

OMEGA



TECHNICAL GUIDE

No. 10 March 1958

CALIBRE 540 (20.5 AM 17 jewels)



This movement (only 2 mm high without dial) is indeed one of the thinnest watches available today. Having the quality of interchangeability usually associated with our watches, servicing presents none of the difficulties that might be expected from so thin a movement.

Combining elegance with precision, models incorporating this movement form a collection of great distinction.

CHARACTERISTICS

Dimensions

Total diameter: 20.80 mm
Casing diameter: 20.50 mm
Height: 2 mm

Ebauche

As guide

Finish

Rose gilt with large wave effect diamond polished bevelled edges.

Jewelling

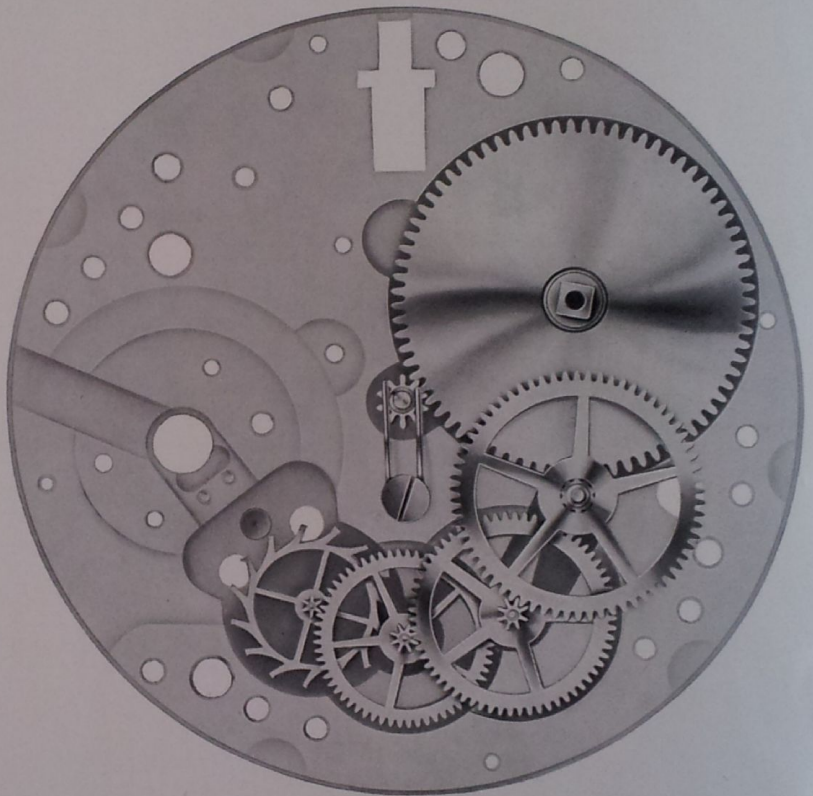
17 Jewels (Rubies) including 12 olive holes for train and escapement, 2 balance endstones, pallet stones and roller jewel.

Winding and hand setting

This follows normal Omega practice except that there is an additional intermediate wheel added to the hand setting mechanism, which meshes with the minute wheel.

Barrel

This contains stainless alloy mainspring with rivetted steel end. Running time 38 hours.



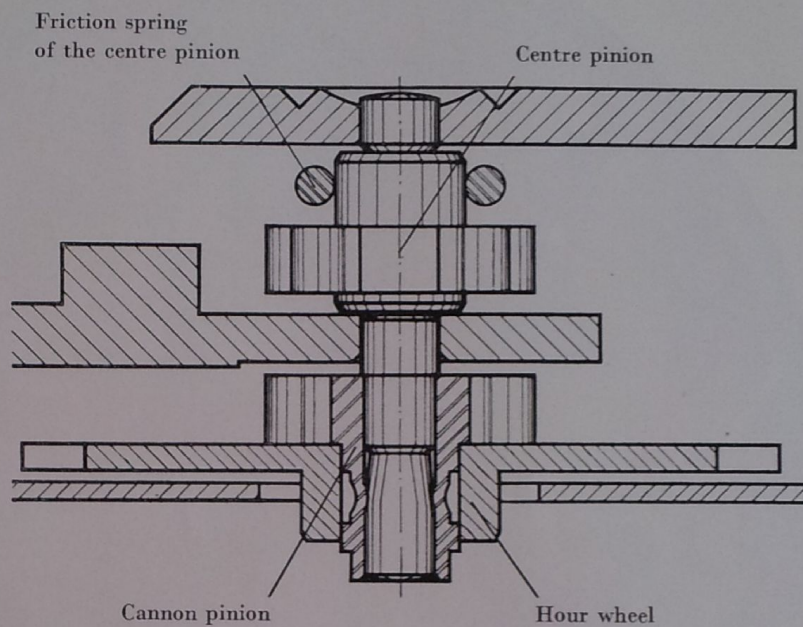
Layout

The layout of the train differs appreciably from normal. Owing to the reduced height of the movement the normal centre wheel has been replaced by an intermediate wheel and pinion. The pinion being driven by the barrel and the wheel driving the third wheel pinion.

Centre pinion

The centre pinion carrying cannon pinion and minute hand has been retained. A small U shaped wire spring screwed to the main plate acts as a friction spring, eliminating "shake" of the minute hand due to backlash.

Centre pinion friction spring



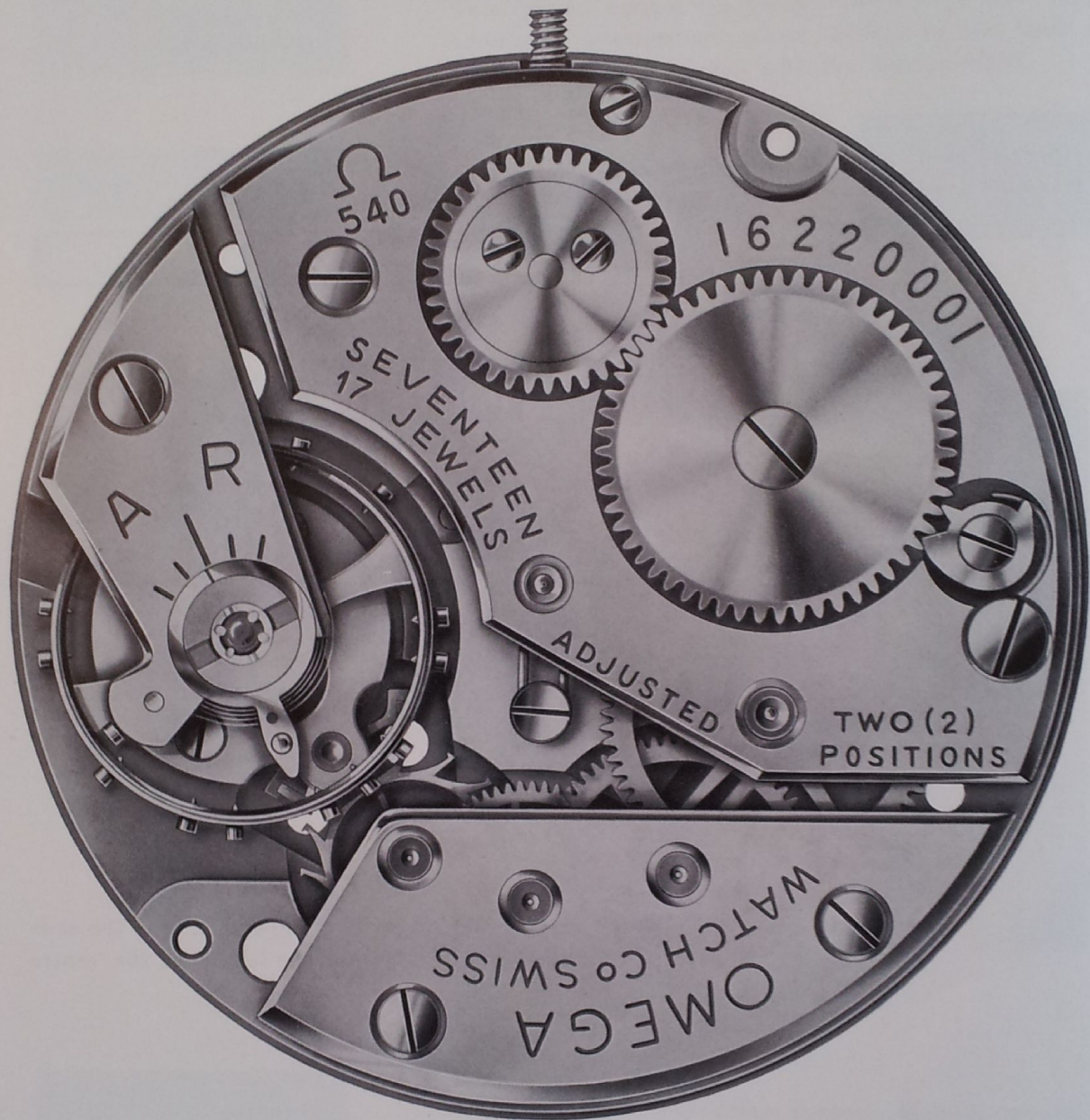
When fitting the friction spring it is important that the ends touch neither the barrel bridge nor the leaves of the centre pinion.

Escapement

The escapement is of the straight line classical type. The escape wheel pallets and roller are made of steel. The pallet cock, which is of new design, is held by two screws. The balance runs in jewels pressed in Gyrocap settings.

Index

In order that the index is flush with the top of the balance cock it has been sunk, and the pointer dispensed with. When making adjustments the slot in the index may be used as a guide.



Balance and spring

Non magnetic, with beryllium bronze balance and flat compensating spring.

Train

19800

Gyrocap settings

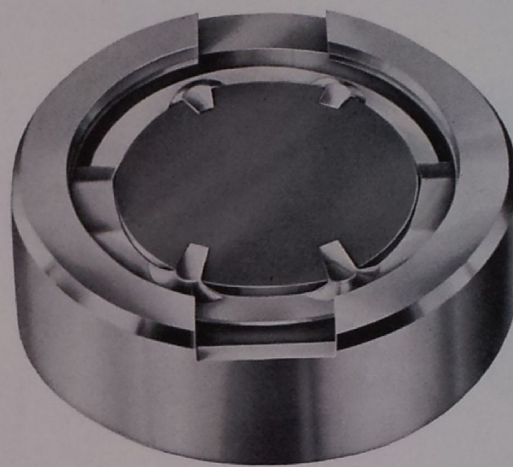
The balance jewel and endstones are contained within the "Gyrocap" settings.

They consist of:

a brass setting

a balance jewel hole

an endstone and retaining piece.

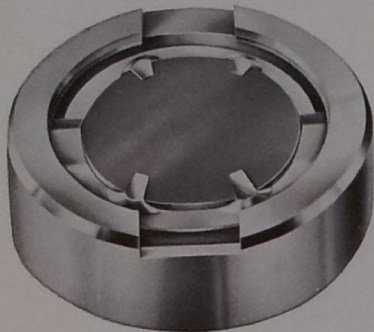


The Gyrocaps are pressed into the plate and balance cock, thus allowing accurate adjustment of endshake without resorting to harmful expedients.

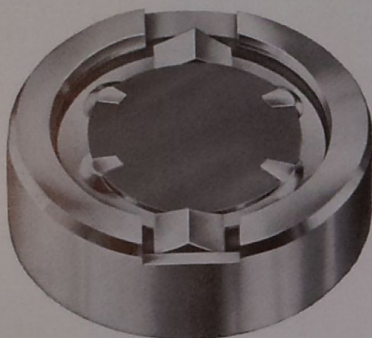
The jewel holes are pressed into the Gyrocap settings. The endstones are held friction tight in circular retaining pieces which have two resilient extensions which, when in position, have the effect of cushioning the endstone.

When cleaning the movement remove only the endstone and retaining piece and not the Gyrocap setting, as this has been accurately adjusted at the factory with regard to both endshake and the position of the roller relative to the lower plate.

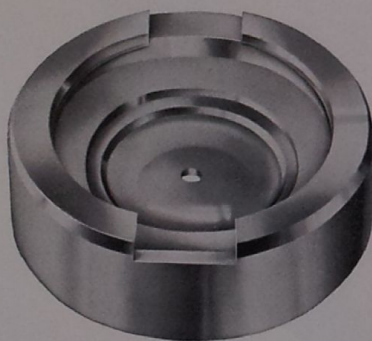
HANDLING THE GYROCAP



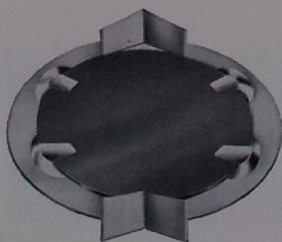
- 1 To remove the endstone and retaining piece, proceed as follows:
With a suitable tool such as screw-driver or pair of tweezers rotate the retaining piece a quarter of a turn.



- 2 This rotation causes the two extension pieces to line up with the slots in the setting, thus permitting easy removal of endstone and retaining piece.



- 3 With the retaining piece and endstone removed the jewel can easily be cleaned.



- 4 Changing the endstone is easily carried out by lightly pressing down the endstone into its retaining piece. Replacement endstones are normally supplied complete with retaining pieces.

THE ADVANTAGES OF THE GYROCAP SETTINGS

- ① Correct adjustment of balance endshake.
- ② Perfect oiling due to the accurate spacing between the balance jewel hole and endstone.
- ③ Oil perfectly centered.
- ④ Watch will run for a much longer period, due to the oil remaining fresh.
- ⑤ Easy dismantling and re-assembling.
- ⑥ End piece and screw dispensed with.



Material

As listed in Catalogue GF 620-3.

OILING

Synt A Lube Oil to:

winding stem
clutch wheel
yoke (clutch lever)
yoke spring (set spring)
setting lever (detent)
setting lever spring
setting wheels
minute wheel

Moebius lubricant to:

barrel and mainspring

Moebius oil for chronometers No. 1 to:

center pinion
cannon pinion
pivoting points of barrel arbor
 within main plate and bridge
pallet jewels

Chronax oil D to:

pivoting points in gear train,
 of escape wheel and balance

Pallet-staff pivots are not oiled

