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FABRIQUE D'EBAUCHES FELSA S. A., GRENCHEN



Lever movement, self-winding, sweep second, with :

Date showing through aperture in dial (cal. 692) Date showing through aperture in dial, and corrector (cal. 694) Calendar and moon phase devices (cal. 693)



Enlarged movements

TECHNICAL AND PRACTICAL COMMUNICATION FOR THE GUIDANCE OF WATCH REPAIRERS

Lever movement, self-winding, sweep second, with calendar and moon phase devices

Movement 693 is the same as caliber 690 (see Technical Communication No. 5), with the addition of calendar and moon phase devices.

DISASSEMBLING :

To gain access to the calendar and moon phase devices, it is necessary first of all to go through operations 1 to 3 for disassembling the automatic winding mechanism (see under cal. 690), after which the devices can be disassembled easily. Check cleanness and wear of all parts.

ASSEMBLING :

The devices are equally easy to assemble, but the following special points should be taken into account: date star driving wheel 2556 (see diagram) should be placed with its mark F opposite pin G of day star driving wheel 2560. Furthermore, moon phase star driving wheel 2597 should be placed with its mark H opposite pin G of day star driving wheel 2560. To do this, it is only necessary, after having made the setting F-G, to turn day star driving wheel 2560 in the direction shown by the arrow, so as to bring pin G opposite mark H on moon phase star driving wheel 2597, on the line joining the centers of the two wheels.

Note: To facilitate the assembling of these devices, driving wheels 2560 and 2597 have been slightly changed in the latest series of movements manufactured. Day star driving wheel 2560 now has a mark, and the one on moon phase star driving wheel 2597 has been moved. When assembling, it is therefore only necessary to make sure that the wheels are simultaneously placed as follows: pin G of day star driving wheel 2556, and its mark should be opposite mark H on moon phase star driving wheel 2597, on the respective lines joining the centers of the three wheels.

CHECKING AND LUBRICATION :

With the winding stem in the hand-setting position, check the "jumping" of the day and date stars, which should move simultaneously. Check the working by means of the correctors, then oil all corrector and jumper pivots, and grease friction points of springs and jumpers.

WORKING AND SETTING OF CALENDAR AND MOON PHASE DEVICE :

After having fitted the dial, fit the date hand and turn the winding stem until the day disk or the date hand jumps forward; fit the hour and minute hands, making sure that they point to 12, then fit the second hand. Place the movement in the case, then set the watch to the correct time, and set the calendar to the correct date by means of the pushers, remembering that the hands have been set to zero hours. Do not use the pushers to work the calendar between 10 p. m. and 2 a. m., when the automatic "jumping" takes place.







In this caliber, the calendar and moon phase pushers are fitted in the side of the case. Pusher A works the date hand, pusher B the day disk, and pusher C the month disk. Pusher D works the moon phase disk, and any almanac will show the phase of the moon at the time of setting.



52551 Calendar plate screw - 52556 Date star driving wheel screw - 52560 Day star driving wheel screw - 52561 Day star screw - 52562 Month star screw - 52566 Date corrector screw - 52567 Day corrector screw - 52568 Month corrector screw - 52571 Screw for day corrector spring -52572 Screw for date corrector spring - 52573 Screw for day jumper spring - 52576 Date jumper screw - 52577 Day jumper screw - 52578 Month jumper screw - 52580 Screw for month corrector spring - 52583 Screw for month jumper spring - 52587 Moon phase star screw - 52588 Moon phase jumper screw - 52590 Moon phase corrector screw - 52590¹ Safety screw for moon phase corrector - 52592 Screw for moon phase jumper spring - 52593 Screw for moon phase corrector spring - 52597 Moon phase star driving wheel screw.

The following screws are identical : 52561 = 52562 = 52566 = 52567 = 52568 = 52571 = 52572 = 52573 = 52577 = 52578 = 52580 = 52583 = 52587 = 52588 = 52590 = 52593.

All parts not listed above are exactly the same as for caliber 690, with the exception of plate 100, pallet cock 125, center wheel 206, cannon pinion 245 and sweep second pinion 275, of which there are special types for caliber 693.

Note: Two types of moon phase corrector are manufactured for this caliber; they are interchangeable, however.



SPECIAL DEVICE



As a result of technical improvements, calibers 690, 692, 693 and 694 can be fitted with a special regulator, which has a separate regulator driver 362 instead of a stud. Three parts have had to be altered accordingly. The new types are shown in the above illustration, and their numbers are followed by the letter "a". The sign * means that the new and old types are not interchangeable.

Lever movement, self-winding, sweep second, with date showing through aperture in dial (without corrector)

11 ½′′′′ **692**

Movement 692 is the same as caliber 694, except that it has no corrector. All its parts are exactly the same as for caliber 694, with the exception of plate 100, of which there is a special type for caliber 692, and pallet cock 125, which is the same as for caliber 690.

Lever movement, self-winding, sweep second, with date showing through aperture in dial (with corrector)

11 ½‴ **694**

Movement 694 is the same as caliber 690 (see Technical Communication No. 5), with the addition of a device for showing the date through an aperture in the dial, and a corrector.

DISASSEMBLING :

To gain access to the date-indicating device, it is necessary first of all to go through operations 1 to 3 for disassembling the automatic winding mechanism (see under 690). The date-indicating device can then be disassembled easily, as follows : remove date roller spring 2541 and date roller 2540, date indicator

guard 2535 with its 3 screws, date indicator 2557, double-toothing hour wheel 2558, date indicator driving wheel 2556 and date corrector 2566. Check cleanness and wear of all parts.

ASSEMBLING :

The device is equally easy to assemble, by reversing the order of operations given above.

CHECKING AND LUBRICATION :

Check movement of date indicator, first by turning the winding stem (hand-setting position), then by means of the corrector. If it does not work properly, check tension of roller spring and position of corrector finger, which should drive one tooth each time that pressure is applied. Oil the corrector pivot and grease friction points of roller and its spring.

WORKING AND SETTING OF DATE-INDICATING DEVICE :

After having fitted the dial, turn the winding stem until the date indicator jumps forward, fit the hour and minute hands, making sure that they point to 12, then fit the second hand. Set the watch to the correct time, then set the date indicator to the correct date by means of pusher A in the side of the case, remembering that the hands have been set to zero hours. Do not use the pusher to work the date indicator between 9 p. m. and 2 a. m., when the automatic "jumping" takes place.







2535 Date indicator guard2540 Date roller2541 Date roller spring

2556 Date indicator driving wheel 2557/1 Date indicator, transferred 2558 Double-toothing hour wheel 2566 Date corrector 2572a* Date corrector spring

52535 Screw for date indicator guard - 52556 Date indicator driving wheel screw - 52566 Date corrector screw - 52572 a* Screw for date corrector spring. NOTE: As a result of technical improvements, date corrector 2566 with its combined spring, as shown in the left-hand illustration, has now been

replaced by a corrector and a separate spring. These are shown in the right-hand illustration. This change has also necessitated the modification of plate 100. Apart from these parts and their screws, all the components of caliber 694 remain unchanged.

All parts not listed above are exactly the same as for caliber 690, with the exception of plate 100, pallet cock 125 and cannon pinion 245, of which there are special types for caliber 694.

When ordering parts for a shock-protecting device, make certain to specify its exact type. For further details of the description and numbering of spare parts, see Technical Communication No. 5 (Felsa, cal. 690) or the "Technological Dictionary of Watch Parts", 2nd edition, published by Ebauches S. A.

Order repair parts through your jobber, giving the numbers and designations, thus insuring prompt and efficient deliveries.