Jan. 26, 1960 O. BRAITSCH ET AL 2,922,276

CLOCK

Filed Dec. 10, 1956

2 Sheets-Sheet 1

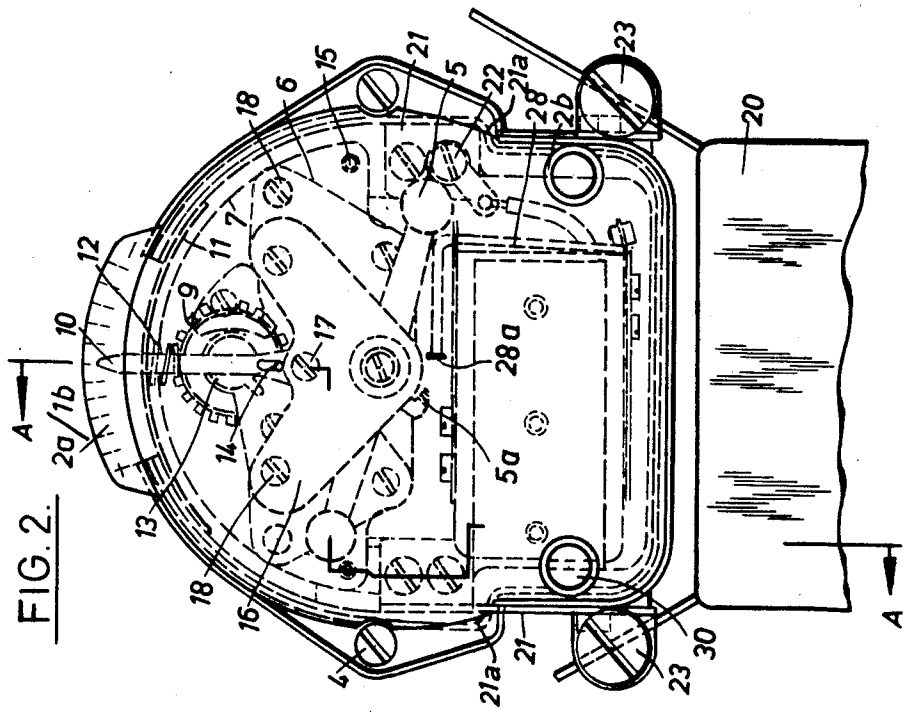


FIG. 2.

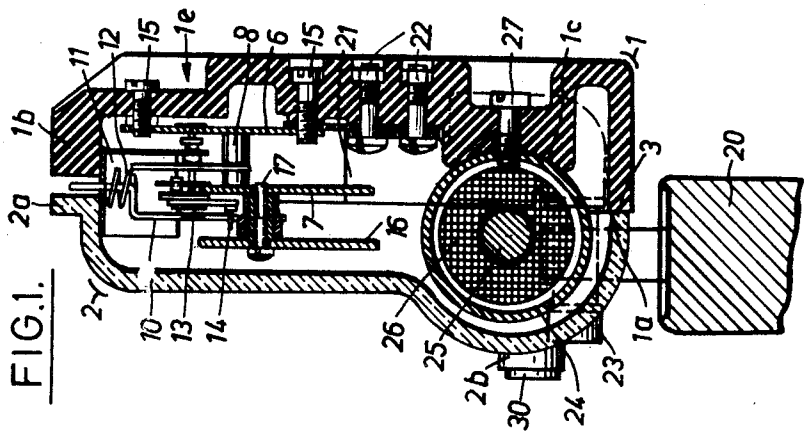


FIG. 1.

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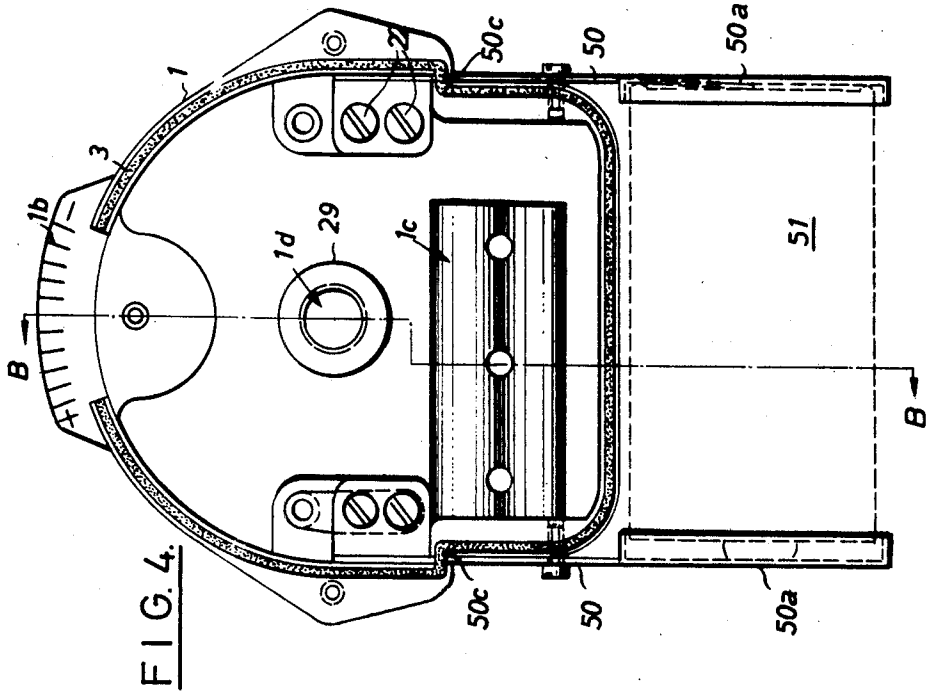


FIG. 4.

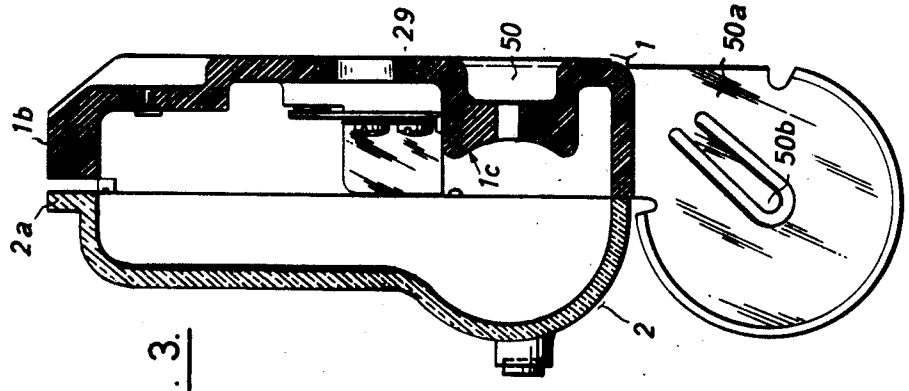


FIG. 3.

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CLOCK

Otto Braitsch and Hans Schlenker, Schramberg, Germany

Application December 10, 1956, Serial No. 627,444

Claims priority, application Germany December 9, 1955

1 Claim. (Cl. 58—41)

This invention relates to a clock having a movement driven by a spring, in which the main spring is wound by an electromagnetically actuated flyweight constructed as a lever.

The invention is characterised in that the clock movement is arranged on a dished member of synthetic material, that the dished member has seating surfaces for the electromagnet serving for the impulse of the flyweight that the rim of the dished member provides a seating for a casing which is closed in dust-tight manner and which preferably consists of transparent plastic, and that arms serving as a holder for the dry battery to be used and at the same time for the supply of current are led through the wall of the dish-shaped member.

The spiral pointer by which the running of the clock can be regulated preferably extends outwardly through a slot between the rim portion of the dished member and the rim portion of the protective casing which closes in dust-tight manner, so that the said pointer can be actuated from outside.

For operating the clock, it is expedient to use a flashlight battery which is supported horizontally beneath the dish-shaped plastic member between plate-shaped shoulder surfaces of the outwardly extending current conductors.

One constructional example of the invention is shown in four figures, wherein:

Fig. 1 is a section through a clock with a fitted protective casing, taken on the line A—A in Fig. 2,

Fig. 2 is a rear elevation of the clock;

Fig. 3 is a sectional view corresponding to Fig. 1 showing the housing and the protective casing on the line B—B of Fig. 4.

Fig. 4 is a rear view corresponding to Fig. 3 of the housing with the protective casing removed;

The references used in the figures have the following significance; 1 is a dished member of a synthetic material and serving as the base plate for the following groups of components;

(1) The clock movement with the flyweight 5, constructed as a double-armed lever, which flyweight is given electro-magnetic impulses and effects the winding of the main spring driving the clock movement.

(2) The electromagnet which imparts impulses in a manner known per se to the said flyweight at suitable time intervals and supplies the said weight with the energy which is necessary for winding the main spring.

(3) The arms 21 serving as holding means and current supply means for the dry battery 20 to be used for feeding the said electromagnet.

A protective casing 2, preferably consisting of transparent synthetic material, is fitted in dust-tight manner on the rim 1*a* of the dished member 1. In order to ensure a dust-tight closure, a rubber packing cord 3 is inlaid in the rim 1*a* of the dished member 1. The protective casing 2 is fixed to the dished member 1 by means of screws 4.

The clock movement comprises the front plate 6 and the rear plate 7; they are held in spaced relation to one another by posts 8. 9 is the balance wheel and 10 is the pointer serving for regulating the running.

The protective casing 2 and the dished member 1 are provided at the upper part of the clock with two projecting lugs 1*b* and 2*a* respectively which form a slot into which the pointed end of the pointer 10 projects. If a thin article, such as a screwdriver or a coin, is introduced into the slot, the pointer 10 can be actuated from outside. In order also to ensure dust-tight closure at this point, the pointer 10 has arranged thereon a dust plate 11 which is under the pressure of a spring 12. The pointer 10 has a longitudinal slot 14 which forms a part of a pin-and-slot connection and actuates an indicator 13. The front plate 6 is fixed to the dished member 1 by means of screws 15. A bridge 16 is fixed by means of posts 17 and 18 on the rear plate 7. The bridge 16 serves for the mounting of the flyweight 5. The pointer 10 is at the same time mounted with slight friction by means of a bushing 19 on the central post 17. The pointer 10 functions to permit adjustment of a balance of the clock movement to thereby adjust the latter.

Two arms 21, which pass at 21*a* through slits provided in the marginal portion of the base plate 1 and are fixed by means of screws 22 to the dished member 1 and extend through the side wall thereof serve as holding means for a dry battery 20 and at the same time as conductors.

Serving for the supply of current, as shown in Figs. 1 and 2 is the flashlight battery 20 of elongated cross-section and having three juxtaposed battery cells of conventional design. For this case, the supporting arms 21 terminate in screw terminals 23 into which are fitted the contact blades of the battery 20.

Figs. 3 and 4 provide for the use of a single flashlight battery 51 which is arranged horizontally beneath the clock. Instead of this arrangement, it would also be possible for such a flashlight battery to be arranged in similar manner on both sides of the clock. For holding the flashlight battery, the current supply arms indicated at 50 pass at 50*a* through slits provided in the marginal portions of the base plate 1 and are formed with plate-like parts 50*a* which bear on the end surfaces of the flashlight battery and in this manner effect both the support and the electrical connection. In order to make reliable contact, a spring tongue 50*b* can be bent inwardly from the plate-like parts 50*a*.

The electromagnet actuating the flyweight 5 is constructed as a pot magnet. It is secured by means of the fixing screws 27 on the seating surface 1*c* of the dished member 1. 28 is the armature of the magnet, the extension 28*a* of which acts against an extension 5*a* of the flyweight 5 and sets the latter in motion.

The coil 26 of the electromagnet is connected in a manner known per se to the circuit of the dry battery, the end surfaces of the projections 28*a* and 5*a* forming the controlling contact path.

As will be seen from Figs. 3 and 4, the dished member 1 is formed with a bore 1*d* to serve as the hole for the clock hand spindles, a bushing 29 is formed with an internal thread being inserted into the said bore 1*d* for centrally securing the clock movement, for example on a plate by means of a hollow screw. A recess is formed at 1*e* near the upper edge of the dished member 1, the purpose of which is to secure a suspension device which would engage rearwardly over the top edge of the clock movement, if necessary by making use of the screw 15. Rubber blocks 30 or the like are also fitted in the casing 2, which is provided with suitable mounting devices 2*b*, the said blocks serving to rest on the wall.

We claim:

A clock housing comprising a base plate in the form of a dished member consisting of a plastic synthetic material and having a rim portion thereon, a casing consisting of a plastic synthetic transparent material in contact with the rim of the base plate, said casing forming the cover of the housing and enclosing a clock movement and electromagnet in dustproof condition, said rim of the base plate having slits therein through which supply arms for the electromagnet pass, the dished member being provided with a molded and inwards extending socket as a seat for supporting the electromagnet and the rim portion supporting the casing, a lug on said casing, a corresponding lug on said dished member, said rim portion extending to said lugs and the latter defining a slot between the base plate and the casing and in said housing through which a pointer projects having a free end thereof extending into said slot, and a dustplate carried by the pointer and resiliently urged against the inside of the base plate and the casing at the base of the lugs.

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