

The G.E.C. 1000 Telephone

*By A. F. Jones, D.I.C.
Telephone Laboratory.*

In this new G.E.C. telephone, a new level of performance, described elsewhere in this issue, is allied to an improved shape, to give an outstanding subscriber's instrument.



Fig. 1.-The "G.E.C. 1000" Telephone.

At one time a common practice was to conceal or disguise telephones because their appearance detracted from the pleasing effects that were sought from the furnishings and decorations by which they were surrounded. This practice emphasised the importance of shape, which really received first acknowledgment when plastic-cased telephones with some pretensions to good shape were introduced. In nearly three decades many designs have emerged. The latest is the "G.E.C. 1000" Telephone, illustrated in Fig. 1.

Shape in the telephone is essentially a matter of appeal to the eye. In an object to be lived with, a flowing line has a more pleasing effect than one that abruptly changes direction. In Fig. 2 are given the predominant lines of a variety of shapes of telephone in current use. In the new G.E.C. telephone, in contrast with others, the flow of line from the front into the cradle and out again to the back is self-evident good design. Resting in the cradle, the handset has curves that complement those of the base.

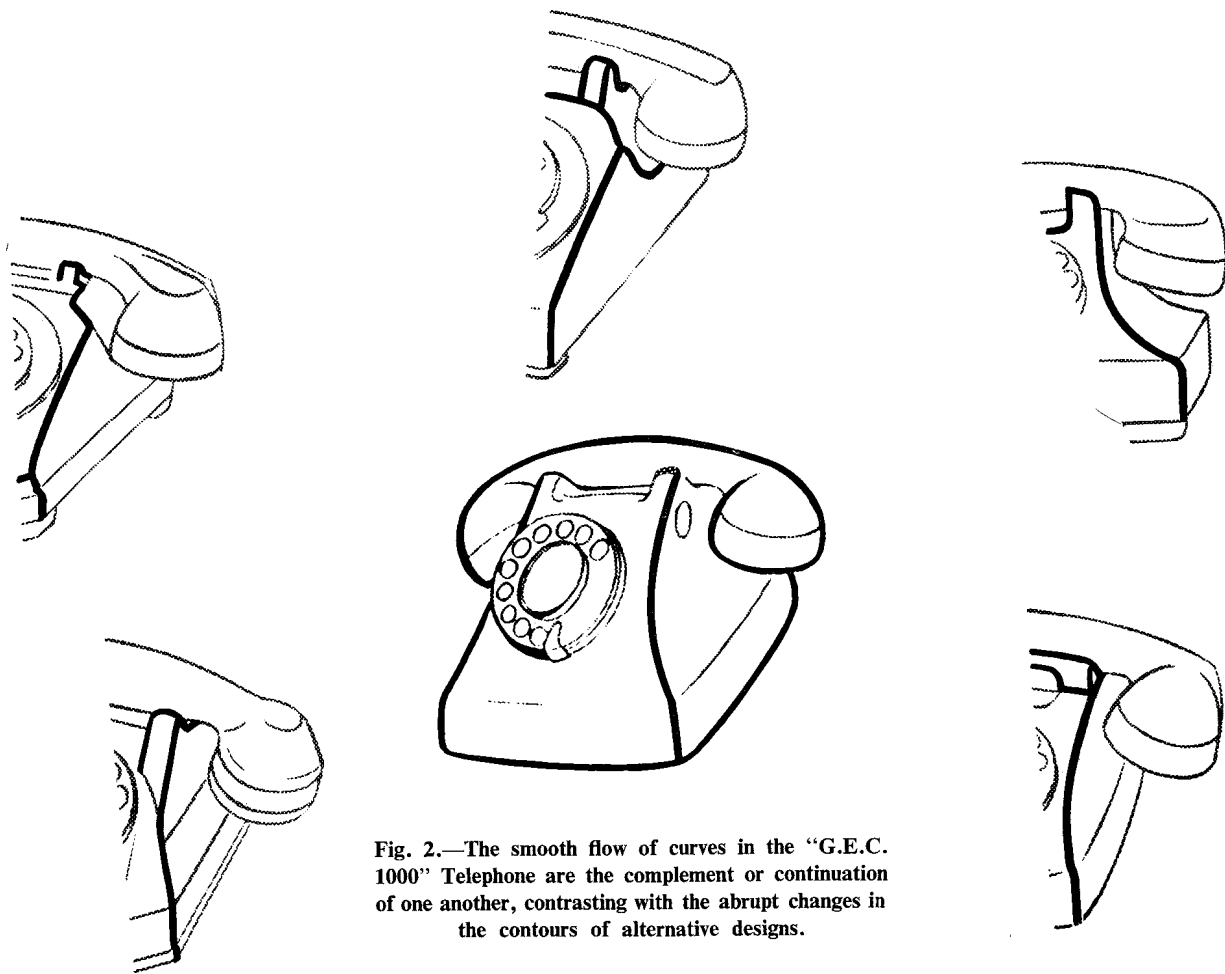


Fig. 2.—The smooth flow of curves in the "G.E.C. 1000" Telephone are the complement or continuation of one another, contrasting with the abrupt changes in the contours of alternative designs.

The angle of slope of the front surface of the case not only affects appearance - it also has a great effect on the ease of dialling. The most advantageous position for the eye is on a line normal to the plane of the dial. Fig. 3 shows how the plane of the dial on the "G.E.C. 1000" Telephone conforms to this principle in comparison with a dial on a more horizontal plane.

Ventilation of the case, to minimise internal condensation, has for many years been a feature of G.E.C. telephones for tropical service. It is not only retained in the new telephone but is so contrived as to give an added facility. On each side of the case, in front of the handset, is an indentation which provides finger grips for lifting the instrument with ease. This indentation contains a large number of small holes, which provide ventilation, but which are small enough to prevent the ingress of insects.

The same precautions against insects are found in the base, where a large number of small holes allow air to circulate and sound from the bell to escape, but prevent the entry of insects.

When resting in the cradle, the curved handset gives the telephone a domed silhouette in accord with the remainder of the instrument. The increased curvature of the handset over previous types gives greater comfort to the user. Many tests have been carried out to determine the most satisfactory distance and angular relationship between the earpiece and mouthpiece. This new design suits the average person, and allows the size of the mouthpiece horn to be reduced. The latter feature improves the transmitter frequency response, and makes the telephone more hygienic.

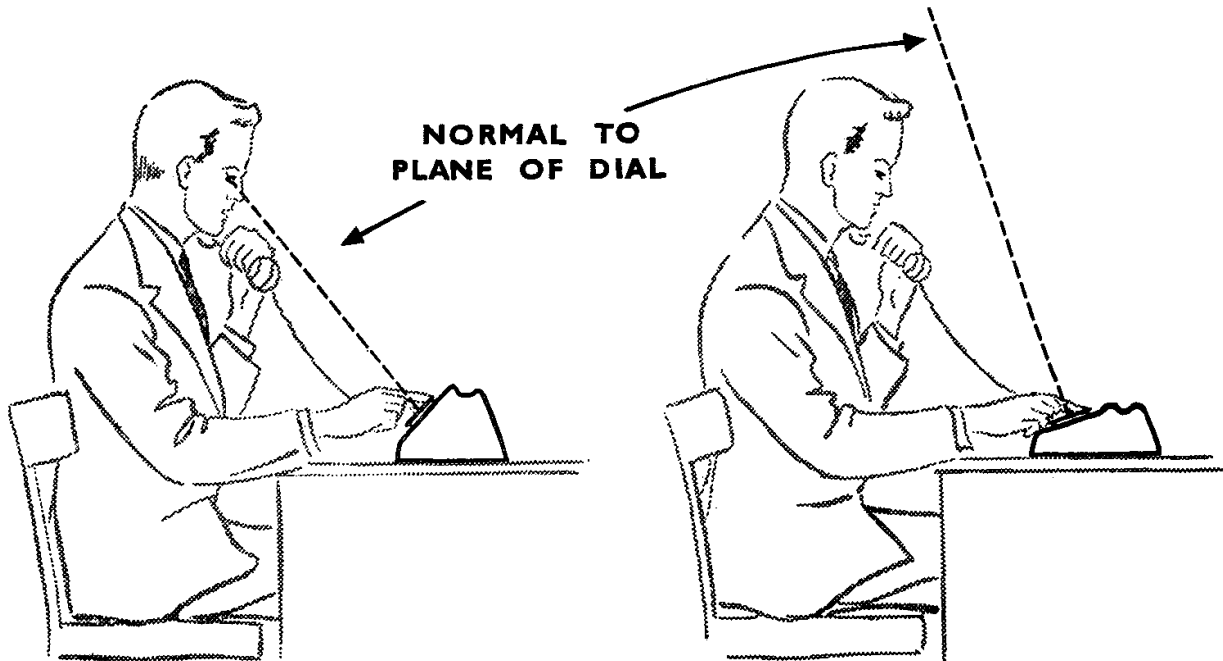


Fig. 3.-Illustrating the convenient positioning of the dial on the "G.E.C. 1000" Telephone.

There are no moulded-in contacts in the handset ; the cord is connected direct to the capsule-type transmitter and receiver. The transmitter and receiver capsules are held in place by a screw-on mouthpiece and earpiece respectively. Being attached directly to the cord, the capsules are prevented from falling out when the mouthpiece and earpiece are removed.

Base Plate Assembly

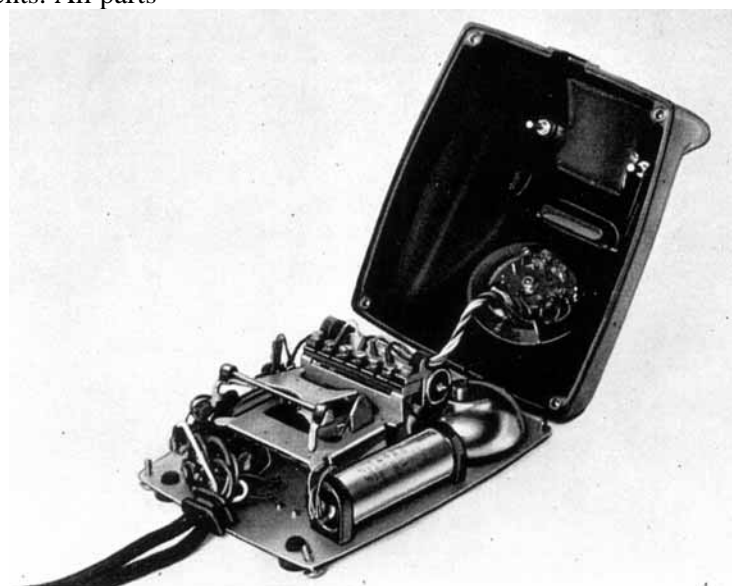
All items, except the dial, are mounted on the base plate. An internal view of the instrument in Fig. 4 shows the layout of the components. All parts

are detachable ; hence servicing is easily accomplished.

Dial

The G.E.C. well-known trigger-type dial is fitted and operates at ten impulses per second, with a break to make ratio of 2 : 1. Dials having other ratios can be fitted when required. A transparent plastic cover can be fitted to the back of the dial to provide protection, when necessary, against dust.

Fig. 4.-An internal view of the "G.E.C. 1000" Telephone.





**Fig. 5. - Two-tone
"G.E.C. 1000" Telephone.**

Ringer

The ringer normally has a resistance of 1000 ohms, and an impedance of 17000 ohms at 1000c/s. When required for multi-party working, coils of higher impedance are fitted.

Cradle Switch

The cradle switch is designed to eliminate any likelihood of sticking plungers. The springsets, which are mounted so that any accumulation of dust tends to fall away, are fitted with twin contacts to give maximum reliability.

Large insulators are fitted on tropical models to ensure long leakage paths between springs.

Tropicalisation

The three special G.E.C. features, high-quality insulation, ventilation of the case, and protection against humidity and insects are provided on all telephones supplied to tropical areas.

Colour

In addition to the normal black instrument, a range of two-tone telephones can be supplied in which the case is coloured and all other parts, including the dial, are black (Fig. 5). The present range of colours is ivory, red and green. The two-tone telephones have the following advantages over the all-colour telephones :

As only one coloured item is used, the difficulty of shade matching is eliminated. Delicate and pleasing shades can be used.

The number of spare parts required by Administrations using more than one colour of telephone is greatly reduced.

The colour of a telephone can readily be altered by changing the case only.

Cords

The telephones are fitted with the latest type instrument cords having PVC-insulated conductors and nylon overall braid. This combination of good-quality modern materials ensures a cord having long life and pleasing appearance.

Published by
The General Electric Company Limited of England
Telephone, Radio and Television Works, Coventry, England

August 1956
Copyright Reserved