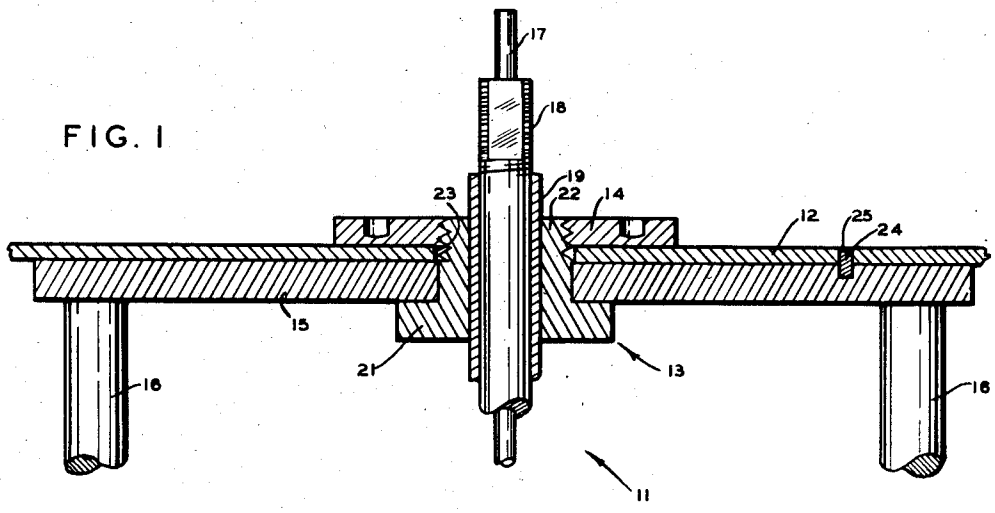
Oct. 9, 1951 A. W. FOWLER 2,570,539

MOVEMENT TO DIAL ATTACHMENT FOR CLOCKS

Filed Aug. 9, 1947

FIG. 1



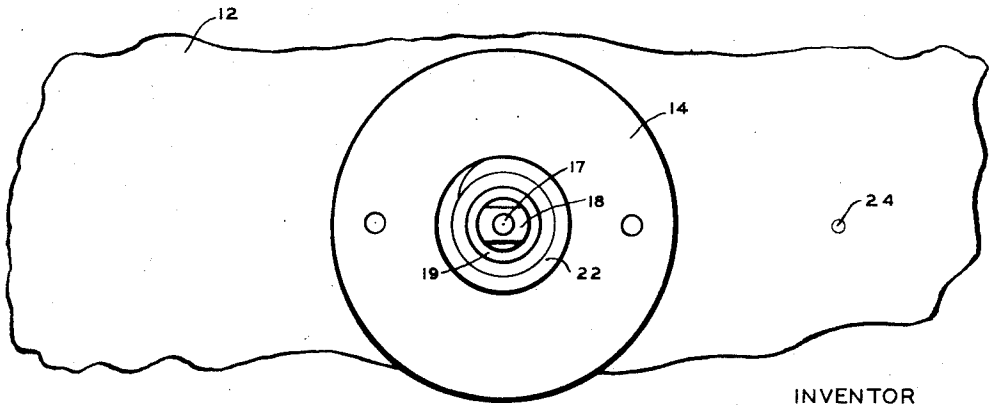


FIG. 2

INVENTOR

ARNO W. FOWLER

BY John H Cassidy

ATTORNEY

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MOVEMENT TO DIAL ATTACHMENT FOR CLOCKS

Arno W. Fowler, Highland, Ill., assignor to C. J. Hug Co., Inc., Highland, Ill., a corporation of Indiana

Application August 9, 1947, Serial No. 767,722

1 Claim. (Cl. 58—127)

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This invention relates to improved means for attaching the movement of a clock to its dial.

In the art of clock making, particularly as it pertains to the manufacture of large faced electric clocks, it is common practice to support the movement in the clock case by attaching the same to the clock's dial. In such instances, a clock case and dial such as that described in a co-pending application by Arno W. Fowler for Clock Dial Attachment, Serial No. 768,741, filed August 15, 1947, now abandoned, is used. Heretofore, it has been the practice to secure the movement to the dial with screws which are passed through holes therein into threaded holes in the top pillar plate of the clock's movement. As will be seen by reference to the aforementioned co-pending application, the dial of the clock is secured in the case and the movement is supported on the dial. Accordingly, a different problem is presented from that found in the art of watchmaking wherein the watch dial is secured to the watch movement by drawing the former downwardly against the latter until the dial is supported at its peripheral edge on the watch case. In other words, it is here required that the clock movement be attached to the dial independently of the case, the movement itself being much smaller in dimensions than either the dial or the case.

This result is accomplished by the instant invention, which may be briefly described as comprising a threaded bushing and a nut therefor which clamps the movement onto the dial. The bushing, so employed, has a bottom flange which is drawn tightly against the underside of the movement's top pillar plate. A central bore in the bushing is also provided through which the coaxial shafts for the clock's hour, minute and second hands extend. A threaded portion of the bushing is of such length that it extends above the upper surface of the movement's top pillar plate a sufficient distance to pass through a hole drilled in the clock dial and to receive a large diameter disc nut which is threaded thereon to clamp the movement to the dial. A pin, extending up from the top pillar plate, passes into a hole in the dial when the movement is clamped thereon, which properly positions the latter with respect to all other parts of the clock.

Thus, the instant invention accomplishes its desired objectives which may be stated generally as the provision of an improved means for attaching the movement of a clock to a clock dial, which is positive in action, is inexpensive to make and apply, and one which greatly reduces the

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amount of labor involved in assembling the parts.

Other objects and advantages will become apparent as the specification proceeds and a more comprehensive understanding of the invention will be afforded from the following detailed description when considered in conjunction with the accompanying drawing, in which

Fig. 1 is a sectional view of a clock dial and movement with parts thereof broken away showing a means embodying the instant invention for attaching the latter to the former, and

Fig. 2 is a fragmentary plan view of the assembly shown in Fig. 1.

In the illustrated embodiment of the invention, a clock movement 11 (only parts of which are shown) is attached to a clock dial 12. The attaching means comprises a threaded bushing 13 and a washer nut 14, the parts being arranged as follows.

The essential parts of the clock movement 11, insofar as being those necessary to describe the invention, are a top pillar plate 15 which is supported by a plurality of pillars 16, and the second, minute and hour hand shafts 17, 18 and 19, respectively. The bushing 13 has a flange 21 and a threaded section 22, the latter being passed through a hole in the plate 15. A hole 23 in the dial 12 is dimensioned to pass over the threads of the bushing so that a tightening of the nut 14 will draw the movement 11 until its pillar plate 15 is tight against the back of the dial 12. To insure the proper positionment of the movement with respect to the dial and to prevent the same from turning about its hand shafts, a pin 24, extending upwardly from the plate 15, is provided which passes into a hole 25 in the dial.

It is to be observed that the bushing 13 serves, in addition to its primary function of clamping the movement to the dial, as a sleeve bearing for the movement's hand shafts. Thus, the usual sleeve bearing is not required and an additional saving in the manufacturing cost of the completed clock is realized.

Various changes may be made in the details of construction, within the scope of the appended claim, without departing from the spirit of this invention. Parts of the invention may be used without the whole and improvements may be added while retaining some or all of the advantages of the invention.

What is claimed is:

An attachment for connecting a clock movement having a pillar plate to a clock dial comprising a hollow bushing passing through holes

in said pillar plate and dial and having an external flange, and a nut threaded onto said bushing for clamping said dial and pillar plate between said nut and said external flange, said hollow bushing acting as a sleeve bearing for shafts extending from said movement.

ARNO W. FOWLER.

REFERENCES CITED

The following references are of record in the file of this patent:

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