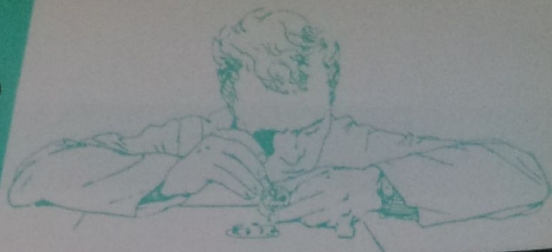


OMEGA

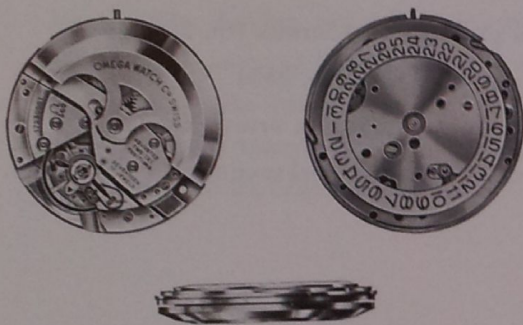


TECHNICAL GUIDE

N° 16 1960

THE AUTOMATIC CALENDAR CALIBRE 561

(27.90 RA. SC. PC. CAL AM BULLETIN 24 jewels)



This is an automatic calibre with double action rotor, sweep seconds, and calendar work with date aperture at 3 o'clock.

Its main feature is its reduced height which is only 5 mm, thus permitting the use of thin and attractive cases which are now in great demand.

CHARACTERISTICS

Dimensions

Major diameter 28.40 mm
Casing diameter 27.90 mm
Height including rotor 5 mm
Diameter of winding stem thread 0.90 mm

Train

19 800

Ebauche

1 barrel bridge including centre wheel
1 train bridge including third, fourth and escape wheels
1 pallet bridge
1 balance cock
2 automatic work bridges forming an independent assembly
1 printed date indicator
1 date indicator bridge

Finish

Rose gilt with large wave effect, diamond polished bevelled edges

Jewelling

- 24 jewels including 19 olive holes for train, escapement and upper and lower bridges of automatic work
- 2 balance end-stones
- 1 roller jewel
- 1 beryllium bronze buchon for barrel arbor in barrel bridge

CALENDAR WORK

The total height of the movement is 5 mm; compared with the basic calibre 550 there is only a difference of 0.5 mm. The calendar work is simple and reliable and comprises of the following parts.

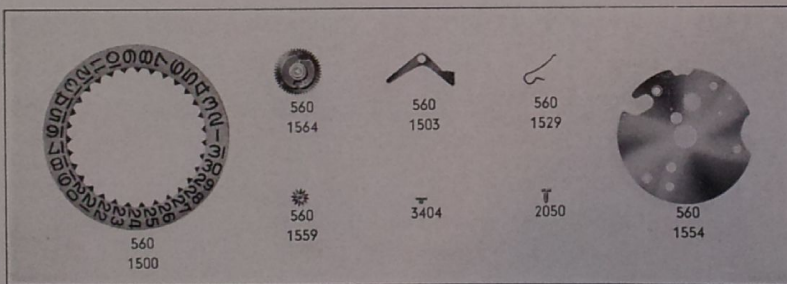
The printed date indicator No. 560.1500 which is an annular ring having 31 teeth on the inside and marked from 1 to 31.

The date indicator guard No. 560.1554 mounted on the main plate by two screws No. 2050.

The date jumper No. 560.1503 fitted to the date indicator guard by screw No. 3404.

The date jumper spring No. 560.1529 also fitted to the date indicator guard by screw No. 3404.

The double calendar setting wheel No. 560.1503 and date indicator driving wheel mounted No. 560.1564.

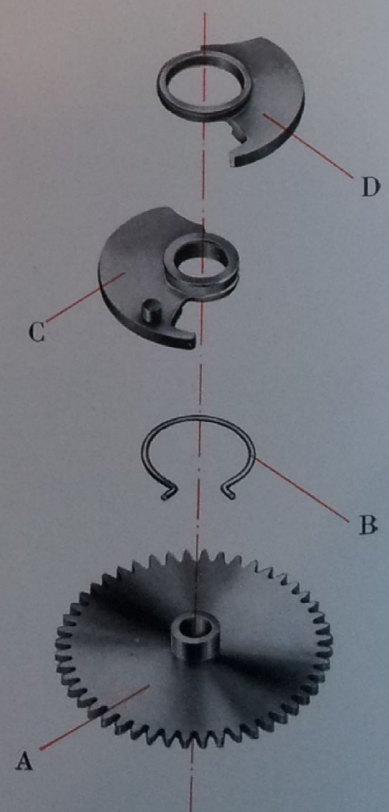


The latter itself comprising of:

The date indicator driving wheel A on the pipe of which is mounted (A driven fit) the lower safety cam C carrying the driving pin,

the upper safety cam D which is a spring fit on the former, in a manner similar to that which a regulator is fitted to a balance cock,

and the safety date spring the purpose of which is in its expanded position to hold the two cams together as in illustration (see enlarged movement).



FUNCTIONING OF THE CALENDAR



The hour wheel having 36 teeth meshes with the upper half of the double setting wheel having 12 teeth, the lower half having eight teeth meshes with the date indicator driving wheel which performs a complete revolution every 24 hours.

The driving pin attached to the lower safety cam which is mounted on the date indicator driving wheel thus carries forward the date indicator one tooth every 24 hours bringing the new date into position. The time taken for the date to change is about two hours, starting soon after 10 p.m. and ending at midnight.

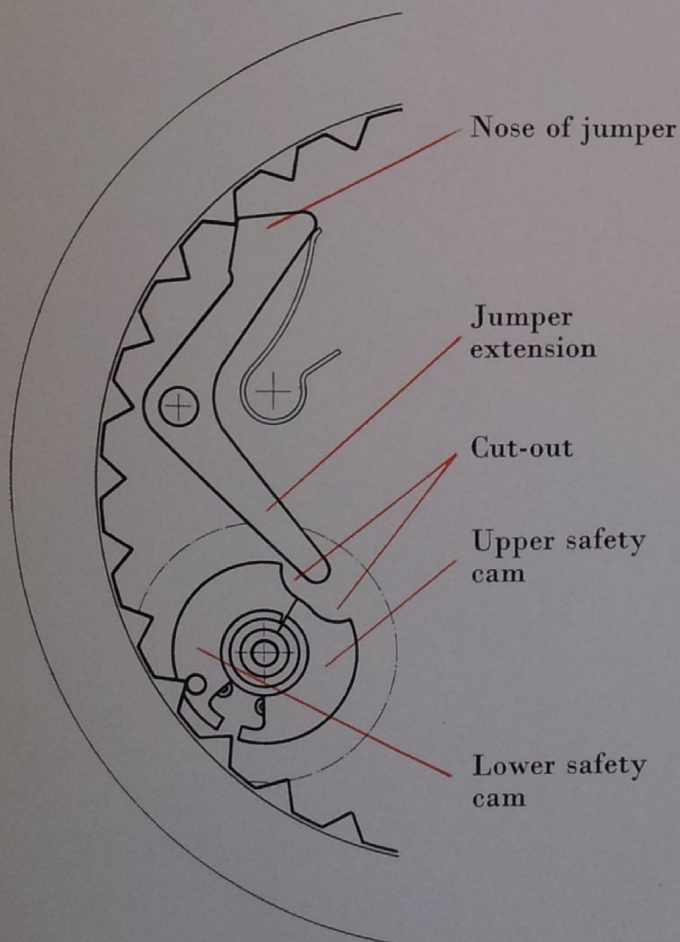
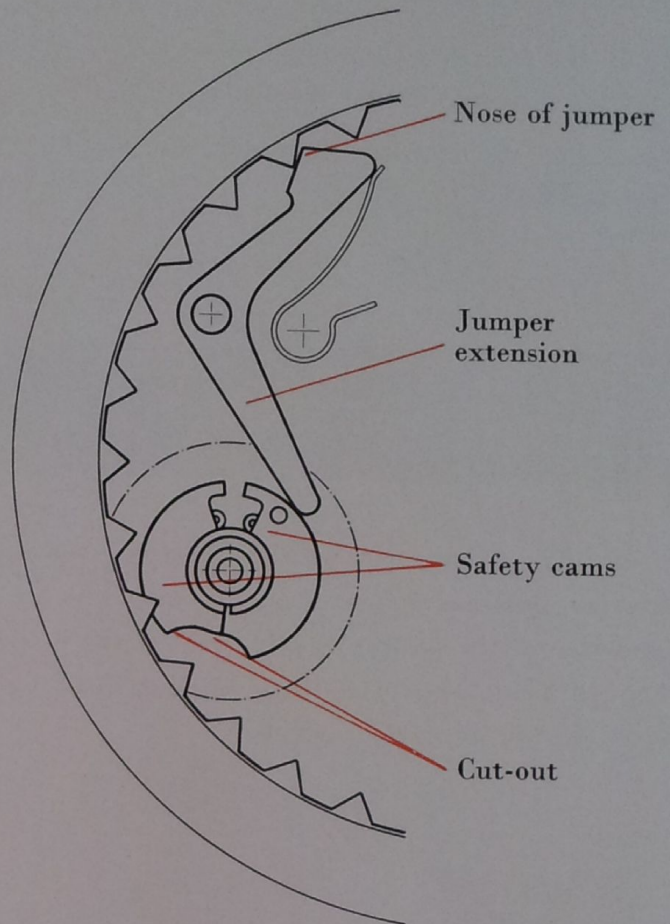
When fitting hands turn the date indicator by means of the winding stem until change over has just taken place. Set hands at midnight.

SAFETY

A safety device has been provided to prevent the date indicator from being displaced when subjected to a severe shock.

This is achieved by extending the date jumper, such that when subjected to shock, the date indicator acting on the nose of the jumper will cause the extension to butt against the periphery of the safety cams, thus limiting the action of the jumper, sufficiently to prevent the passage of the teeth of the date indicator. Under normal conditions the jumper being held in position by its spring, its extension will be clear of the safety cams.

(See figure on right.)



On passing from one tooth to the next the date jumper extension will pass inside the safety cam cut out so as to allow the nose of the jumper to lift over the indicator teeth.

(See figure on left.)

SETTING THE DATE INDICATOR

To set the date turn the winding stem anti clockwise so as to move the date indicator until the first date change takes place.

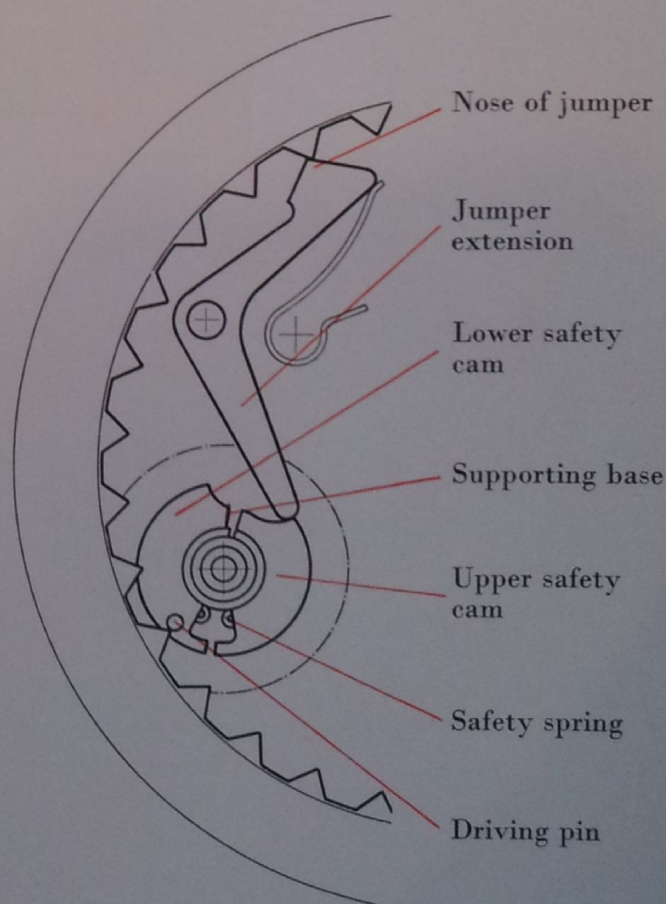
To advance the date from here, turn the winding stem 4 turns clockwise then 4 turns anti clockwise.

Action of the calendar mechanism when the date indicator is moved anti clockwise

Firstly: The driving pin which is carrying the indicator disc in the anti clockwise direction, disengages from the tooth with which it is in contact, without (because of the design of the jumper) having moved the disc back a complete tooth, as soon as disengagement takes place the jumper actuated by its spring will return the partially moved disc to its original position.

Secondly: While this is taking place the jumper extension comes into contact with the wall of the upper safety cam, holding it while the lower safety cam carried by the driving wheel moves away from it until the driving pin disengages from the date indicator, when the jumper and extension will, under the influence of the return spring, return to their normal position allowing the two cams to join up under the influence of the safety spring.

(See figure on right.)



OILING OF CALENDAR WORK

Only perfectly clean parts should be oiled

Double calendar setting wheel pivots at plate and date indicator guard

Date indicator driving wheel post at plate

Pivoting point of date jumper at date indicator guard

Angled faces of nose of jumper

Point of contact between date jumper and spring



Use: Synta-visco-lube oil

