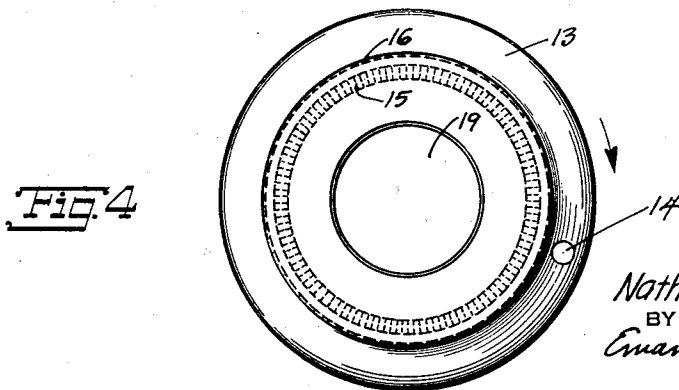
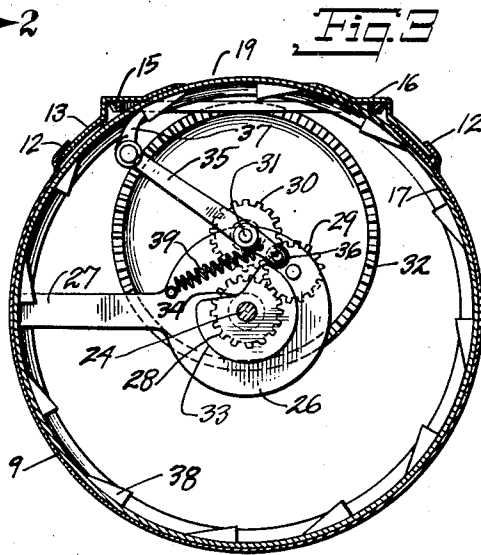
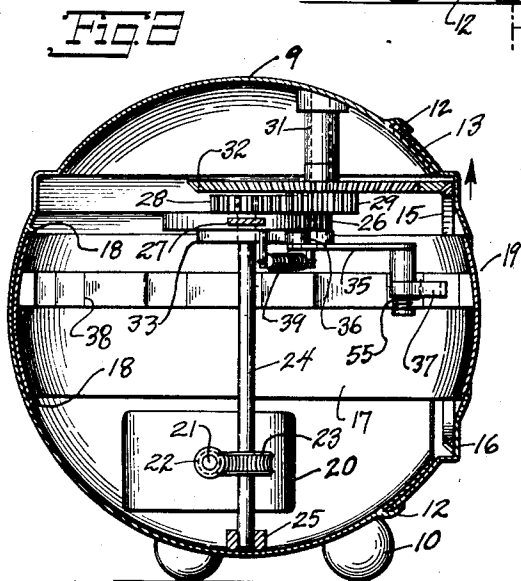
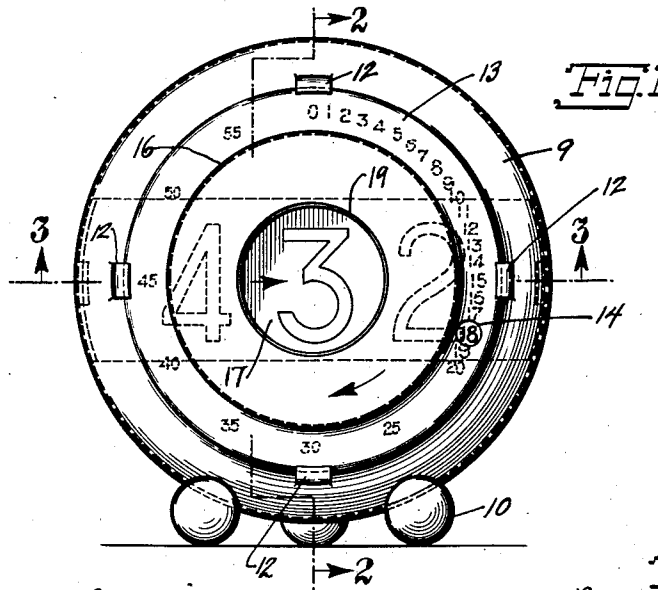


2,157,540

4 Sheets-Sheet 1.



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May 9, 1939.

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2,157,540

CYCLOMETER CLOCK

Original Filed May 13, 1936

4 Sheets-Sheet 2

Fig 5

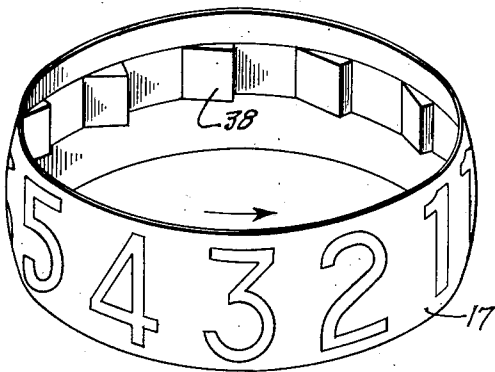


Fig 6

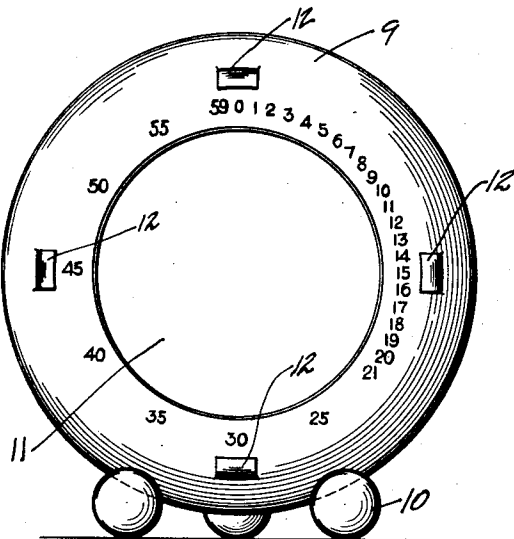


Fig 7

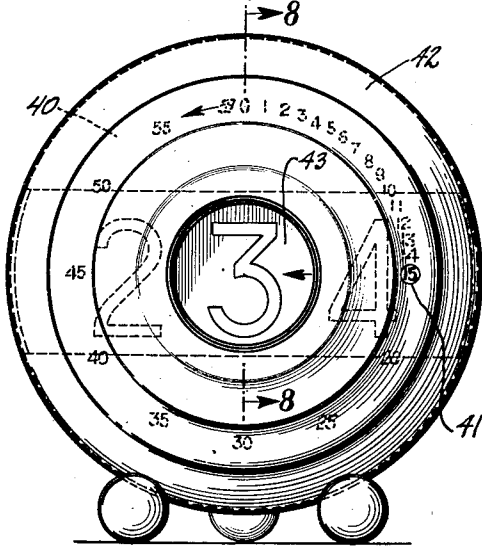
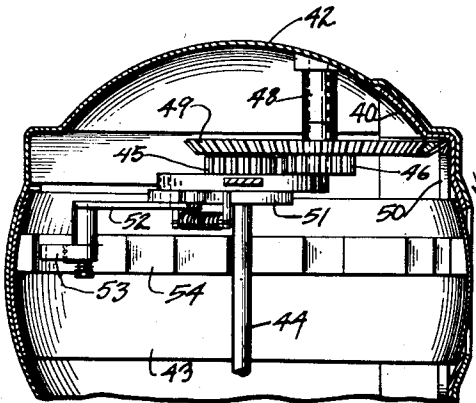


Fig 8



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Fig. 8

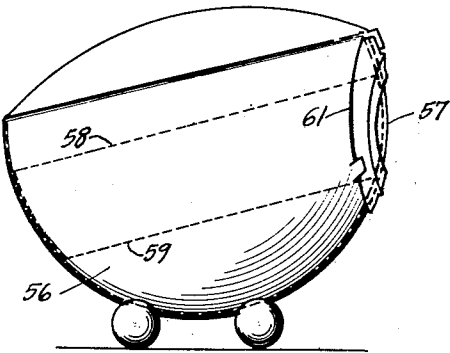


Fig. 10

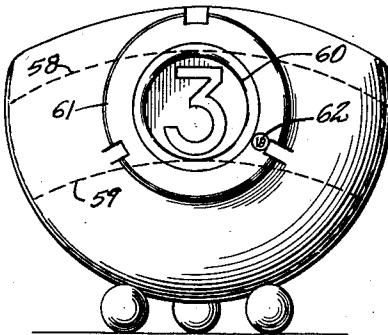


Fig. 11

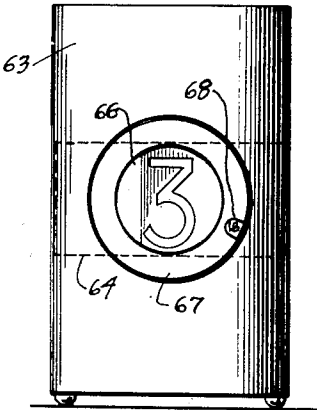


Fig. 12

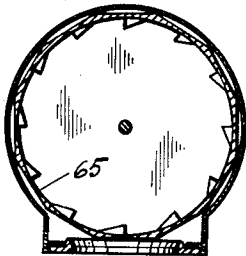


Fig. 13

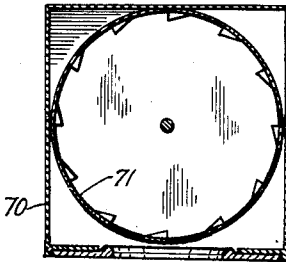
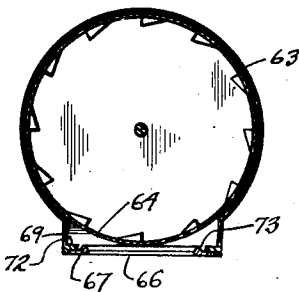


Fig. 14



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Original Filed May 13, 1936

4 Sheets-Sheet 4

Fig. 15

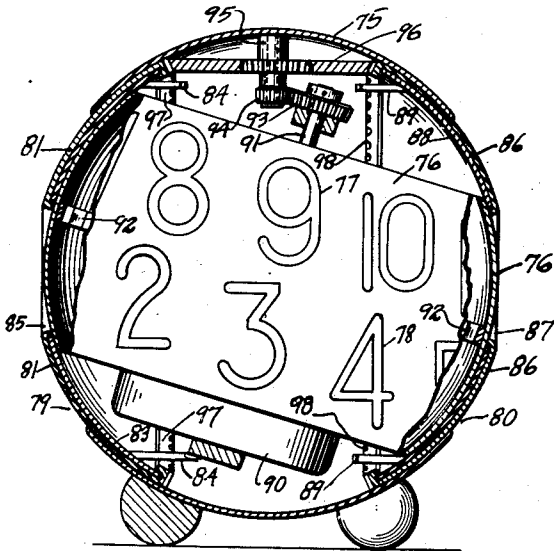


Fig. 17

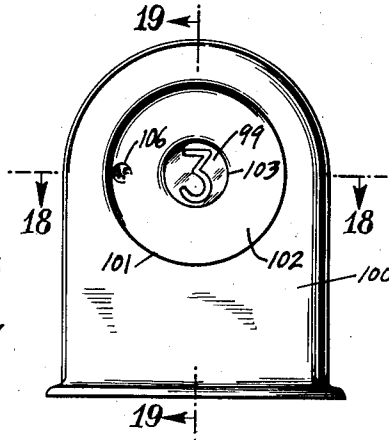


Fig. 18

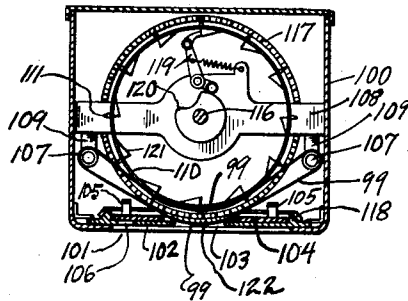
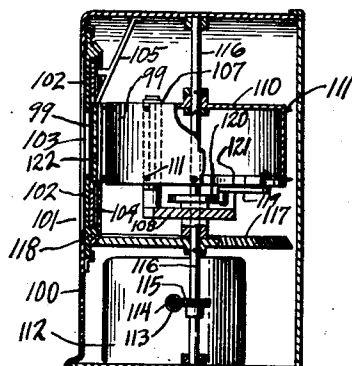


Fig. 19



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2,157,540

CYCLOMETER CLOCK

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Application May 13, 1936, Serial No. 79,449

Renewed October 3, 1938

16 Claims. (Cl. 58—125)

This invention relates to a cyclometer clock having a construction which enables the hour numerals to be very large in proportion to the size of the clock. A small clock of my construction will have these numerals legible at a considerable distance. In clocks having all cylindrical dials or drums, the numerals are marked on the periphery of the cylindrical drums which are placed next to each other about the same horizontal axis of rotation. These drums require a bulky case and crowd the driving mechanism. In my mechanism there is only one ring dial or drum, the one used for the hour numerals. My hour drum preferably rotates about a vertical axis enabling the numerals marked on its periphery to be increased in height without substantially increasing the size of the clock. Numerals are normally higher than wide, so that much larger numerals can be used on my hour drum than in those of previous clocks, such as that shown in Patent No. 1,991,241, because the width and not the height of the numerals is the controlling factor in the diameter of my drum.

My preferred form has a casing with a spherical surface, said casing comprising a complete sphere or a part of a sphere. In said casing an hour drum is rotatably mounted, said drum being in the form of a spherical zone with hour numerals on its periphery. There is an opening in the front of the casing through which the successive hour numerals are exposed. A ring of minute numerals are marked on the front of the casing about said opening, and means are provided to point out or indicate the successive minute numerals. The minute indicating means is preferably a rotatably mounted plate having an opening therein concentric with the opening in the casing, said plate having a spherical surface and a window in it which travels around in front of the minute numerals, successively exposing them. The position of this window corresponds at any time to the position of the minute-hand on the ordinary type of clock, making it unnecessary to change age old habits of time telling. Contrasting colors used between that of the minute numerals or their background and that of the minute disc, will aid an observer at a considerable distance to estimate the time by the position of the window, even if he cannot read the minute numerals. A light behind translucent minute numerals exposed at the window is also effective in estimating the time at a distance.

The construction of my clock avoids the annoyance of the constant clicking present in clocks having a cylindrical drum for the minutes, where

the drum is given a jump at the end of each minute. Only once an hour is there a click in my clock, as the hour ring or drum jumps at the end of an hour to expose the next hour numeral, my minute disc preferably being given a continuous rotation.

My clock may be constructed in a number of forms. Instead of having the means for presenting the hour numerals at the concentric openings of the casing and the minute indicating means, in the form of a drum, said former means may be in the form of an endless belt, with the hour numerals thereon. The belt as it runs on its rollers presents the successive hour numerals at said openings.

Other objects and advantages will become apparent upon a further study of the description and drawings, in which:—

Fig. 1 is a front elevation of the preferred form of my clock.

Fig. 2 is a section taken generally along the line 2—2 of Fig. 1.

Fig. 3 is a section taken along the line 3—3 of Fig. 1.

Fig. 4 is an elevation of the annular disc with the minute window, said disc being shown by itself.

Fig. 5 is a perspective view of the hour ring or drum shown by itself.

Fig. 6 is a front elevation of the main casing shown by itself.

Fig. 7 is a front elevation of an alternative form of the clock in which the minute numerals rotate.

Fig. 8 is a partial section of the clock taken along the line 8—8 of Fig. 7.

Fig. 9 is a side elevation of a form of the clock in which only a portion of the clock casing has a spherical surface.

Fig. 10 is a front elevation of the clock shown in Fig. 9.

Fig. 11 is a front elevation of a form of the clock in which the casing is cylindrical.

Fig. 12 is a horizontal section of the clock of Fig. 11 in which the drum is in the form of a prism inscribed in the cylindrical casing, the driving mechanism being omitted.

Fig. 13 is a section of a clock having a casing in the form of a prism, the drum being in the form of a cylinder, the driving mechanism being omitted.

Fig. 14 is a horizontal section of a clock with a cylindrical casing, as in Fig. 11, in which the drum is also cylindrical, the driving mechanism being omitted.

Fig. 15 is a section through a two faced clock, the hour ring being shown partially in elevation, said section being taken along the line 15—15 of Fig. 16.

Fig. 16 is a front elevation of the two faced clock.

Fig. 17 is a front elevation of an endless band type of clock.

Fig. 18 is a section taken along the line 18—18 of Fig. 17, and

Fig. 19 is a section taken along the line 19—19 of Fig. 17.

Main casing 9, which is spherical, is supported on feet 10. A large opening 11 (Fig. 6) is provided in the front of casing 9. The minute numerals 0 to 59 are marked on casing 9, bordering opening 11. In the drawings only some of the minute numerals are shown, it being readily understood that a complete set of numerals are to be provided.

Guide lugs 12 are provided on the front of casing 9. Annular minute disc or plate 13, is rotatably mounted between lugs 12 and casing 9. As disc 13 is rotated, by means to be described later, minute window 14 exposes the successive minute numerals located on the front of casing 9 about large opening 11. Disc 13 has a large window 19 which is concentric with opening 11. The inside face of disc or plate 13 is provided with a ring of bevel gear teeth 15. Disc 13 is set out in the form of a ridge 16 at teeth 15, so that the distance from the center of the spherical casing 9 to the innermost point on said teeth is not less than the radius of the inside face of casing 9. This is so that teeth 15 will clear the outside face of hour ring or drum 17. Hour ring 17, which has a spherical contour, is a substantially hollow spherical zone, preferably symmetrical about a great circle of the casing, and preferably that great circle which is the equator of the casing, the outer face of said zone having a radius substantially equal to that of the inside face of casing 9. Ring 17 is slidably mounted in casing 9 and is retained in position therein by guide lugs 18. The axis of rotation of hour ring or drum 17 is at right angles to the axis of rotation of minute disc 13. Hour ring 17 has large numerals 1 to 12 around its outside face, which, as said ring is rotated, show successively through large window 19 of disc 13.

A synchronous electric clock motor 20 with the necessary reducing gearing, is used to drive hour ring 17 and disc 13. The motor shown is diagrammatic. In its place a spring clock motor could be used. A motor shaft 21 has at its outer end a worm 22, which meshes with a worm wheel 23 fixed to shaft 24. Shaft 24 has one end mounted in a bearing 25 on casing 9 and the other end in fixed disc 26, Figs. 2 and 3. Disc 26 is mounted on casing 9 by a pedestal 27. On the end of shaft 24 away from worm wheel 23 is fixed a gear 28 which meshes with an idler gear 29. Idler gear 29 meshes with gear 30 fixed on short shaft 31. Fixed to short shaft 31, adjacent to idler gear 29, is bevel gear 32 which meshes with bevel gear teeth 15 on minute disc 13. For driving hour ring 17, a cam 33 is provided fixed to shaft 24, said cam having a low spot 34 formed in its periphery. A lever 35 is pivotally mounted on fixed disc 26. The inner end of said lever carries a cam roller 36. The outer end of lever 35 has a pawl 37 pivotally mounted on it. Pawl 37 is normally spring pressed outward by spring 55. Hour ring 17 is provided on its inside with twelve ratchet teeth 38 which are successively engaged

by pawl 37. The mechanism for driving hour ring 17 is similar to that shown in U. S. Patent No. 2,001,195, May 14, 1935.

The gear train comprising gears 28, 29, 30, 32 and ring of bevel gear teeth 15 is so proportioned that one revolution of shaft 24 occurs for each revolution of minute disc 13. Thus low spot 34 comes opposite roller 36 once each hour. When this occurs, spring 39, pulling on lever 35, snaps said roller into said low spot, causing pawl 37 to rotate hour ring 17 one-twelfth of a revolution and to expose the next hour numeral at window 19.

The driving mechanism rotates minute disc 13 with its window 14 continuously, one revolution requiring an hour's time. When minute disc 13 has about finished exposing numeral 59, hour ring 17 is caused to jump a one-twelfth revolution. The rotation of window 14 exposes the successive minute numerals. The minutes can be determined or estimated at a great distance from the clock, even if the minute numerals cannot be read, by the position of window 14, just as by the minute-hand in an ordinary clock.

In the alternative form shown in Figs. 7 and 8, the annular minute disc 40, which is located inside main casing 42, is provided with the minute numerals 0 to 59, while minute window 41, which is formed in main casing 42, is stationary. In the form shown the hour ring 43 rotates in the opposite direction to that shown for hour ring 17 in Fig. 1.

Similar driving mechanism is provided to that of my preferred form. A driven shaft 44, has a gear 45 fixed to its end which meshes with idler gear 46 which in turn drives a gear, not shown, fixed to short shaft 48. Bevel gear 49, fixed to shaft 48 engages bevel gear ring 50 on the rear of minute disc 40, causing the latter to rotate once every hour. The cam and pawl mechanism for driving hour ring 43, has the single notched cam 51 fixed to shaft 44 which trips lever 52 and its pawl 53 into ratchet teeth 54 turning hour ring 43 one-twelfth of a revolution each hour.

As minute disc 40 rotates behind window 41, the successive minute numerals are exposed at window 41. When minute numeral 59 leaves window 41, lever 52 is tripped and the next hour numeral on hour ring 43 is exposed through the large front opening in casing 42 and minute disc 40.

The clock of Figs. 9 and 10 has the lower portion 56 of its casing formed with a spherical surface. Its hour drum 57 is in the form of a spherical zone rotatably mounted in portion 56. The upper and lower edges 58 and 59, respectively, of drum 57 are symmetrically disposed about a minor circle of lower portion 56 of the casing. In other words the diameter of upper edge 58 is greater than that of lower edge 59. This zone differs from that formed by drum 17 of Figs. 1, 2 and 5 in that the latter has its upper and lower edges symmetrically disposed about a great circle of the spherical casing. The hour numerals are disposed on the drum to appear vertically at opening 60. A plate 61, having a substantially spherical surface, is rotatably mounted on the front of portion 56 of the casing. It has a window 62 for indicating the minutes, and is in general similar to plate 13 of Figs. 1, 2, 3 and 4.

In Fig. 11 a clock is shown with a cylindrical casing 63, the hour drum 64 being in the form of a cylinder as in Fig. 14. The numerals on the hour drum are presented at opening 66. The minute disc 67 is a flat plate rotatably mounted

in the forwardly extending portion 69 of casing 63. Disc 67 has a ring of bevel gear teeth 73 upon it. An index notch 68, in disc 67, exposes the minute numerals on flange 72 of portion 69 of casing 63, only the 18 minute numeral being shown.

Instead of the hour drum being cylindrical, it could be in the form of a prism, as drum 65 in Fig. 12.

Fig. 13 is a section through a clock in which the casing 70 is in the form of a prism. The hour drum 71 is shown as a cylinder inscribed in the casing. Said drum could be given a polygonal form as in Fig. 12.

The mechanism for driving the hour drums and minute discs for the clocks illustrated in Figs. 9 to 14 inclusive is not shown, but as will be understood by those skilled in the art it is similar to that provided for the clock of Figs. 1 to 6 inclusive.

Instead of using a minute window 14, in Figs. 1 and 4, which window in reality is an index for indicating the successive minute numerals, other forms of index means could be used, such as a window in the form of notch 68 in disc 67, Fig. 11.

Other modifications of my clock can be made and still come within the scope of my invention.

In Figs. 15 and 16 there is illustrated a two faced clock of the general type of Fig. 1. Mounted to rotate inside of spherical casing 75, is a spherical zone or hour ring 76, having an upper set of hour numerals 77 and a lower set 78. Casing 75 has a front window or opening 79 and a rear opening 80. Rotatably mounted just inside of casing 75 is annular minute disc or plate 81, having its opening 85 smaller than and concentric with opening 79. In Fig. 16, the hour numeral 12 of the lower set of hour numerals 78 is shown encircled by opening 85. Plate 81 is provided with a minute window 82 which as said plate rotates exposes the successive minute numerals located on annular plate 83 fixed by stays 84 to the inside of casing 75. The opening in plate 83 is substantially coincident with opening 85. For the position of minute window 82 shown in Fig. 16, the minute numeral 30 is exposed. Minute numerals 0, 15, and 45 are shown dotted but it will be understood that the rest of the minute numerals are located in a ring containing them. In a similar manner, annular minute disc or plate 86 is rotatably mounted just inside of casing 75, having its opening 87 smaller than and concentric with opening 80 in the rear of said casing. The hour numerals of the upper set 77 successively appear at the rear of the clock encircled by opening 87. A minute window, not shown, similar to minute window 82, is provided for minute disc 86 which as said disc rotates exposes the successive minute numerals, not seen, located on annular plate 88 fixed by stays 89 to the inside of casing 75. The opening in plate 88 is substantially coincident with opening 87.

Motor 90 drives shaft 91 which has a cam, not seen, similar to cam 33, Figs. 2 and 3, fixed to it which operates similar mechanism to that shown in said figures for engaging rock teeth 92 inside of hour ring 76 for rotating said ring one-twelfth of a revolution every hour. Bevel gear 93, fixed to the upper end of shaft 91, meshes with bevel gear 94 fixed to short shaft 95. Bevel gear 96 is also fixed to short shaft 95 and drives on one side bevel gearing 97 fixed to minute disc 81 and on the other side bevel gear ring 98 fixed to minute disc 86. By the train of gears just described,

minute discs 81 and 86 are caused to revolve at the rate of one revolution per hour for exposing through their minute windows on opposite faces of the clock the ring of minute numerals on plates 83 and 88. The rotation of hour ring 76 presents the successive hour numerals, on opposite faces of the clock, inside the rings of minute numerals.

Instead of using an hour ring, the clock illustrated in Figs. 17, 18 and 19 uses an endless flexible band or belt 99 with the hour numerals thereon, the hour numeral 3 in Fig. 17 being one of said numerals. Casing 100 has an opening 101 in front. Rotatably mounted on casing 100, is an annular minute plate 102 having its opening 103 concentric with opening 101. Back of plate 102 is another annular plate 104, the minute numeral plate, fixed to casing 100 by stays 105. The opening in minute numeral plate 104 is concentric with opening 103 in minute plate 102. Minute numeral plate 104 has the minute numerals arranged in a ring about its opening, the minute numeral 45 in Fig. 17 being one of said numerals. Minute plate 102 is provided with a minute window 106, which as said plate rotates exposes the successive minute numerals located on minute numeral plate 104. For the position of minute window 106 shown in Fig. 17, minute numeral 45 is exposed. Endless band 99 is mounted on idler rollers 107 supported on extensions 109 of cross piece 108 fixed to the casing, said band being held taut and driven by pin wheel 110, the pins 111 of which engaging corresponding perforations in said band. A guide 122 keeps the forward run of band 99 close to opening 103.

Motor 112, by means of shaft 113 and worm 114 fixed to it, drives wormwheel 115 fixed to shaft 116. Bevel gear 117 engages the ring 118 of bevel gear teeth fixed to the rear of minute plate 102 for rotating the latter at the rate of one revolution per hour. A pawl 119 as explained for the clock of Fig. 3 is tripped once an hour by the revolution of cam 120 fixed to shaft 116, said pawl engaging ratchet teeth 121 on the inside of pin wheel 110. Each time pawl 119 is tripped a new hour numeral is presented at window 103.

I claim:—

1. A clock comprising a casing, a drum rotatably mounted in said casing with the periphery of said drum adapted to rotate by the front of the casing, said drum presenting on its periphery numerals representing hours, said casing having an opening in its front opposite the drum, the rotation of the drum presenting at said opening its successive hour numerals, a fixed ring of minute numerals around said opening, and a rotatably mounted member at the front of the casing having an opening therein opposite the opening in the casing, enabling the successive hour numerals to be exposed through both openings, said member having an index for showing the successive minute numerals as it passes around said ring.

2. A clock comprising a casing member, a drum rotatably mounted in said casing member with the periphery of the drum adapted to rotate by the front of the casing member, said drum presenting on its periphery numerals representing hours, said casing member having an opening in its front opposite the drum, the rotation of the drum presenting at said opening its successive hour numerals, and a rotatably mounted plate member at the front of the casing member having an opening therein opposite the opening in

the casing member, enabling the successive hour numerals to be exposed through both openings, one of said members as viewed from the front having a ring of minute numerals surrounding its opening, the other of said members having an index for successively indicating the minute numerals as said plate member is rotated.

3. A clock comprising a casing, a drum rotatably mounted in the casing with the periphery of the drum adapted to rotate by the front of the casing, said drum presenting on its periphery numerals representing hours, said casing having an opening in its front opposite the drum, the rotation of the drum presenting at said opening its successive hour numerals, said casing having a ring of minute numerals around said opening, and a rotatably mounted member for successively indicating the minute numerals, said member leaving a substantially unobstructed view of the hour numeral through the opening in the casing.

4. A clock comprising a casing, a drum rotatably mounted in the casing with the periphery of the drum adapted to rotate by the front of the casing, said drum presenting on its periphery numerals representing hours, said casing having an opening in its front opposite the drum, the rotation of the drum presenting at said opening its successive hour numerals, a member rotatably mounted at the front of the casing, said member having a ring of minute numerals surrounding said opening, and indexing means carried by the casing for indicating the successive minute numerals as they rotate about said opening.

5. A clock comprising a casing having a spherical surface, a drum substantially in the form of a spherical zone rotatably mounted in the casing with the periphery of the drum substantially concentric with said spherical surface and adapted to rotate by the front of the casing, said drum presenting on its periphery numerals representing hours, said casing having an opening in its front opposite the drum, the rotation of the drum presenting at said opening its successive hour numerals, said casing having a ring of minute numerals around said opening, and a plate having a spherical surface rotatably mounted at the front of the casing substantially concentric with the spherical surface of the latter and having an opening therein opposite the opening in the casing, enabling the successive hour numerals to be exposed through both openings, said plate being provided with a window and covering up the ring of minute numerals except at the window for successively showing the minute numerals as said plate is rotated.

6. A clock comprising a casing having a spherical surface, a drum substantially in the form of a spherical zone rotatably mounted in the casing with the periphery of the drum substantially concentric with said spherical surface and adapted to rotate by the front of the casing, said drum presenting on its periphery numerals representing hours, said casing having an opening in its front opposite the drum, the rotation of the drum presenting at said opening its successive hour numerals, and a plate having a spherical surface rotatably mounted at the front of the casing substantially concentric with the spherical surface of the latter and having an opening therein opposite the opening in the casing, enabling the successive hour numerals to be exposed through both openings, said plate having a ring of minute numerals surrounding its opening, and indexing means on the casing for indicating the successive

minute numerals as they rotate about said opening.

7. A clock as claimed in claim 2 in which the periphery of the drum is substantially inscribed in the casing, the cross-sections of the drum and the casing being substantially regular geometric figures.

8. A clock comprising a casing member having a spherical surface, a drum substantially in the form of a spherical zone rotatably mounted in the casing, the outside radius of the drum being substantially equal to the inside radius of the casing member opposite the spherical surface, said drum presenting numerals representing hours, said casing member having an opening in its front opposite the drum, the rotation of the drum presenting at said opening its successive hour numerals, and a rotatably mounted member at the front of the casing member having an opening therein opposite the opening in the casing member, enabling the successive hour numerals to be exposed through both openings, one of said members having a ring of minute numerals about its opening, the other of said members having an index successively indicating the minute numerals as said member is rotated.

9. A clock comprising a casing member, a drum rotatably mounted in said casing member with the periphery of the drum adapted to rotate by the front of the casing member, the axis of rotation of the drum extending in a general up and down direction, said drum presenting numerals representing hours, said casing member having an opening in its front opposite the drum, the rotation of the drum presenting at said opening its successive hour numerals, and a rotatably mounted member at the front of the casing member having its axis of rotation substantially at right angles to said axis of rotation of the drum leaving a substantially unobstructed view of the hour numeral at the opening, one of said members having a ring of minute numerals about said opening, the other of said members having an index for successively indicating the minute numerals as said rotatably mounted member is rotated.

10. A clock comprising a casing, a drum rotatably mounted in the casing with the periphery of the drum adapted to rotate by the front of the casing, the axis of rotation of the drum extending in a general up and down direction, said drum presenting numerals representing hours, said casing having an opening in its front opposite the drum, the rotation of the drum presenting at said opening its successive hour numerals, and a rotatably mounted plate at the front of the casing having an opening therein in register with the opening in the casing, enabling the successive hour numerals to be exposed through both openings, the axis of rotation of said plate being substantially perpendicular to and intersecting the axis of rotation of the drum, said casing having a ring of minute numerals about its opening, said plate being provided with an index for successively indicating the minute numerals as the plate is rotated.

11. A clock comprising a casing member, a drum rotatably mounted in said casing member with the periphery of the drum adapted to rotate by the front of the casing member, said drum presenting on its periphery numerals representing hours, said casing member having an opening in its front opposite the drum, the rotation of the drum presenting at said opening its successive hour numerals, mechanism for intermittently ro-

tating the drum step by step, the drum after each step of rotation presenting its next hour numeral at the opening, a rotatably mounted member at the front of the casing member leaving a substantially unobstructed view of the hour numeral at the opening, the axis of rotation of the drum and the axis of rotation of the rotatably mounted member making a substantial angle with each other, mechanism for rotating said latter member, one of said members having a ring of minute numerals about said opening as viewed from the front, the other of said members having an index for successively indicating the minute numerals as said rotatably mounted member is rotated.

12. A clock comprising a casing, a drum rotatably mounted in said casing with the periphery of the drum adapted to rotate by the front of the casing, said drum presenting on its periphery numerals representing hours, said casing having an opening in its front opposite the drum, the rotation of the drum presenting at said opening its successive hour numerals, mechanism for intermittently rotating the drum step by step, the drum after each step of rotation presenting its next hour numeral at the opening, a rotatably mounted member at the front of the casing having an opening therein opposite the opening in the casing, enabling the successive hour numerals to be exposed through both openings, mechanism for rotating the member, and a ring of minute numerals held by the casing and surrounding the openings as viewed from in front, said member being provided with an index successively indicating the minute numerals as it rotates

13. A clock comprising a casing having a spherical surface, a drum substantially in the form of a spherical zone substantially concentric with the casing opposite its spherical surface, said drum presenting on its periphery numerals representing hours, said casing having an opening in its front opposite the drum, the rotation of the drum presenting at said opening its successive hour numerals, mechanism for intermittently rotating the drum step by step, the drum after each step of rotation presenting its next hour numeral at the opening, a rotatably mounted member at the front of the casing having an opening therein opposite the opening in the casing, enabling the successive hour numerals to be exposed through both openings, mechanism for rotating the member, and a ring of minute numerals held by the casing and surrounding the openings as viewed from in front, said member being provided with

an index successively indicating the minute numerals as it rotates.

14. A clock comprising a casing member, a device movably mounted in said casing member having an outer surface adapted to move by the front of the casing member, said device presenting numerals representing hours, said casing member having an opening in its front for exposing a portion of said surface, the motion of said device presenting at said opening its successive hour numerals, and a rotatably mounted member at the front of the casing member having its axis of rotation substantially at right angles to the direction of motion of said surface at said opening and leaving a substantially unobstructed view of the hour numeral at the opening, one of said members having a ring of minute numerals about said opening, the other of said members having an index for successively indicating the minute numerals as said rotatably mounted member is rotated.

15. A clock comprising a casing member, a device movably mounted in said casing member having an outer surface adapted to move by the front of the casing member, said device presenting numerals representing hours, said casing member having an opening in its front for exposing a portion of said surface, the motion of said device presenting at said opening its successive hour numerals, and a rotatably mounted member at the front of the casing member having an opening therein opposite the opening in the casing member, enabling the successive hour numerals to be exposed through both openings, one of said members having a ring of minute numerals about its opening, the other of said members having an index successively indicating the minute numerals as said member is rotated.

16. A clock comprising a casing, a device movably mounted in said casing having an outer surface adapted to move by the front of the casing, said device presenting numerals representing hours, said casing having an opening in its front for exposing a portion of said surface, the motion of said device presenting at said opening its successive hour numerals, and a rotatably mounted member at the front of the casing having an opening therein in register with the opening in the casing, enabling the successive hour numerals to be exposed through both openings, said casing having a ring of minute numerals about its opening, said member being provided with an index for successively indicating the minute numerals as said member is rotated.

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