PATENT SPECIFICATION

Inventor: ERIC TOMSON

810,064

Date of filing Complete Specification: May 17, 1957.

Application Date: Oct. 18, 1956. *No. 31770/56.*

Complete Specification Published: March 11, 1959.

Index at acceptance:—Class 40(4), J1(F2: K).

International Classification:—H04m.

COMPLETE SPECIFICATION

Improvements in or relating to Microphones

We, SIMON EQUIPMENT LIMITED, a British Company, of Recorder House, 46—50, George Street, Portman Square, London, W.1, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to microphones of the velocity-operated type, notably ribbon microphones. It has previously been customary in ribbon microphones simply to clamp the ribbon at either end thereof and allow the intermediate portion to move freely.

According to the present invention, the middle portion of the ribbon is fixed and means is provided for independently securing the two ends so effectively producing two individually adjustable ribbon elements in series, said means comprising an insulating block to which the ribbon is fixed and which is yieldably held in place by a spring acting to push the block against the ends of the pole pieces.

An embodiment of the invention will now be described with reference to the accompanying drawings, of which:—

Fig. 1 is a plan view of the ribbon and its associated pole pieces;

Fig. 2 is an end elevation of Fig. 1, and

Fig. 3 is a section on the line III—III of Fig. 1.

The ribbon element 1 is disposed in the longitudinal gap between the two pole pieces 2 and 3 which are magnetically energized and spaced apart by magnets 4, 5 and 6. Mounted on the central magnet 5 is an insulating block 7 pressed upwards against the pole pieces 2 and 3 by a spring 8. (The flexure of this spring has been exaggerated in Fig. 3 in the interests of clarity). Once located in its correct position the block 7 is secured in position by, for example, cement. The centre of the ribbon 1 is secured to the upstanding centre of the block 7.

The means for securing the ribbon at either end comprises an insulating block such as 9 or 10. The block 9 is pressed upwards against the ends of the pole pieces 2 and 3 by means of a spring 11 (whose flexure is also shown exaggerated). The block 9 carries two countersunk screws 12 having nuts 13 holding in place two clamping plates 14 and 15 between which is held one end of the ribbon 1. The other end of the ribbon is similarly secured to the block 10 which is yieldably held in place by a spring similar to the spring 11. This mounting arrangement permits either end of the ribbon to be individually adjusted in two planes, laterally or longitudinally.

When the adjustments have been finalized, the block and spring at either end are held in place by cement or other setting medium.

The bolts and nuts 12 and 13 may conveniently serve as terminals for the ribbon circuit.

WHAT WE CLAIM IS:—

1. A ribbon microphone in which the middle portion of the ribbon is fixed and means is provided for independently securing the two ends so effectively producing two individually adjustable ribbon elements in series, said means comprising an insulating block to which the ribbon is fixed and which is yieldably held in place by a spring acting to push the block against the ends of the pole pieces.

2. A ribbon microphone substantially as described with reference to the accompanying drawings.

HERON ROGERS & CO.,
Agents for Applicants,
Bridge House, 181, Queen Victoria Street
London, E.C.4.

PROVISIONAL SPECIFICATION

Improvements in or relating to Microphones

We, SIMON EQUIPMENT LIMITED, a British Company, of Recorder House, 46—50, George Street, Portman Square, London, W.1, do hereby declare this invention to be described in the following statement:—

This invention relates to microphones of the velocity-operated type, notably ribbon microphones. It has previously been customary in ribbon microphones simply to clamp the ribbon at either end thereof and allow the intermediate portion to move freely.

According to the present invention, the middle portion of the ribbon is fixed and means is provided for adjustably securing the two ends so effectively producing two ribbon elements in series.

In carrying out an embodiment of the invention the means for securing the ribbon at either end comprises an insulating block to which the ribbon is fixed, this insulating block being yieldably held in place by a spring acting to push the block against an extension of the pole pieces. This mounting arrangement permits either end of the ribbon to be adjusted in two planes, laterally or longitudinally.

When the adjustments have been finalized, the block and spring are held in place by cement or other setting medium.

By having the two halves of the ribbon separately adjustable it is possible to arrange that the motional impedance curves of the two halves are displaced from each other by an amount sufficient to produce a much flatter curve than would be the case with a single ribbon.

HERON ROGERS & CO.,
Agents for Applicants,
Bridge House, 181, Queen Victoria Street,
London, E.C.4.

Leamington Spa: Printed for Her Majesty's Stationery Office, by the Courier Press.—1959.
Published by The Patent Office, 25, Southampton Buildings, London, W.C.2, from which copies may be obtained.

810064 COMPLETE SPECIFICATION
1 SHEET *This drawing is a reproduction of the Original on a reduced scale*

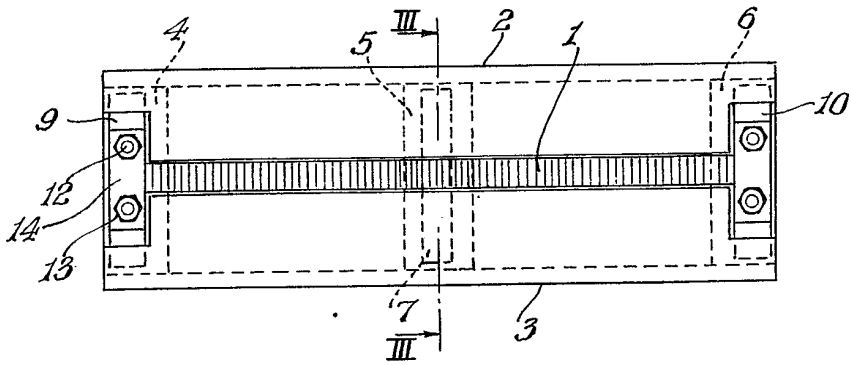

Fig. 1.

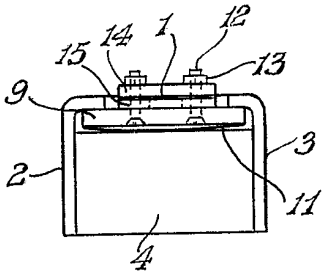

Fig. 2.

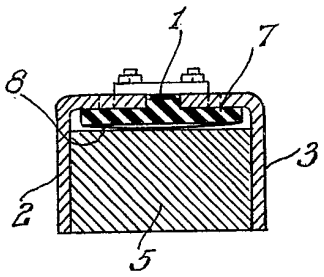

Fig. 3.