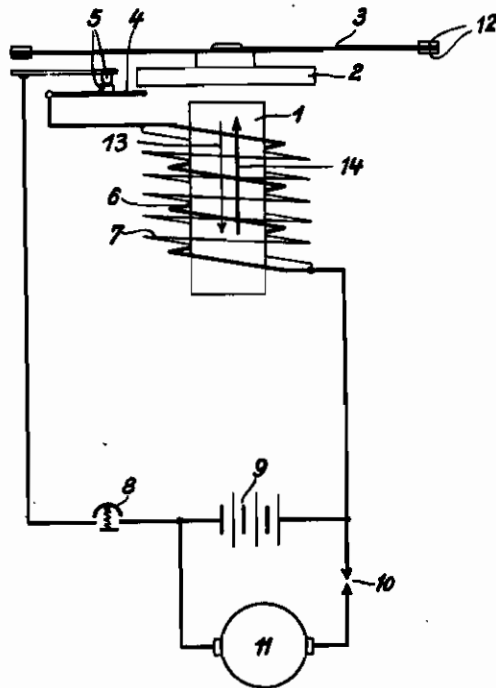


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ELECTROMAGNETIC SIGNAL HORN
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ELECTROMAGNETIC SIGNAL HORN

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This invention relates to an electromagnetic signal horn, more particularly for vehicles. In electrical plants on vehicles, the voltage is liable to variations within a wide range depending on the charging condition of the battery. Owing to these variations of the voltage signal horns oftentimes produce a discord or impure note owing to an operating voltage exceeding the nominal voltage of the device.

It is an important object of the present invention to provide means for avoiding the above mentioned effect of deterioration of the sound of the horn as a result of variations of the voltage.

Another object of the present invention is to provide means for quenching the sparks at the interrupter contacts.

With these objects in view, I provide the electromagnet of the horn with an auxiliary winding which is shunted to the main winding and consists of a thinner wire, the direction of winding and the connections being made so that the magnetic effect of the auxiliary winding counteracts that of the main winding.

The invention will be better understood by reference to the following detailed description in connection with the accompanying drawing, showing by way of example and purely schematically a diagram of connection of a signal horn device having the invention applied thereto.

As will be noted from the drawing, the horn comprises an electromagnet having a core 1 and an armature 2 fixedly connected to a diaphragm 3 and controlling by its oscillations a contact spring 4 of an interrupter including two cooperating contacts 5. The diaphragm at its rim is held between rings 12. The stationary core 1 of

the magnet is provided with a main winding 6 and an auxiliary winding 7, said windings being inductively intercoupled. The main winding 6 is connected in series with the contacts 5 for control by the same, whilst the auxiliary winding 7 is connected in parallel with the main winding and consists of a smaller gauge wire, having, for instance, half the diameter of the main winding 6. The auxiliary winding 7 therefore absorbs very little current only and is wound so that its magnetising effect indicated by arrow 13 counteracts that of the main winding 6 indicated by arrow 14 whilst the potential of self inductance of the main coil 6 counteracts that of the auxiliary coil 7. Through a push button 8 the horn may be connected to a battery 9 which through an automatic charging switch 10 may be charged from a generator 11.

It has been found that by provision of the auxiliary winding 7 the horn produces an undistorted, clear sound even with a higher than its nominal voltage at its terminals. Moreover, the auxiliary coil 7 produces a good spark quenching effect at the interrupter contacts 5, 5, so that the condenser, which usually has been arranged in parallel with the interrupter, may be dispensed with.

The method and apparatus of the present invention have been described in detail with reference to a specific embodiment. It is to be understood, however, that the invention is not limited by such specific reference but is broader in scope and capable of other embodiments than that specifically described and illustrated in the drawing.

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