

EUROPEAN PATENT APPLICATION

Application number: 90105866.9

Int. Cl.⁵: H04M 1/02, H04B 1/034

Date of filing: 28.03.90

Priority: 25.05.89 FI 892561

Applicant: **NOKIA MOBILE PHONES LTD.**
P.O. Box 86
SF-24101 Salo(FI)

Date of publication of application:
 28.11.90 Bulletin 90/48

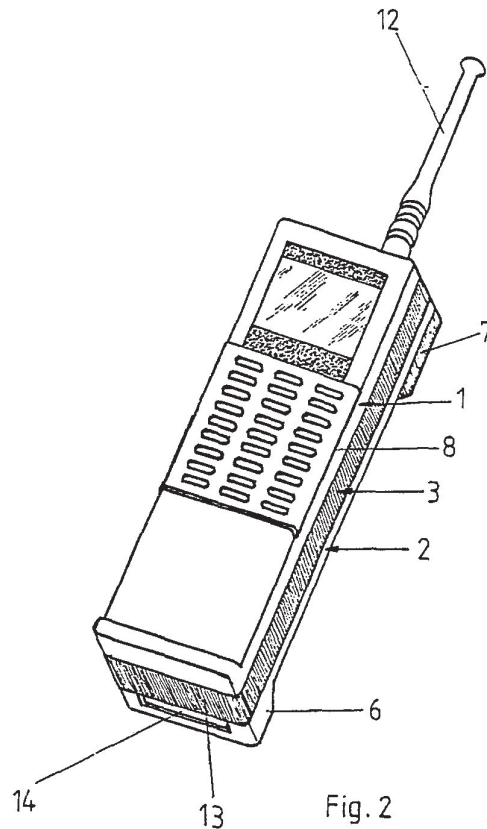
Inventor: **Tattari, Jouko**
Torikatu 14A 16
SF-24100 Salo(FI)

Designated Contracting States:
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

Representative: **EGLI-EUROPEAN PATENT**
ATTORNEYS
Horneggstrasse 4
CH-8008 Zürich(CH)

Construction of a telephone handset operating as an independent unit.

The object of the description is the construction of a telephone handset operating as an independent unit. The handset is formed from the operating unit of a mobile phone by placing between the upper half (1) and the lower half (2) of the operating unit an intermediate body (3) containing the rf-part, the antenna (12) and the batteries. The antenna and the batteries are preferably located at the opposite ends of the rectangular intermediate body.



EP 0 399 176 A2

Construction of a telephone handset operating as an independent unit

The present invention relates to the construction of a telephone handset, more specifically the construction of a handset operating as an independent telephone unit.

Handsets of this type are battery-powered, small-sized portable telephone units working like mobile (car) phones and using a mobile phone system. Such a handset thus comprises all parts including the antenna required for a mobile station.

The handset comprises basically the same parts as for example the operating unit of a mobile phone, though the operating unit does not include the rf-parts, antenna and the batteries of the telephone. Therefore it was now realized regarding the manufacture and assembly, that it is most advantageous to utilize existing parts of an operating unit and in addition, to design the appearance of the handset to correspond to the operating unit as far as possible, whereby these two instruments readily can be identified as instruments from the same manufacturer.

The features of the invention will be apparent from the enclosed claim.

The invention will be described further by way of an example with reference to the accompanying drawing, in which:

figure 1 shows the operating unit of a mobile phone; and

figure 2 shows a handset constructed utilizing parts of the operating unit.

The operating unit according to figure 1 comprises generally an upper half 1 and a lower half 2, each being rectangular and joined together along the center line. The upper part 1 includes a key set 4 and a display 5. The lower part 2 includes a microphone 6 and an earphone 7.

If required, the instrument can be equipped with a sliding lid 8, which is provided with a prepared surface 8 and can be pushed over the key set 4 to cover it.

The operating unit is connected to the main unit of the mobile phone with a spiral cord 10. The cable clamp part at 11 is closely attached to the microphone end of the operating unit.

In figure 2 there is shown a handset construction according to the invention. This handset utilizes the above mentioned parts of 1 and 2 the operating unit. Between these parts there is provided in a sandwiched fashion an intermediate body 3 including the rf-part of the handset, the antenna 12 and the case for the batteries. At 14 is a connector, through which the handset also can be connected to e.g. the main unit of a mobile phone or to other auxiliaries. In the case of the operating unit, the cable clamp 11 covers this

connector 14.

As a result of the construction according to the invention it is possible to use as many common parts as possible, thereby naturally saving in the costs of molds and other manufacturing costs. When required, the intermediate module part 3 may be provided with such contact means that it will automatically connect to the upper part 1 and the lower part 2 when the handset is assembled.

It is quite obvious that the appearance of the operating unit and the handset may vary considerably from that shown in the the drawing, without departing from the inventive idea.

Claims

1. Construction of a telephone handset operating as an independent unit, **characterized** in that it is formed from the operating unit of a mobile phone by placing between the upper and lower part (1, 2) of the operating unit an intermediate body (3) containing the rf-part, the antenna (12) and the batteries.

2. The construction of claim 1, **characterized** in that the antenna (12) is mounted at one end of the oblong intermediate body (3), the other end containing a battery case (13).

3. The construction of claim 1 or 2, **characterized** in that the intermediate body (3) is in the shape of a rectangular plate.

4. The construction according to one of the previous claims, **characterized** in that the telephone is provided with a sliding lid (8) that can be pushed over the key set (4).

