April 15, 1930. E. FREY 1,754,884

WATCH

Filed March 21, 1929

Fig. 1.

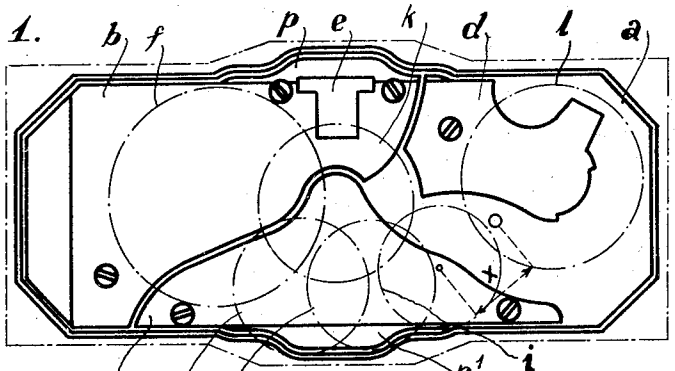


Fig. 2.



Fig. 3

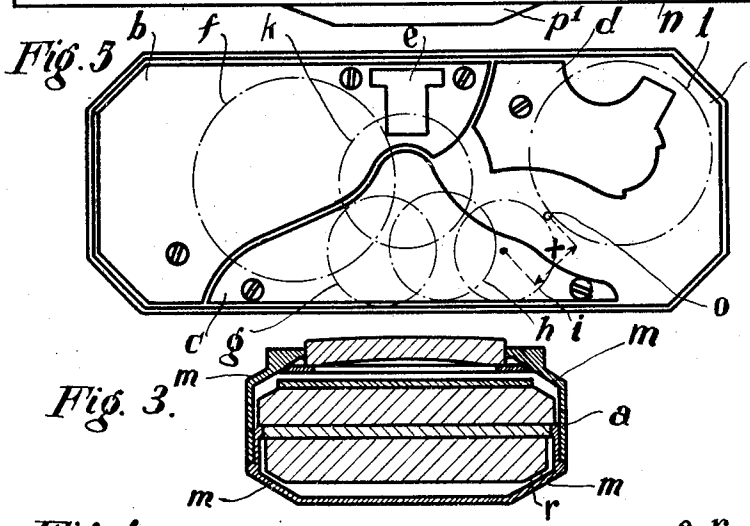
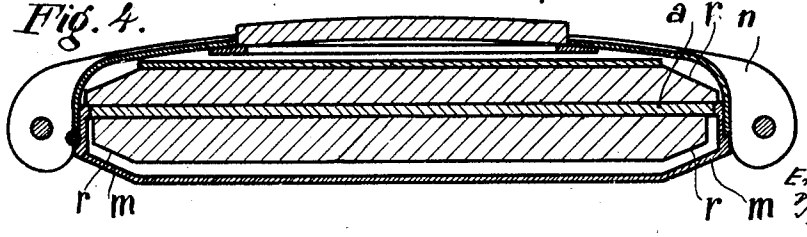


Fig. 3.

Fig. 4.



Inventor:
Emil Frey
by Louis Quinard
Attorney.

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UNITED STATES PATENT OFFICE

EMIL FREY, OF BIENNE, SWITZERLAND, ASSIGNOR TO THE FIRM FREY & CO., FREY-UHREN AKTIENGESELLSCHAFT, (FREY & CO., MONTRES FREY, SOCIETE ANONYME) (FREY & CO., FREY WATCH CO., LIMITED), OF BIENNE, SWITZERLAND

WATCH

Application filed March 21, 1929, Serial No. 348,880, and in Switzerland December 22, 1928.

The present invention relates to novelty watches of a longitudinal shape and having substantially straight outlines.

The manufacturing price of a watch movement depends on the quality of the work and the amount of jewelling remaining the same, on the dimensions of the escapement. The smaller the escapement the higher the price, the more difficult the repairing and the poorer the time keeping. If, therefore, in a given watch, fixed as to size by the ruling fashion to such an extent that a departure from such dimensions would exclude further sale, an escapement is employed which is larger than otherwise would be possible with the best utilizing of space, a construction is created presenting substantial technical and mercantile advantages.

The object of the present invention is to produce a watch in which the point suggested in the above has been carried out. By providing a small local swelling, hardly perceptible, at the middle portion of a wrist-watch case of rectangular shape, it has been made possible to introduce a relatively large lever escape wheel into a small watch. The arrangement of this swelling which, as regards the appearance and therefore the possibility of sale of the watch, is of such importance, is so well calculated and combined with the case that practically, that is, for the buyer, said swelling will not matter.

In the accompanying drawing a watch built according to the present invention is represented as an example. The scale of the figures is about 6:1.

Fig. 1 is a bottom view of the movement. The outline of the case is marked in broken lines.

Fig. 2 is a top view of the closed case.

Fig. 3 is a section through the axis of the winding stem.

Fig. 4 is a section of the watch on a line passing through the numerals 12 and 6 of the dial.

Fig. 5 shows the conditions such as they would be without the swelling but when the same dimensions are maintained as for an ordinary movement.

In Figs. 1, 2 and 3, *a* designates the plate and *b*, *c*, *d* the bridges.

The hole for the contrate wheel of the winding mechanism is designated *e*. *f* indicates the barrel, and *g* and *h* are intermediate wheels. *i* is the lever escape wheel, *k* the center wheel and *l* the balance wheel. On both sides of the winding stem, above and below, the plate *a* has small swellings *p*, p^1 which are also to be found on the bridges *b* and *c*, and has also space on one side for the hole *e* for the crown wheel and on the other side for the outer rims of the intermediate wheels *g* and *h* and the escape wheel *i*. It is easily understood that with this local swelling, which increases very little the total width, it has now become possible to displace the fastening screws of the bridge *b* and the hole *e* to the outward, and the same is also true of the wheels *g*, *h*, *i*. This displacement increases the distance *x* between the center wheel and the escape wheel and renders it possible to increase not only the dimensions of the intermediate wheels but also the distance between the escape wheel and the pallet, the axis of which is designated *o*. Compared with the corresponding distance *x* in the arrangement according to Fig. 5, which shows the arrangement without swellings, the increase is 25 per cent, this has a considerable influence on the price of the watch.

But the important feature of the represented arrangement resides in the fact that the position of these swellings and their arrangement at a deeper level than that of the dial tend to conceal the abnormal form of the lateral bars of the case, and the mentioned swellings seem to be an intended ornamentation, as will be apparent, particularly from Fig. 2.

The case and the bridges are bevelled at both ends at *m* and *r* (see Figs. 3 and 4). This allows the upper side of the case to be limited by a continuous curve which confers upon the whole quite a particular appearance and, besides, allows the swellings to be concealed by means of chamfered parts. Thus sharp corners are avoided which helps greatly in masking the said swellings.

What I claim as new is:

1. A bracelet watch comprising an elongated rectangular case, and an elongated rectangular movement occupying substantially the entire space within the case and the sides of which, for their greatest part, are limited by straight lines; said movement embodying an escapement device, a plate, bridges, a set of intermediate wheels, and a winding stem; at least one intermediate wheel projecting slightly beyond the outer side of the rectangle formed by the movement; the plate and certain of the bridges being provided with lateral swellings that protect the projecting part of the said intermediate wheel, thereby to enable the component parts of the escapement device to be made of abnormally-large size as compared with those of a conventional escapement device for a movement of the same size.

2. A bracelet watch according to claim 1, in which a side of the rectangular case is formed with a slight lateral swelling corresponding to and covering the swelling on the side of the movement.

In testimony whereof I affix my signature.

EMIL FREY.