PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improved Telescopic Antennæ for those Radio Sets which are Mounted on Motor Vehicles

We, MAGNADYNE RADIO, a Joint Stock Company organised under the laws of Italy, of 10, Via S. Ambrogio, Turin, Italy, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The present invention relates to telescopic antennæ for those radio sets which are mounted upon motor vehicles, and has for its object to improve the construction of such antennæ so as to reduce the capacity set up between the antennæ and metallic masses of the vehicle and to minimise the ohmic resistance of the antennæ without regard to the degree of its telescopic extension, thereby to increase the efficiency of the reception of radio waves by the antennæ.

Accordingly, the outer telescopic element of the antenna is supported in a substantially vertical position by means of a pair of supports, each of which comprises a metallic housing enclosing a suction cup adapted to adhere to a smooth surface, e.g., an insulating glass panel.

With the arrangement according to the invention, since the antenna is secured to such suction cups by very small metallic unions, the electrical self-capacity of the antenna is much reduced whereby its efficiency is very large even where the glass pane of the wind screen or other window has a superficial conductiveness when it rains or in similar circumstances.

In this new type of telescopic antenna for those radio sets which are mounted on motor vehicles, are also provided several improved constructional details having for their object to shelter from atmospheric agents the small number of metal parts of which the antenna consists, while maintaining a perfect electrical contact between the stationary tubular part and the rod that is slidably engaged in it. To this end, there is provided at the upper end of the tubular part a stuffing box impregnated with a greasy substance which inhibits the ingress of water drops which flow down along the rod, and the inside of the tubular part is parkerized approximately to the zone of the stuffing box. Immediately underneath the stuffing box are provided strips which ensure a reliable contact.

The diameter of the tubular part need not be more than a few millimetres, and the diameter of the suction cups preferably made of india rubber can also be small, such cups being located at appreciable distance from each other and being well capable of withstanding bending stresses of the rod. The casings protecting each suction cup may be made of any suitable metal.

The invention will hereinafter be further described with reference to the accompanying drawing in which:—

Figure 1 shows by way of example the constructional details of an embodiment of the antenna according to the invention.

Figure 2 shows by way of example the mode of applying the antenna to the glass pane of the wind screen of a motor vehicle.

Figure 3 shows by way of example the mode of applying the antenna to the pane of a rear window of a motor vehicle.

In Fig. 1, 1 designates the tubular part of the telescopic antenna; 2 the suction cups forming separate carriers and secured by threaded bolts 18 to guide supports 3 and 5 through which the tubular part of the antenna slidably passes; 4 a set screw fitted in the lower support 3 to lock the tubular antenna-part in its adjusted position; 6 the upper end stuffing box; 7 the electrically conductive contact springs for the movable rod, adapted also to guide and centre said rod; 10 the upper end of the movable rod, conveniently of spherical shape; 11 the housings for protecting each suction cup said housings having their bottoms perforated for the passage of the bolts 18; 12 the lower end of the tubular part of suitable shape for receiving the connecting jack 13 of the radio signal input capable of the radio set. The upper guide support 5 need not have a locking set screw.

In Figs. 2 and 3, 14 and 15 designate the two separate carriers, 16 designates the tubular part of the antenna and 17 the movable rod.

Having now particularly described and

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ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. Improved telescopic antenna for radio sets mounted on motor vehicles, characterized in that the outer telescopic element of the antenna is supported in a substantially vertical position by means of a pair of supports, each of which comprises a metallic housing enclosing a suction cup adapted to adhere to a smooth surface, e.g., an insulating glass panel.

2. Antenna as claimed in claim 1, characterized in that the outer telescopic element is internally parkerized and provided with electrically conductive strips for contacting with the inner telescopic element.

3. Antenna, as claimed in claims 1 and 2, characterized in that the top opening of the outer telescopic element is fitted with a stuffing box.

4. Antenna, as claimed in claims 1 to 3, characterized in that the lower end of the outer telescopic element is used for connecting up a jack fitted to the radio signal input cable of the radio receiving set.

5. Antenna, as claimed in claims 1 to 4, characterized in that the outer tubular telescopic element and the inner slidable rod are made of stainlesss metals or alloys.

6. An antenna constructed substantially as described and shewn.

Dated this 30th day of March, 1939.

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Fig. 1

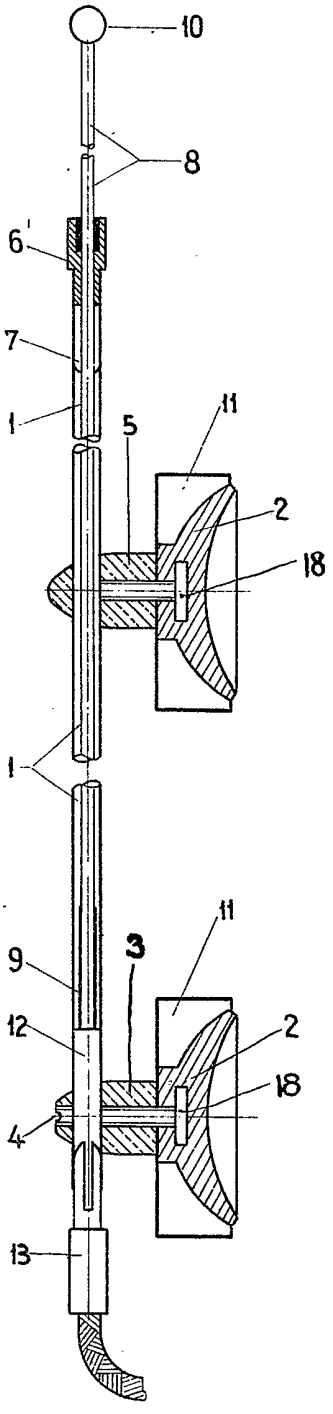


Fig. 2

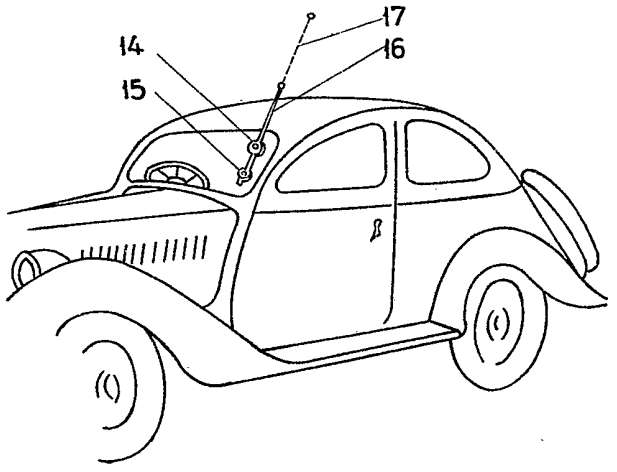
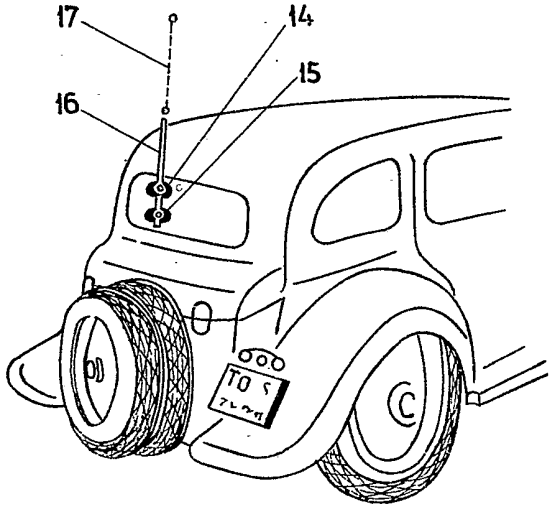


Fig. 3



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