Mar. 13, 1923. 1,448,293

H. L. GULLINE

PERPETUAL CALENDAR

Filed Oct. 22, 1921 2 sheets-sheet 1.

Fig-1.

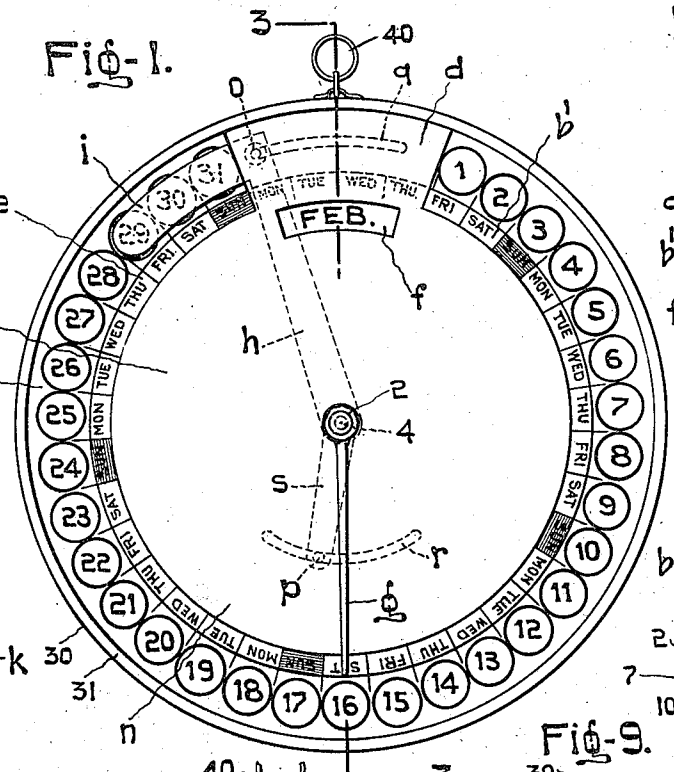


Fig-10.

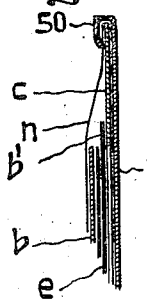


Fig-2.

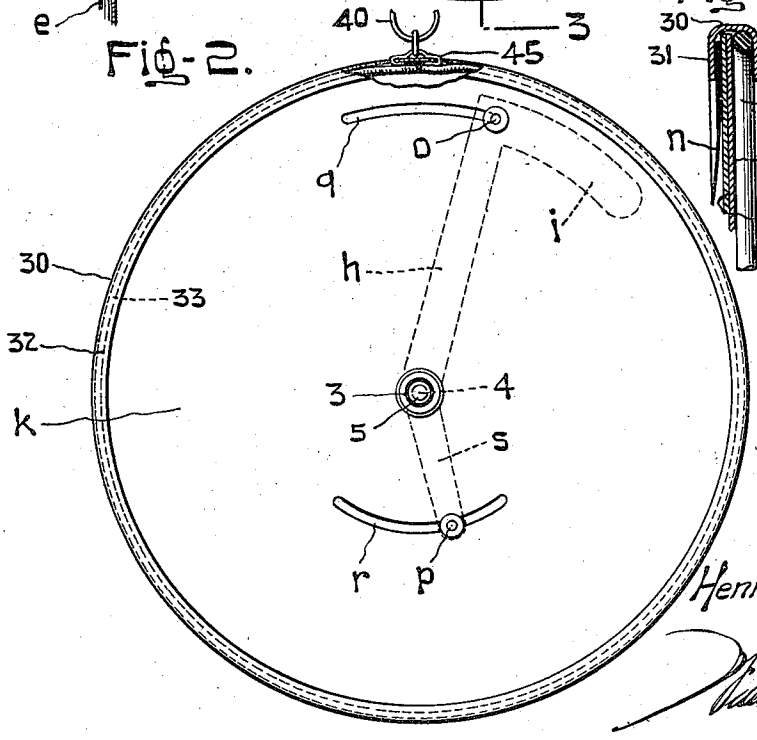


Fig-3.

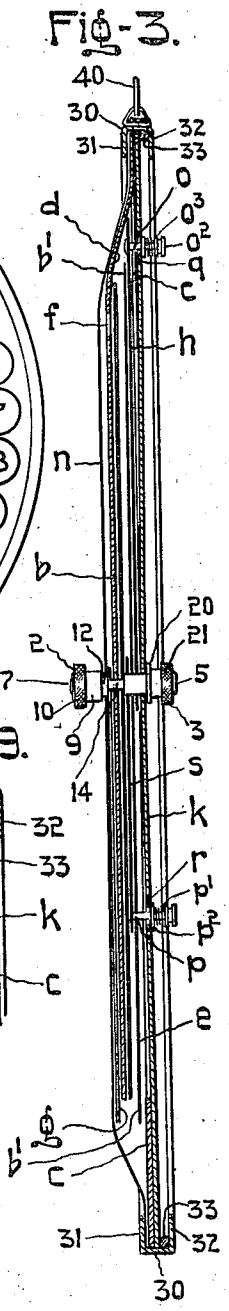


Fig-9.

Henry L. Gulline.
Inventor,

William L. Wheat
Attorney.

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PERPETUAL CALENDAR

Filed Oct. 22, 1921 2 sheets-sheet 2

Fig. 4.

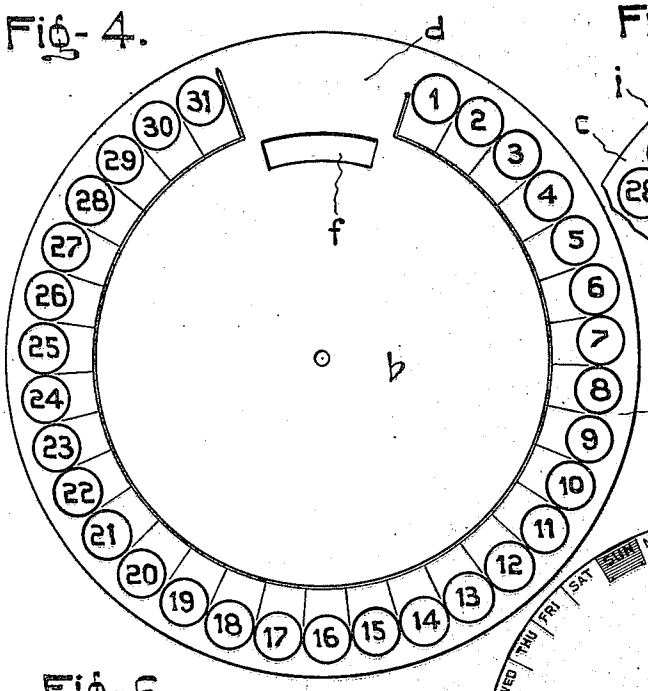


Fig. 7.

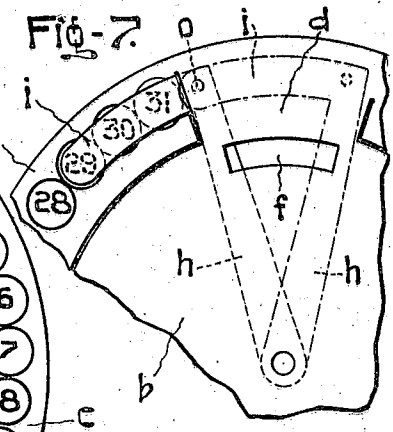


Fig. 5.

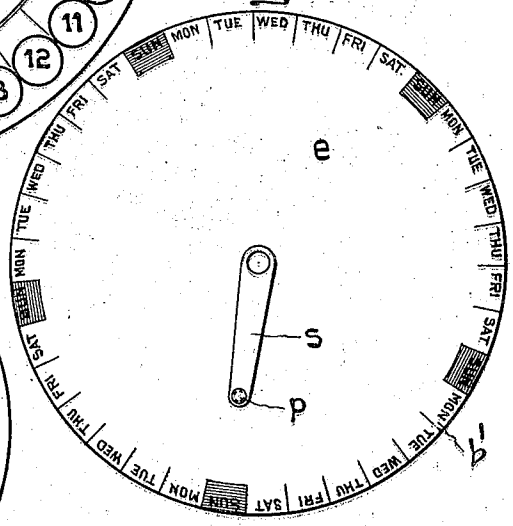


Fig. 6.

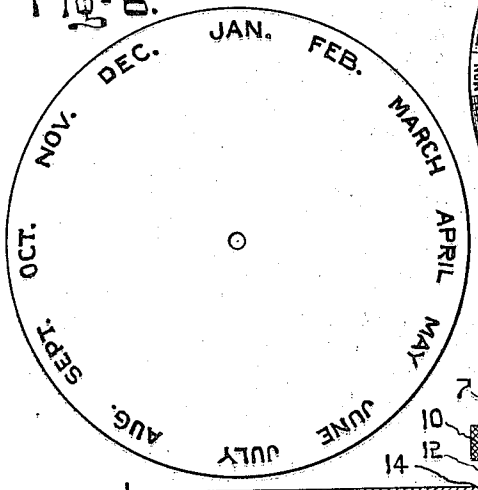
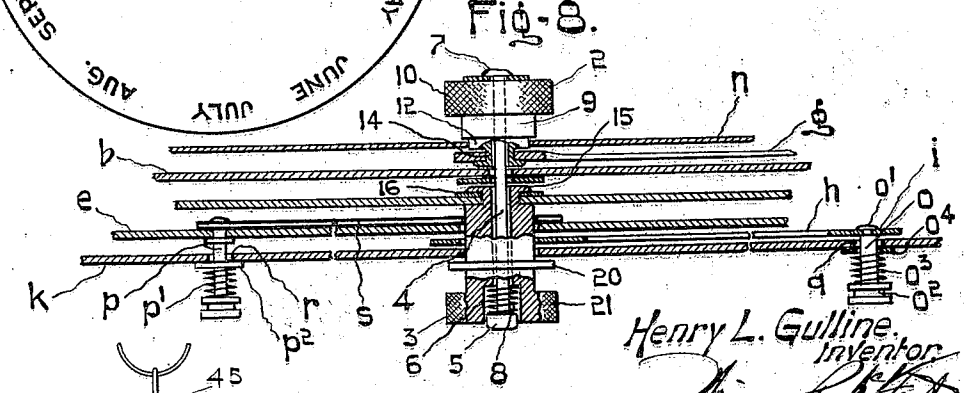


Fig. 8.



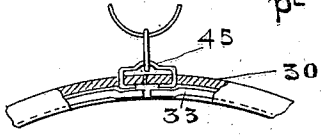


Fig. 11.

Henry L. Gulline. Inventor.

Attorney.

Patented Mar. 13, 1923. 1,448,293

UNITED STATES PATENT OFFICE.

HENRY L. GULLINE, OF MONTREAL, QUEBEC, CANADA, ASSIGNOR OF ONE-HALF TO JOHN HYDE, OF WESTMOUNT, QUEBEC, CANADA.

PERPETUAL CALENDAR.

Application filed October 22, 1921. Serial No. 509,647.

To all whom it may concern:

Be it known that I, HENRY L. GULLINE, of the city of Montreal, Province of Quebec, Dominion of Canada, a subject of the King of Great Britain, have invented certain new and useful Improvements in Perpetual Calendars; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has particular reference to perpetual calendars for current and continuous use and it has for its object to provide a calendar of this nature which will be simple, compact and inexpensive and lend itself readily for advertising purposes.

To this end the invention, broadly stated, consists of superimposed discs particularly relatively arranged to obtain compactness and at the same time coaction without the necessity of complex structure to prevent relative displacement.

More specifically stated the invention consists of a face plate a portion of which is partially detached to present supporting and retaining members between which the day and month discs are located. The supporting member carries the date numbers with which the day names on the day disc coincide, this disc being divided into weekly divisions and these divisions into daily subdivisions. It is these subdivisions which coincide with the date numbers upon the supporting member of the face plate. The date indicator is a hand with means for rotating it around the circle while the month disc also has means for its rotation and the day disc has means by which it is adjusted in an arc including seven subdivisions in order to permit the necessary change to be made to accommodate the names of the days to the numbers indicating the date for any month. The retaining member of the face plate is slotted to expose the name of the month printed upon the month disc. In order to set the calendar for a current month a screen is provided with means by which it may be adjusted to cover any number in excess of the number of days in the month.

For full comprehension, however, of my invention reference must be had to the accompanying drawings in which similar reference characters indicate the same parts and wherein:

Figure 1 is a face view of my improved perpetual calendar;

Figure 2 is a rear view thereof;

Figure 3 is a transverse sectional view taken on line 3—3 Figure 1;

Figure 4 is a detail view of the face disc removed;

Figure 5 is a detail view of the day disc;

Figure 6 is a detail view of the month disc; and

Figure 7 is a detail fragmentary view particularly illustrating the screen for covering the numerals 29, 30 or 31;

Figure 8 is a fragmentary axial sectional view drawn to a larger scale;

Figure 9 is a detail view of the means for protecting the edges of the calendar;

Figure 10 is a similar view of a modification and

Figure 11 is a detail view illustrating the means for suspending the calendar from a hook or the like.

The face plate has its middle portion *b* partially detached from an annular peripheral portion *c* the connection between the two members being a wedgelike portion *d*. The circumferential member, with the exception of this wedgelike part, is divided into thirty-one divisions bearing the numbers indicating thirty-one days in circumferential series, the date numbers being spaced a short distance from the circumferential line separating the middle from the peripheral member. The day disc *e* is slightly larger in diameter than the middle member *b* in order to overlap the inner edge of the circumferential member *c* thus exposing a narrow margin b^1 which is divided into radial spaces corresponding with the date divisions on the marginal member, these spaces containing the names of the days of the week. The month disc is substantially equal in diameter to the middle member *b* of the face plate and has marked thereon in circumferential series the names of the months while a slot *f* in the member *b* in close proximity to the attachment part *d* exposes the name of any one of the months according to the angular position to which the month disc may be adjusted.

The screen for covering the three numbers 29, 30 and 31 or one or two of them according to the number of days in the calendar month is preferably a thin metallic plate consisting of a radial arm *h* carrying at its end a member *i* curved concentrically to the face plate and being of sufficient width to

completely hide the date numbers while its length is sufficient to cover the numbers 29, 30 and 31. This member is adjustable circumferentially. The date indicator in the form of a hand *g* is pivoted centrally of the face of the calendar and is of sufficient length to overlap the margin b^1 of the day disc.

A back for the calendar consists of a disc *k* and the face is covered by a transparent front *n*.

The means for adjusting the day discs and date screen consist of pins *o* and *p* respectively, projecting through curved slots *q* and *r* in the back disc. The pin *o* is riveted at its inner end as at o^1 in the screen *i* at the junction of its arm *h*, and in order to give it stability and the screen smoothness of action this pin has a head o^2, and a spring o^3 bears at one end against this head and its opposite end against a washer o^4, thus bracing the pin in its slot in the disc *k*. The pin *p* is also braced by a spring p^1 and a washer p^2, its inner end being riveted to an arm *s* pivoted centrally of the calendar and it projects through the day disc and the slot while this pin is also riveted to the disc, thus insuring smooth action of the disc without danger of the disc, of cardboard or other relatively frail material, being torn when being adjusted. The date indicating hand and the month disc are rotated by front and rear turn buttons 2 and 3 respectively indicated particularly in Figure 8. These front and rear buttons are rotatably mounted on an axial pin 4 each button being axially bored for the purpose. The rear end of the pin has a head 5 accommodated in a seat 6 in the rear button, the front end of the pin being riveted as at 7 to prevent it entering the boring in the front button; while an expansile helical spring 8 yieldingly holds the buttons together and also yieldingly connects the members of the calendar at the center. The front button 2 is reduced as at 9 to present a distance piece or collar separating a knurled thumb-hold 10 from the celluloid front, the button being further reduced in diameter as at 12 to present a shoulder serving as a distance piece providing the necessary clearance to accommodate the celluloid cover and permit rotation of the button freely relatively to the latter. The inner end of this button has a short stem 14 which is riveted in the hub of the hand *g* thus providing the means for rotating this hand. The month disc is mounted rigidly on the inner end of the rear button by being riveted thereto by means of a tubular stem 15 through a washer 16. The arm *s* has a hub encircling this rear button thus providing the necessary pivotal connection, the day disc *e* being also pivoted on this button 3 as is also the inner end of the arm *h* carrying the screen *i*. This button has a collar 20 for confining the back plate and a knurled collar 21 for affording a thumb-hold.

In order to provide the necessary friction to prevent rotation from being transmitted from one rotary disc to the other during adjustment from day to day and month to month, the back disc, face plate and celluloid cover are clamped together at their edges by an annular frame 30 having a flat flange 31 extending inwardly therefrom at right angles thereto to overlie the edge of the face plate cover to within close proximity of the date numbers. A wire ring 33 serving as a compression filler is located against the rear side edge portion of the back and the frame piece has a flange 32 adapted to be pressed down over the ring to clamp the edges of these three discs tightly together as shown particularly in Figure 9 and allow the month and day discs, the screen and the hand to have freedom of movement. The compactness of this calendar is due largely to the fact that the back and cover or front may be clamped firmly at their edges to the annular peripheral portion *c* or supporting member of the face plate. The central portion *b* or retaining member of the latter acts as a filler pressing upon the month disc and retaining it against movement while the larger day disc is being moved by its pin; and the pressure of the day disc on the inner margin of the annular supporting member of the face plate retains it against movement while the month disc is being rotated by its central rear button. This particular arrangement of parts permits the free rotation of the indicator hand between the celluloid and the retaining member of the face plate without abrading either.

The calendar is hung by a loose ring 40 confined in a fixed ring secured to the ends of the annular frame 30 by a staple the legs 45 of which are projected through this frame and clinched on its inside the frame being constructed of a single piece of metal bent to annular form with its ends abutting and united by the staple.

This particular construction of face plate in two members joined by the wedge-like part at the top is particularly designed to act as an advertising medium.

In the modified construction illustrated in Figure 10 the back disc *k* which may be of sheet metal or any other material of sufficient rigidity has formed therewith a circumferential turned-in retaining flange 50. This flange is the equivalent of the flange 31.

In order to set the calendar for a current date the screen is first adjusted to expose the correct number of days. The month disc is then rotated by button 3 until the name of the month is exposed in slot *f*. The day disc is then adjusted to set the name of the day upon which the first of the month

falls in juxtaposition with the numeral, by means of the pin p the indicator hand is finally swung to the number of the current day.

The calendar will then indicate the current month, day and date and the indicator hand being over the face plate it may be colored distinctly thus strikingly indicating the date.

Although my invention is applicable to and has been described in connection with calendars and more particularly daily calendars of a perpetual nature, nevertheless the particular structure and arrangement of parts may be employed wherever it is necessary to indicate different units in a combination including such units with other relatively movable parts the movement of which indicates different sum totals, without departing from the spirit of my invention.

What I claim is as follows:

1. In a device of the type described, the combination with concentrically disposed parts bearing relative markings, such parts including a supporting member, a retaining member of smaller diameter than the supporting member and a part located between the said supporting and retaining members and having its margin exposed beyond the periphery of the retaining member, means for rotatably adjusting the part between the supporting and retaining members, and an adjustable indicator for directing attention to particular markings in the exposed margins of the supporting member and intermediate part.

2. In a device of the type described, an integral face plate comprising an annular supporting member and a circular retaining member, the latter being partially separated from the annular supporting member, a rotary disc located between the supporting and retaining members and presenting a marginal portion overlapping the supporting member, means whereby the disc is adjusted to different angular positions, an adjustable indicator for directing attention to particular markings in the exposed margins of the supporting member and intermediate disc.

3. In a device of the type described, the combination with a face plate, back and transparent front, and means for clamping the same together at their outer edges, of a relatively large central retaining disc connected at one point in its periphery to an annular supporting member, a disc of less diameter than the supporting member and greater diameter than the retaining disc and located between the said member and retaining disc and having its exposed margin and the annular supporting member provided with relative markings, and means for rotatably adjusting the said intermediate disc.

4. In a device of the type described the combination with a face plate, back, and transparent front, and means for clamping the same together at their outer edges, of a supporting member and a relatively large central retaining disc connected at one point in its periphery to the supporting member, a disc of less diameter than the supporting member and greater diameter than the retaining disc and located between the said member and disc and having its exposed margin and the supporting member provided with relative markings, means for rotatably adjusting the said intermediate disc, a second disc rotatably mounted between the first mentioned disc and retaining disc and bearing certain markings relative to the markings of the first mentioned disc and supporting member, and the retaining disc having a slot adapted to expose one of the said markings of the second mentioned disc, and means for rotatably adjusting the said second mentioned disc.

5. In a device of the type described, the combination with a face plate, back, and transparent front, and means for clamping the same together at their outer edges, of a supporting member a relatively large central retaining disc connected at one point in its periphery to the supporting member, a disc of less diameter than the supporting member and greater diameter than the retaining disc and located between the said member and disc and having its exposed margin and the supporting member provided with relative markings, means for rotatably adjusting the said intermediate disc, a second disc rotatably mounted between the first mentioned disc and retaining disc and bearing markings relative to the markings of the first mentioned disc and supporting member, and the retaining disc having a slot adapted to expose one of the said markings of the second mentioned disc, means for rotatably adjusting the said second mentioned disc, and an indicator hand pivoted centrally of the discs and located between the retaining disc and transparent cover, and means for adjusting the said indicator to different angular positions.

6. In a device of the type described, the combination with a face plate presenting a supporting member, back and transparent front, and means for clamping the same together at their outer edges, of a relatively large central retaining disc connected at one point in its periphery to the supporting member, a disc of less diameter than the supporting member and greater diameter than the retaining disc and located between the said member and disc and having its exposed margin and the supporting member provided with relative markings, means for rotatably adjusting the said intermediate disc, a second disc rotatably mounted between the first mentioned disc and retaining disc and bearing at its margin certain markings rela-

tive to the markings of the first mentioned disc and supporting member, and the retaining disc having a slot adapted to expose one of the said markings of the second mentioned disc, means for rotatably adjusting the said second mentioned disc, and an indicator hand pivoted centrally of the disc and located between the retaining disc and transparent cover, and means for adjusting the said indicator to different angular positions, said means consisting of a turn button exposed outside of the cover.

7. In a device of the type described, the combination with a face plate, back, and transparent front, and means for clamping the same together at their outer edges, of a relatively large central retaining disc connected at one point in its periphery to an annular supporting member, a disc of less diameter than the supporting member and greater diameter than the retaining disc and located between the said member and retaining disc and having its exposed margin and the annular supporting member provided with relative markings, means for rotatably adjusting the said intermediate disc, an adjustable screen for covering a portion of the annular supporting member to a variable extent and means for adjusting the said screen.

8. In a device of the type described, the combination with a face plate, back, and transparent front, and means for clamping the same together, of a relatively large central retaining disc connected at one point in its periphery to an annular supporting member, the said retaining disc having a slot, a disc rotatably mounted between the supporting member and retaining disc and having markings thereon to be exposed through the said slot, means for pivoting and rotating the said rotatable disc consisting of a turn button rotatably mounted at the centre of the back and having the said rotatable disc rigidly secured thereto.

9. In a device of the type described, the combination with a face plate, back, and transparent front, and means for clamping the same together, of a relatively large central retaining disc connected at one point in its periphery to an annular supporting member, the said retaining disc having a slot, a disc rotatably mounted between the supporting member and retaining disc and having markings thereon to be exposed through the said slot, means for pivoting and rotating the said rotatable disc consisting of a turn button rotatably mounted at the centre of the back and having the said rotatable disc rigidly secured thereto and means for yieldingly retarding the rotation of the rotatable disc.

10. In a device of the type described, the combination with a face plate presenting an annular supporting member, back, and transparent front, and means for clamping the same together at their outer edges, of a relatively large central retaining disc connected at one point in its periphery to the supporting member, a disc of less diameter than the supporting member and of greater diameter than the retaining disc and located between the said member and disc and having its exposed margin and the annular supporting member provided with relative markings, means for rotatably adjusting the said intermediate disc, consisting of a journal mounted centrally within the device and having an arm pivoted thereon, the said back having a slot curved concentrically to the device, a pin riveted at its inner end to the arm and projecting through the said intermediate disc and through the said slot and having a head on its outer end, and a spring encircling the pin and bearing between the head thereof and the said back and serving as a tension between the pin and back.

11. In a device of the type described, the combination with a face plate presenting an annular supporting member, back, and transparent front, and means for clamping the same together at their outer edges, of a relatively large central retaining disc connected at one point in its periphery to the supporting member, a disc of less diameter than the supporting member and greater diameter than the retaining disc and located between the said member and disc and having its exposed margin and the annular supporting member provided with relative markings, means for rotatably adjusting the said intermediate disc, a second disc rotatably mounted between the first mentioned disc and retaining disc and bearing at its margin certain markings relative to the markings of the first mentioned disc and supporting member, and the retaining disc having a slot adapted to expose one of the said markings of the second mentioned disc, means for rotatably adjusting the said second mentioned disc, and an indicator hand pivoted centrally of the disc and located between the retaining disc and transparent cover, and means for adjusting the said indicator to different angular positions, said means consisting of a turn button exposed outside of the cover and rotatably mounted centrally of the device and having the said indicator hand rigidly fastened thereto to rotate therewith.

12. In a device of the type described, the combination with a face plate, back, and transparent front, and means for clamping the same together at their outer edges, of a relatively large central retaining disc connected at one point in its periphery to an annular supporting member, a disc of less diameter than the supporting member and greater diameter than the retaining disc

and located between the said member and retaining disc and having its exposed margin and the annular supporting member provided with relative markings, means for rotatably adjusting the said intermediate disc, the said back having a slot curved concentrically to the device, an adjustable screen for covering a portion of the annular supporting member to a variable extent and means for adjusting the said screen, consisting of a radial arm having the screen formed integrally therewith, a fulcrumed member located centrally of the device and having said arm pivoted thereon, a pin riveted at its inner end to the arm and projecting through the said slot in the back and having a head upon its outer end and a spring encircling the pin and bearing between the head and the said back.

13. In a device of the type described, the combination with centrally disposed parts bearing relative markings and being relatively rotatable, a frame consisting of a back and a front and means for clamping the same together at their edges, of a rotatable fulcrum located centrally of the device consisting of front and back centrally bored turn buttons projecting inwardly through the front and inwardly through the back respectively, a pin extending through the borings and having enlarged ends, and a spring encircling the pin and yieldingly holding the buttons together.

14. In a device of the type described, the combination with a back, and transparent front, and means for clamping the same together, consisting of an annular frame having a flat flange extending at right angles thereto and overlapping the edge of the front, and a wire ring within the frame and bearing upon the edge of the back and a second flange upon the said frame piece and clamping the wire ring and coacting with the first mentioned flat flange in clamping the wire ring and edges of the parts together, of a relatively large central retaining disc connected at one point in its periphery to an annular supporting member, the said retaining disc having a slot, a disc rotatably mounted between the supporting member and retaining disc and having markings thereon to be exposed through the said slot, means for pivoting and rotating the said rotatable disc consisting of a turn button rotatably mounted at the centre of the back and having the said rotatable disc rigidly secured thereto.

15. In a device of the type described, the combination with centrally disposed parts bearing relative markings and being relatively rotatable, a frame consisting of a back and a front and means for clamping the same together at their edges consisting of an annular frame having a flat flange extending at right angles thereto and overlapping the edge of the front, and a wire ring within the frame and bearing upon the edge of the back and a flange upon the said frame piece and clamping the wire ring and coacting with the flat flange in clamping the wire ring and edges of the parts together, the said annular frame consisting of a single bent piece with its ends abutting and a hanger consisting of a ring fixed to the abutting ends by a staple with the ends of the latter clinched within the frame.

In testimony whereof I have signed my name to this specification in the presence of two witnesses.

HENRY L. GULLINE.

Witnesses.
GORDON G. COOKE,
HARRIETTE MCDONALD.