April 29, 1924. 1,492,264

W. E. PORTER

CLOCK

Filed Aug. 30, 1923

Fig. 1.

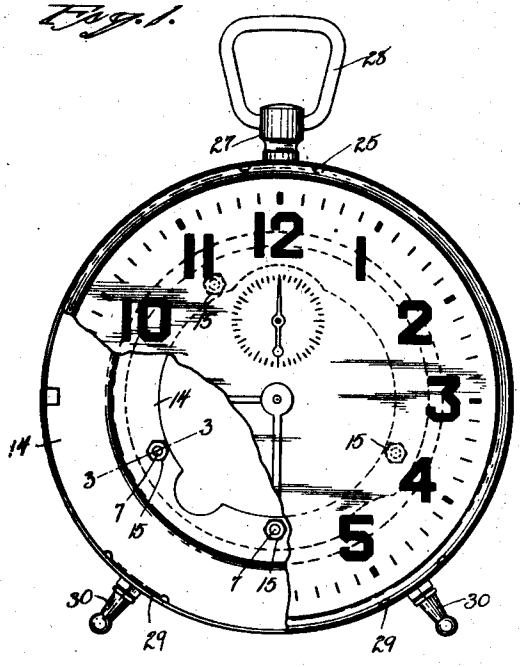


Fig. 2.

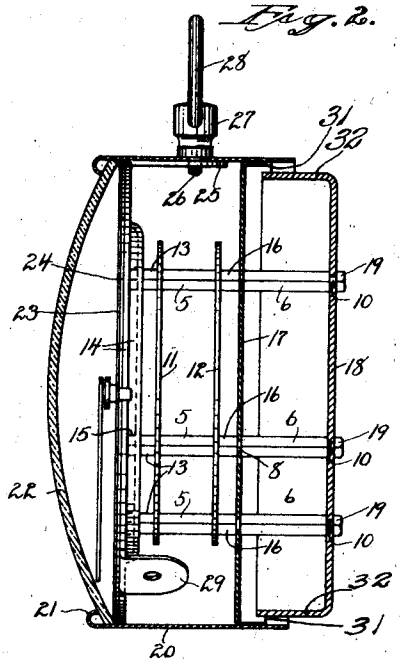
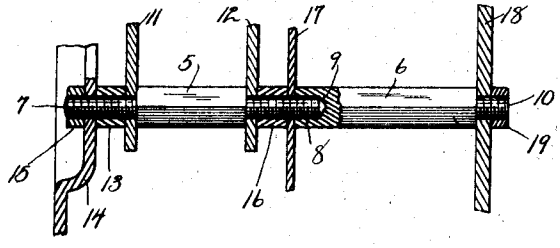


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILSON E. PORTER, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO NEW HAVEN CLOCK CO., OF NEW HAVEN, CONNECTICUT, A CORPORATION.

CLOCK.

Application filed August 30, 1923. Serial No. 660,143.

To all whom it may concern:

Be it known that I, WILSON E. PORTER, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Clocks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Fig. 1, a view in front elevation of a clock constructed in accordance with my invention, with the bezel and glass partly broken away, to expose its circular mounting-plate.

Fig. 2, a view of the clock in vertical central section, with its movement and mounting-plate in side elevation.

Fig. 3, a broken detailed sectional view on an enlarged scale on the line 3—3 of Fig. 1.

My invention relates to an improvement in lever or marine clocks, of the type commonly known in the trade as "alarm clocks," the object being to produce a simple and reliable clock constructed with particular reference to being organized as a unitary structure and "tested out" before insertion into its case, and to avoiding any cramping of the movement-plate and consequent interference with the free operation of the clock-trains.

With these ends in view, my invention consists in a clock having certain details of construction and combinations of parts as will be hereinafter described and particularly pointed out in the claims.

In carrying out my invention, as herein shown, instead of employing the usual solid or one-piece pillars, I employ sectional pillars, each consisting of a front section 5 and a rear section 6, the former being the movement-assembling section and the latter the bell-supporting section. The pillar-section 5 is provided at its front end with a threaded stem 7 and at its rear end with a similar threaded stem 8, while the pillar-section 6 is formed at its front end with a threaded bore 9 receiving the stem 8 aforesaid and at its rear end with a threaded stem 10.

The pillar-section 5 is interposed between the front and rear movement-plates 11 and 12, respectively formed with holes through which they project. Its front stem 7 receives a spacing-nut 13 interposed between the front face of the front movement-plate 11 and the rear face of a circular mounting-plate 14, which is jammed against the said spacing-nut 13 by a binding-nut 15. The rearwardly-projecting threaded-stem 8 of the pillar-section 5 passes through a hole in the rear movement-plate 12 and receives a spacing-nut 16, which is interposed between it and the flanged, circular case-back 17. The projecting end of the stem 8 enters the threaded bore 9 of the pillar-section 6, which is screwed over it so as to hold the case-back against the spacing-nut 16. The stem 10 at the rear end of the pillar-section 6 passes through the cup-shaped bell 18 secured to it by a binding-nut 19. As shown, three of the pillars of the clock are made in the manner described and bear the same relation to the other parts of the other mechanism as described for the pillar shown in detail in Fig. 3. The two movement-plates are thus firmly held together in spaced relation by the front pillar-sections 5 and their spacing-nuts 13 and 16.

The circular mounting-plate 14 is adapted in diameter to fit snugly within the cylindrical clock-case 20, the forward end of which is formed with an inwardly-turned bead 21 for the retention of the glass 22, the edges of which are abutted against a dial 23 applied to a dial-back 24, which is secured in any convenient manner to the front face of the said mounting-plate, which is formed, as shown, at the center of its upper edge with an assembling lug 25, extending rearwardly from it at a right angle and formed with a threaded opening for the reception of the threaded stem 26 of an ordinary pendant 27 mounting a bow 28. Upon its lower edge the mounting-plate is formed with two corresponding, rearwardly-bent mounting-lugs 29 having threaded openings for the reception of the threaded stems of suitable legs 30, which are respectively located at equidistant points on the opposite sides of the vertical center of the case, as shown in Fig. 1.

The case-back 17 fits snugly within the rear portion of the case 20 and is provided with a rearwardly-turned flange 31.

The bell 18 is formed with a forwardly-

turned flange 32 made just small enough in diameter to clear the flange 31 of the case-back 17.

The clock-trains, which, for the sake of clearness, are not shown, may be of any approved construction and form no part of my present invention.

Under my improved construction, the clock-movement proper, together with its mounting-plate, dial, dial-back, case-back and bell, are organized so as to be handled as a unitary structure, which in this form is "tested out" and regulated as to the operation of its trains and its alarm-mechanism. It is then, as a unitary structure, inserted into the open rear end of the clock-case, into which the glass has previously been introduced. The assemblance of the clock is then completed by applying the pendant 27 and the legs 30, which are simply screwed in place into the threaded holes in the mounting-lugs 25 and 29. By employing sectional pillars as described, the movement is secured to the mounting-plate and the case-back and bell connected with the movement without imposing any cramping strains upon the movement-plates. By virtue of building up the unitary structure described by means of sectional pillars passing transversely through the movement-plates and serving to bind the mounting-plate, the movement, the case-back and the bell together, all bending or cramping strains are removed from the movement-plates, whereas, heretofore, the means employed for assembling the parts in question have been independent of the movement-pillars and have tended to cramp the movement-plates, in which they have been mounted. In other words, my invention is characterized by the employment of sectional pillars as means for assembling the several parts of the clock mechanism, whereby the cramping strains heretofore set up are entirely eliminated.

I claim:

1. In a clock, the combination with the front and rear movement-plates thereof, of a mounting plate, a case-back, a bell, and sectional pillars uniting the said elements in spaced relation.

2. In a clock, the combination with front and rear movement-plates, of a circular mounting-plate, a case-back, a bell, sectional pillars passing transversely through and uniting the said parts in spaced relation, each of the said pillars consisting of a front and a rear section, of which the front section has at each end a threaded stem, and the rear section at its forward end a threaded bore and at its rear end a threaded stem, and spacing-nuts applied to the stems of the front pillar-section, on opposite sides of the movement-plates.

3. In a clock, the combination with a unitary structure, comprising a circular mounting-plate having rearwardly-bent mounting-lugs, a dial, a dial-back secured thereto, front and rear movement-plates, a case-back, a bell and sectional pillars by which the said parts are held together in spaced relation; of a clock-case adapted to receive the said unitary structure, and a pendant and legs passing through the case into the said mounting-lugs of the mounting-plate of the said structure, which is thereby positioned and held in place within the case.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

WILSON E. PORTER.

Witnesses:

FREDERIC C. EARLE,

MALCOLM P. NICHOLS.