

EBAUCHES S.A.

NEUCHÂTEL

SWITZERLAND

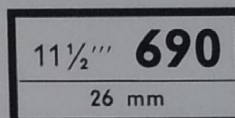
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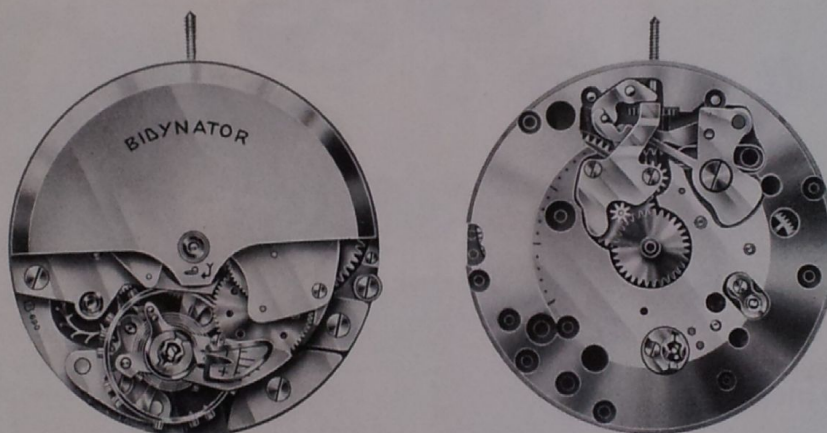
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FABRIQUE D'EBAUCHES
FELSA S.A., GRENCHEN



Lever movement, self-winding, with sweep second



Enlarged movement

TECHNICAL AND PRACTICAL COMMUNICATION FOR THE GUIDANCE OF WATCH REPAIRERS

[illegible]

- Ebauches S. A., Neuchâtel, Switzerland

THE REPAIR OF THIS MOVEMENT IS SIMPLIFIED BY THE FACT THAT THE OSCILLATING WEIGHT CAN BE REMOVED BY MEANS OF A SIMPLE BOLT

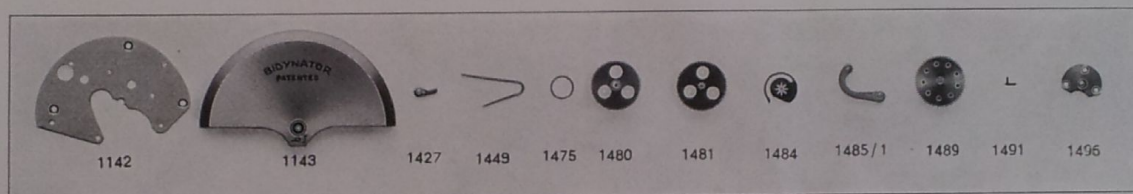
DISASSEMBLING :

1. Open case (see under CASING).
2. Move bolt 1491 in direction of arrow (fig. 1), then turn the movement to allow oscillating weight 1143 to drop; if necessary, remove bolt 1491 and its spring 1475.
3. Remove winding stem, take the movement out of the case, and remove hands and dial. Then replace winding stem.
4. If necessary, release mainspring as follows (fig. 2) : with winding stem in hand-setting position, draw back click B (it will stay in this position), then tension click 1427 at the point indicated by arrow C. Remove balance wheel and pallet fork.
To gain direct access to the barrel (fig. 3), it is only necessary to take out the 4 screws D, E, F and G (fig. 2) in order to remove the train wheel bridge with the automatic winding device in position.
5. Remove upper bridge 1142 of automatic device (fig. 2), after taking out the 3 screws H, I and K.
6. Remove (fig. 4) : mounted reverser 1485/1, tension click spring 1449 and its click 1427, winding-up wheel 1480 (without pinion), reduction gear 1481 and complete pawl winding wheel 1488. Then separate pinion 1484 with spring click from pawl winding wheel 1489 and, if necessary, unscrew oscillating weight axle 1496.
7. Disassemble the watch movement proper and clean all its parts in the ordinary way; check cleanness and wear of parts, oil all pivot holes and friction points, then reassemble the movement, check its running and remove balance wheel and pallet fork.

Mainspring : If the mainspring and brake spring are working normally, **they should not be removed from the barrel** (the brake spring should not slip until the mainspring has been wound 5-6 turns). On the other hand, if the mainspring or brake spring is damaged, it should be replaced by a spring of good quality and of the prescribed dimensions, viz.

Mainspring: breadth 1.45 mm., thickness 0.1075 mm., total length 320 mm., length of riveted hook 3.80 mm. from rivet.
Brake spring: breadth 1.35 mm., thickness 0.1575 mm., length 35 mm.

Grease the entire inner circumference of the barrel. Fit brake spring, bending it as little as possible, then fit mainspring, oiling it in the ordinary way. The winding may be checked by placing the barrel in the movement, but it is simpler to use an F 690 ratchet wheel winder.



ASSEMBLING :

Lubrication A : Use fine oil to lubricate lower pivot holes of winding-up wheel 1480, reduction gear 1481 and pawl winding wheel 1489, lower pivot holes of tension click 1427 and mounted reverser 1485/1, pinion spindle of mounted reverser 1485/1, and lower spindle of pawl winding wheel 1489. Use thick oil, however, to lubricate the countersink of pawl winding wheel 1489.

1. Fit complete pawl winding wheel 1488 with its pinion downwards ($1488=1489+1484$), reduction gear 1481 with its pinion downwards, winding-up wheel 1480 with its seat upwards, mounted reverser 1485/1, tension click 1427 and its spring 1449.

2. Fit upper bridge 1142 of automatic device by means of the 3 screws H, I and K. Replace pallet fork and balance wheel.

Lubrication B : Use fine oil to lubricate the 5 upper pivot holes of the automatic device, oscillating weight axle 1496 at its end and base; its groove should be lubricated with thick oil.

To correct end-shake of oscillating weight, raise or lower its upper jewel (small hole), as required.

3. Fit dial and hands, and place movement in case.
4. Move bolt 1491 in direction of arrow, replace oscillating weight 1143 and push back the bolt.

