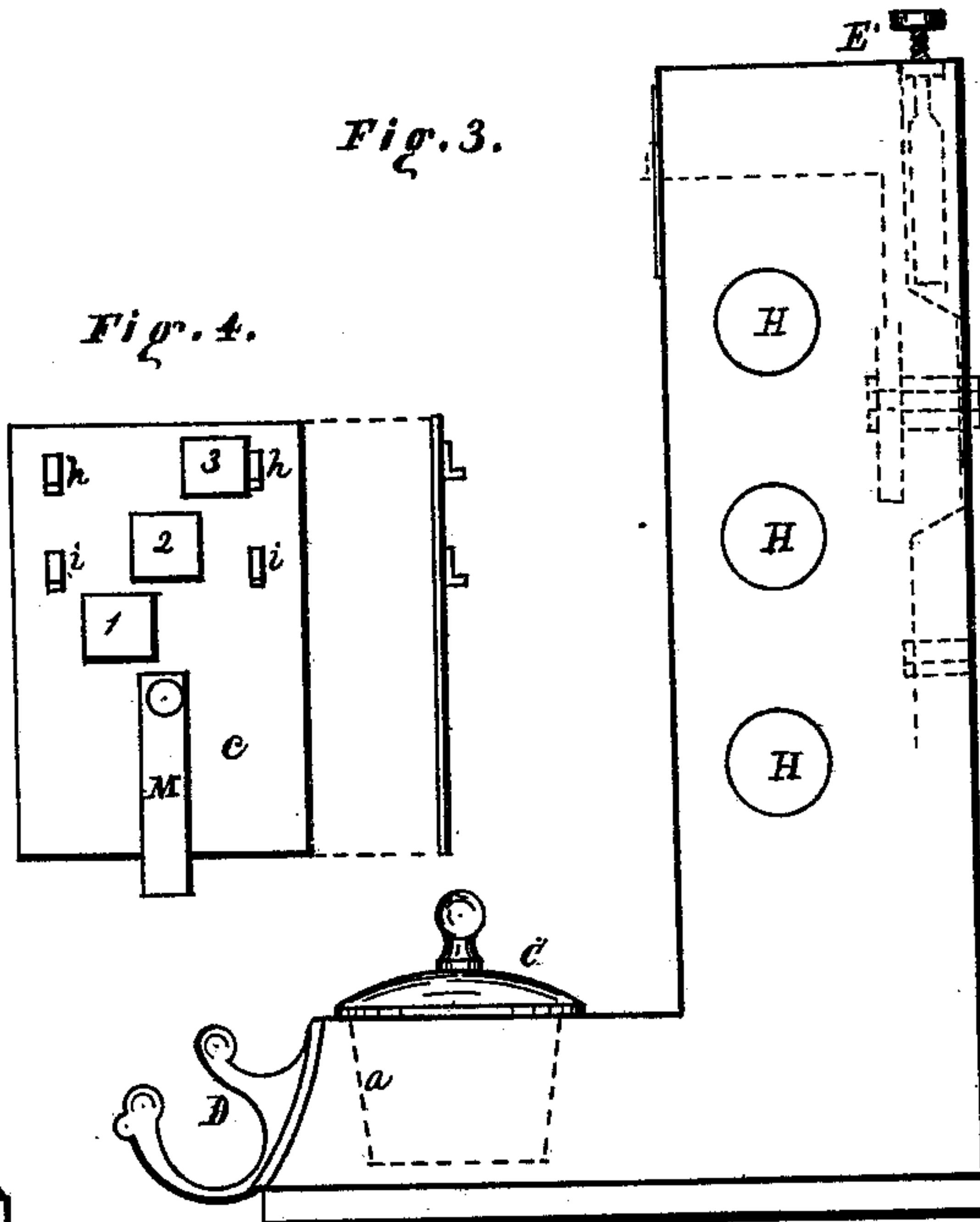
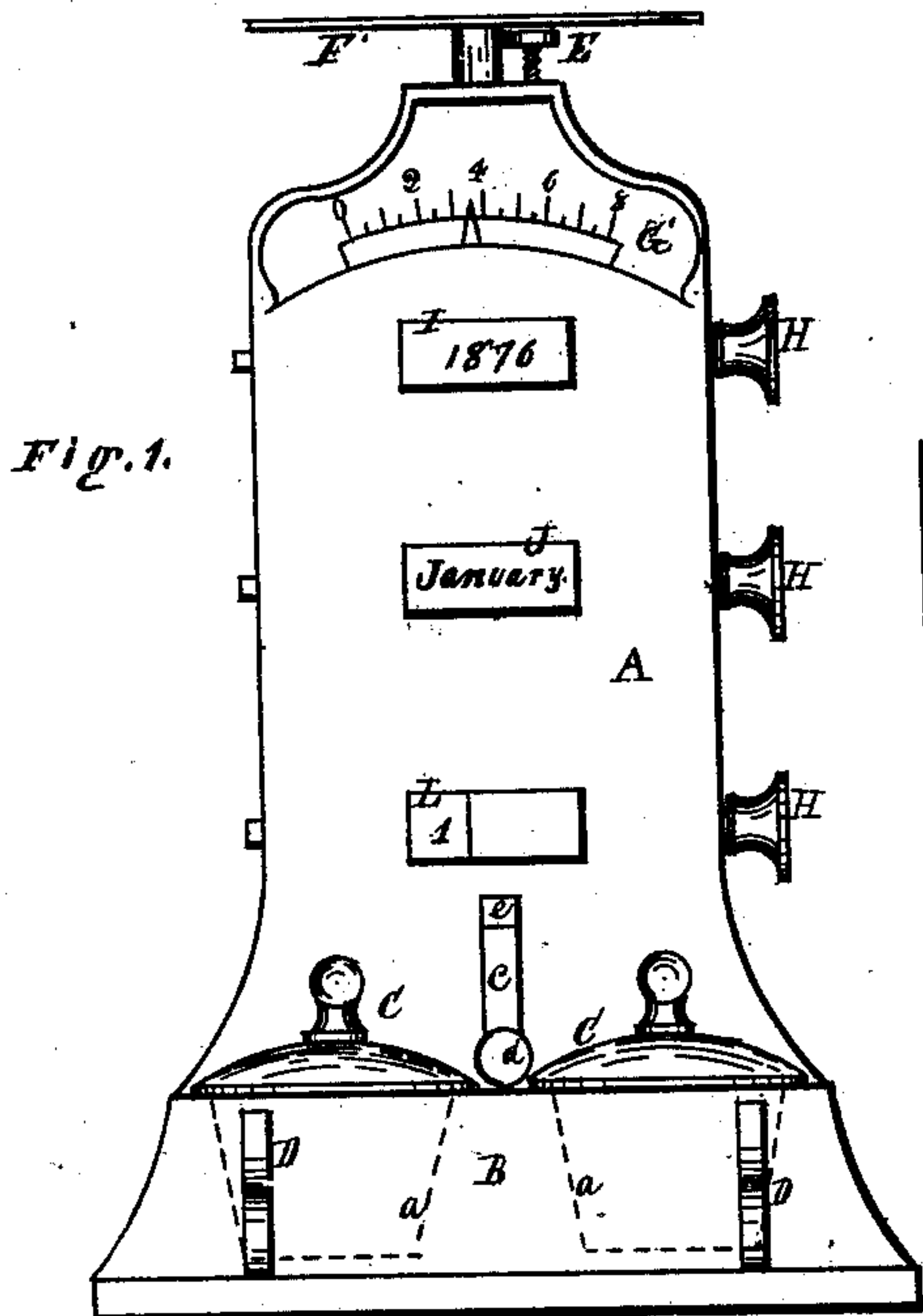


H. GRAM.
CALENDAR

No. 187,972.

Patented March 6, 1877.



Witnesses.
Geo. N. Verrier
Julius Schult

Inventor.
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Per Burridge & Co.
Attys

UNITED STATES PATENT OFFICE.

HENRY GRAM, OF CLEVELAND, OHIO.

IMPROVEMENT IN CALENDARS.

Specification forming part of Letters Patent No. **187,972**, dated March 6, 1877; application filed December 5, 1876.

To all whom it may concern:

Be it known that I, HENRY GRAM, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain Improvement in Calendars; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawings, making part of the same.

Figure 1 is a front view of the invention. Fig. 2 is a rear view of the inside. Fig. 3 is a side view of Fig. 1. Figs. 4 and 5 are detached sections.

Like letters of reference refer to like parts in the several views.

The nature of this invention relates to a calendar, which is constructed and operated in the manner as follows:

In the accompanying drawings, A represents a case wherein is arranged three rollers, E, F, and G, having their bearings in the sides thereof, and which are rotated by the finger-piece H from the outside. The rollers are restrained from moving too easily by the springs *b* on the shafts of the rollers, as shown in Fig. 2. On the roller E is wound a ribbon, whereon are printed, at certain regular intervals, numerals indicating the present year 1876, and the years forward to 1887, eleven years. Said numerals are read from the front of the case through an opening, I, Fig. 1, and are presented to the opening by turning the knob H. On the roller F is wound a ribbon whereon are displayed at certain distances the names of the months, and which are read from the front of the case through an opening, J, Fig. 1, and which are brought into sight by turning the knob H referred to. On the lower roller G is wound a ribbon, whereon are printed in three columns numerals indicating the days of the month, which are also read from the front through an opening, L, about one-third of which is closed by a slide or blind, *c*. A detached view of the slide is shown in Fig. 4, in which it will be seen that there are three openings, 1 2 3, in the slide corresponding to the columns of figures on the roller G. Said Fig. 4 represents a view of the rear side of the slide, in order to see the lugs *h i*, hereinafter noticed. Said slide is

attached to the inner side of the front of the case by means of guides or ways N, Fig. 2, in which it slides vertically when actuated by the button *d*, Fig. 1, projecting therefrom through a slot, *e*, for adjusting the openings to the columns of figures, as will hereinafter be shown. M is a spring secured to the slide, the lower end of which depends below the end of the slide, and presses against the front of the case, the purpose of which is to hold the slide in any one position when required.

From the back of the slide project lugs *h i*, Fig. 4, above alluded to, whereby the slide is raised by corresponding points or lugs *c'* projecting from the face of the roller G near each end, as shown in Fig. 5, representing an end view of said roller G and the lugs or points *c'* thereon in a contact relation to the slide and lugs *h*.

The manipulation of the above-described calendar is as follows: Assuming the present year, 1876, on turning the upper roller E, these figures will appear in the opening I, as seen in Fig. 1; also on turning the roller F January will appear in the opening J, and in the opening L will appear the digit 1, indicating the 1st day of January, 1876. On turning the roller G in the proper direction the digit 2 will appear in the opening L for the 2d day of January. On further turning the roller, 3 will come to the opening for the 3d day of January, and so on for each day until the first row of figures on the roller have been brought to the opening, the last one of which will be 12. At this point in the revolution of the roller the slide *c* is lifted on a further turning of the roller by means of the points *c'* thereof, which, at this time, engage the lugs *h* of the slide, as seen in Fig. 5, thereby pushing it up so far as to cover one-third of the opening L, in which the figure 1 appears in the drawing. This pushing up of the slide, while closing the opening in which the figure 1 appears, brings the opening 2, Fig. 4, of the slide to the middle of the opening L, through which the middle row of figures on the roller will be seen, the first in the series being 13, following in order after 12 in the first column. The first column being now shut from sight by the slide, and also the

third column, a continued turning of the roller brings to the opening the consecutive numbers for each day up to the 24th, at which point the roller has made one revolution, which brings the points *c'* of the roller to the lugs *i* of the slide, which is thereby lifted up so far as to bring the opening 3 of the slide in open relation to the opening L of the case, said opening 3 being about one-third of the width of the opening L, and through which the figures 25, in the third column of the roller, will be seen indicating the 25th day of January, or of any other month seen in the opening J. A further turning of the roller brings consecutively to the opening the remaining figures for the month up to the 30th or 31st, as may be. The slide is then pulled down by the knob *d*, and the roller turned so as to bring the numeral 1 again to the left-hand side of the opening L, as before. The

roller F is also turned, so that February will take the place of January in the opening J.

The operation above described for the month of January is now repeated for the month of February, and so on to the end of the year, at which time 1877 takes the place of 1876 in the opening I.

The slide *c* may be so arranged as to move laterally instead of vertically without changing the nature of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

The roller G, provided with three columns of figures, *a' b' c'*, in combination with the slide *c*, having corresponding openings 1 2 3, spring M, and case A, substantially in the manner as and for the purpose set forth.

Witnesses:

HENRY GRAM.

J. H. BURRIDGE,

GEO. H. WERNER.