

L. B. FERGUSON.  
DIAL.

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903,964.

Patented Nov. 17, 1908.

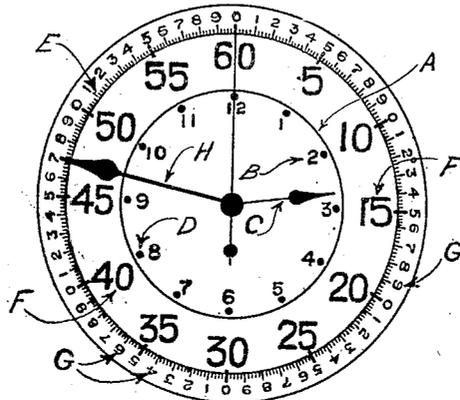


Fig. 3.

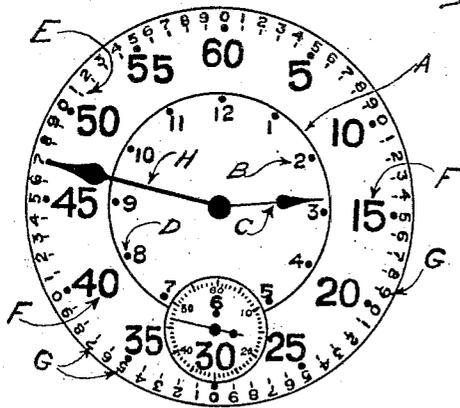


Fig. 1.

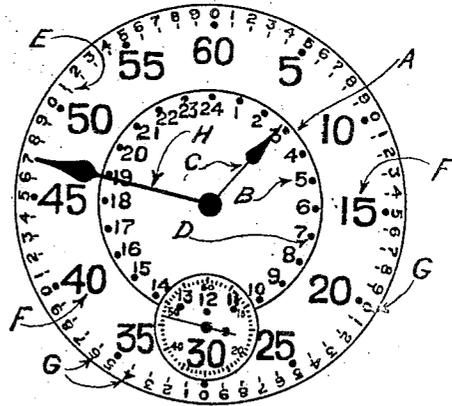


Fig. 2.

Witnesses,

*L. Miles*  
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*Louis Buck Ferguson* Inventor.

His Attorney.

# UNITED STATES PATENT OFFICE.

LOUIS BUCK FERGUSON, OF MONROE, LOUISIANA.

## DIAL.

No. 903,934.

Specification of Letters Patent.

Patented Nov. 17, 1908.

Application filed November 27, 1907. Serial No. 404,177.

*To all whom it may concern:*

Be it known that I, LOUIS BUCK FERGUSON, a citizen of the United States of America, residing at Monroe, in the parish of Ouachita and State of Louisiana, have invented certain new and useful Improvements in Dials, of which the following is a specification.

This invention relates to dials for time pieces of every description, but has special reference to watch dials for railroad employees, the object of the invention being to provide a dial from which the exact time may be noted at a glance, without liability of error. Among railroad men, especially, it is the custom to state the time in exact minutes without mentioning the hour, which is generally known, and understood, and in order to avoid the more or less rapid mental calculation which is required by the use of dials now in general use, I have devised the dial shown in the accompanying drawings and the invention consists in certain novel features of the same as will be hereinafter first fully described and then particularly pointed out in the appended claims.

In the drawings, Figure 1, is a plan view of a dial embodying the invention; Fig. 2, is a similar view showing the invention applied to a dial, which is arranged for the twenty-four hour system; and Fig. 3, is a similar view showing the invention applied to a dial employing a center second-hand, or a split-second-hand instead of the smaller second-hand which is usually located near the bottom of dial, as shown in Figs. 1 and 2.

Referring to the drawings by letter, it will be noticed that I provide on the dials an inner circle "A" within which are consecutive numerals "B" denoting the hours, the hour-hand "C" being just long enough to travel over the circle described by said hour numerals, which are placed in juxtaposition to division marks "D" arranged at regular intervals. Adjacent to and concentric with the edge of the dial are sixty division marks "E" arranged at regular intervals to mark the minutes, large distinctly defined numerals "F" being placed adjacent to each fifth mark denoting the minutes prominently by 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, and on the outer side of the division marks, between them and the edge of the dial are smaller marginal numerals "G" arranged in series of single numbers, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, placed adjacent to each of

the sixty minute division marks for closer observance when required, the minute hand "H" being decidedly heavier, longer and more prominent than the hour hand, and of sufficient length to reach to and travel over the circle described by said division marks, and minute figures.

In the form of dial shown in Fig. 1, and Fig. 2, the seconds are marked in the usual position near the bottom part of the dial, and it will be particularly noted that the numeral 30 indicates both the seconds and the minutes, overcoming the omission which usually occurs at this point on dials with the second-hand in this position on account of having no room for the figure 6 denoting hours and the figure 30 denoting seconds.

In the form of dial shown in Fig. 3, the separate smaller dial for seconds is omitted and the second-hand travels from the central pivot in the same circle described by the minute-hand, and the same numerals answer for both, marks being subdivided into fifths.

Referring further to the drawings, it will be noticed that I have definitely separated the minutes from the hours by using separate sets of figures, and that those figures denoting minutes are made very much more prominent than those denoting the hours, and that the minute-hand is made very much more prominent than the hour-hand, the prominence being attained by making the minute figures decidedly larger than the hour figures, and the minute-hand decidedly heavier than the hour-hand, and also by making the minute figures and minute-hand of a color which will contrast more sharply with the field or face of the dial than the color employed for the hour figures and the hour-hand, preferably black for minutes, and red for hours, although any other contrasting colors could be used if desired.

From the arrangement described, the exact time in minutes will be ascertained at a mere glance without the necessity of any mental calculations such as is generally required by dials previously used whereby the minutes have to be first separated from the hours and then multiplied or added before determined, for instance, the drawings show the time as 2:47 which is determined at the first glance, whereas with the ordinary dial now in general use, it would first have to be noted that the hour hand had not quite reached 3 and then noted that the minute hand had passed 9, whereupon the observer

would count the spaces beyond 9 to the minute hand and necessarily perform the mental calculation  $9 \times 5 = 45 + 2 = 47$ , before the exact time could be ascertained.

5 I consider the advantages to be derived from the use of my ready reference dial, of vital importance to railway employees connected with train service as it relieves them of the uncertainty of accurate calculations, and enables them to pay more attention to other important duties. It will also be advantageous to the general public, for clocks and watches.

10 In Fig. 1, this invention is shown applied to the watches more generally used, which require twelve revolutions of the minute-hand to make one complete revolution of the hour-hand, known as the twelve hour system, practically no change in said watches being necessary in order to apply my improved dial, only the dial itself and the hands would have to be substituted.

15 In Fig. 2, this invention is shown applied to a watch requiring twenty-four revolutions of the minute-hand to make one complete revolution of the hour-hand, suitable for the twenty-four hour system, a minor change in the gearing propelling the hour-hand being the only re-adjustment of the present arrangement of works for watches or clocks, but if in some instances this change was not practical or was considered undesirable, then a double row of hour figures would have to be employed, the numeral 13 being adjacent to the numeral 1, the 14 to 2, 15 to 3, 16 to 4, 17 to 5, 18 to 6, 19 to 7, 20 to 8, 21 to 9, 22 to 10, 23 to 11 and 24 to 12.

20 In Fig. 3, this invention is shown applied to watches and clocks having no separate

smaller dial for the seconds, or having the second-hand placed centrally, and it also shows the general arrangement of such a dial as would be suitable for a time-piece with a hand indicating calendar days, requiring the smaller marginal figures to be respaced and made to read from 1 to 31 inclusive. 45

The three drawings, Figs. 1, 2 and 3, show only a few of the numerous modifications of this invention, which is susceptible to various changes and combinations, in order to make it suitable for all kinds of time-pieces, but are considered sufficient to show the general ideas which cover a very large scope. 50 55

Having thus described my invention, what I claim and desire to secure by Letters Patent is:—

1. A dial for time-pieces having a circle of division-marks indicating minutes, distinctly prominent minute-counting numerals adjacent some of said marks, and an independent concentric circle containing hour-designations which are faint as compared with the minute-counting numerals. 60 65

2. A dial for time-pieces having a comparatively faint circle of hour-designations, an outer independent concentric circle of minute marks, large prominent numbers arranged within said circle opposite some of said marks, and series of small figures outside said circle and opposite the minute marks, each of said series of small figures counting numerically from 0 to 9. 70

In testimony whereof I affix my signature in presence of two witnesses. 75

LOUIS BUCK FERGUSON.

Witnesses:

W. J. BYNUM,  
DELL BROWN.