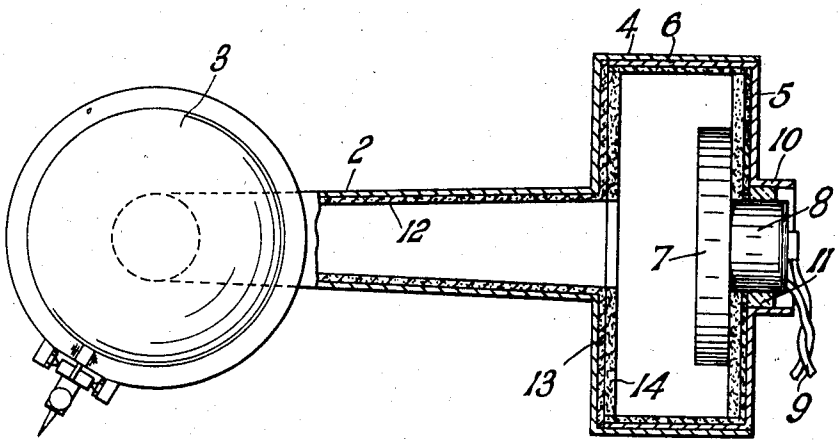
June 6, 1939. E. R. MOUNTSTEPHEN 2,161,526

AUTOMATIC BURGLAR AND FIRE ALARM

Filed Nov. 2, 1937



Inventor,
Edred Rabjohn Mountstephen,
by Frank A. Ackerman,
Attorney.

Patented June 6, 1939 2,161,526

UNITED STATES PATENT OFFICE

2,161,526

AUTOMATIC BURGLAR AND FIRE ALARM

Edred Rabjohn Mountstephen, Southend-on-Sea, England

Application November 2, 1937, Serial No. 172,462
In Great Britain November 4, 1936

2 Claims. (Cl. 179—5)

This invention relates to automatic burglar and fire alarms of the kind comprising a gramophone or like sound reproducing device operatively connected with a telephone line and associated with means automatically to establish communication with a fire, police or other station upon the occurrence of a fire or burglary and to transmit a suitable message to said station.

In this type of apparatus, one example of which is described in my co-pending application Ser. No. 172,461 considerable difficulty has been experienced in reproducing a clear undistorted message at the fire, police or other receiving station due to the fact that the noises of the gramophone motor, the needle and other mechanically operated parts are also picked up by the telephone transmitter or microphone and transmitted to the receiving station thus tending to distort and muffle the message which is being transmitted, furthermore these noises are accentuated owing to the fact that the whole of the apparatus, including the transmitter or microphone, is normally housed in a soundproof casing.

The object of the present invention therefore is to overcome this disadvantage and the invention consists broadly in interconnecting the tone arm of the gramophone with the telephone transmitter or microphone by an enclosed housing or casing and locating a layer or layers of sound insulating or damping material between the parts connecting the tone arm and/or the transmitter or microphone with the interconnecting housing or casing.

In the preferred arrangement the tone arm and the housing or casing arranged between it and the transmitter are lined with sound insulating or damping material.

In order that the invention may be more clearly understood one particular embodiment thereof will now be described with reference to the accompanying diagrammatic drawing in which the invention is illustrated in longitudinal section.

Referring to this drawing the end of the tone arm 2 remote from that on which the sound box 3 of the gramophone is mounted, is rigidly connected, for example by welding, with a cylindrical housing or casing 4 into which it opens and which at its opposite end is provided with an end cover in the form of a disc 5 having at its periphery an annular cylindrical flange 6 adapted to fit within the cylindrical walls of the casing 4. A normal telephone transmitter or microphone unit 7 is mounted on this covering disc 5 so as to be housed within the housing or casing 4, a central cylindrical projection 8 formed on the back of said transmitter through which the transmitter leads 9 pass, projecting through and being held in a corresponding cylindrical part 10 formed by an annular flange extending outwardly from the edge or rim of an aperture formed in the centre of the covering disc 5. The cylindrical projection 8 on the transmitter or microphone 7 is firmly secured in the cylindrical part 10 of the covering disc 5 by a rubber or like sound insulating ring or washer 11 located between the outer surface of said projection 8 and the inner wall of the cylindrical part 10. In this way the transmitter or microphone unit is firmly secured in position within the cylindrical housing or casing 4 without being in direct contact therewith.

The inner wall of the tone arm 2 of the gramophone is lined with a layer 12 or layers of sound insulating or damping material, such as rubber or felt or both, and the inner walls of the cylindrical housing or casing 4 in which the transmitter or microphone 7 is mounted is lined with sound insulating or damping material consisting preferably of a layer of felt or other fabric 13 and a layer of rubber 14.

It must be clearly understood that the invention is not limited to the particular construction herein described, for example the tone arm 2 of the gramophone instead of being welded to the housing or casing 4 may be connected therewith in the same manner as the transmitter or microphone is mounted on the covering disc 5; also any form of sound insulating material other than rubber and felt may be employed for lining the tone arm of the gramophone and the housing or casing interconnecting said tone arm with the telephone transmitter or microphone.

What I claim and desire to secure by Letters Patent is:

1. In an automatic burglar or fire alarm of the kind described comprising a gramophone operatively connected with a telephone line, an arrangement wherein the telephone transmitter or microphone is enclosed in a housing or casing interconnected with the tone arm of the gramophone and at least one layer of sound insulating and damping materal is located between the tone arm and the interconnecting housing or casing and between the transmitter or microphone and the interconnecting housing or casing.

2. In a device of the kind described, a tone arm including a casing and a tubular member extending from one side of the casing, a sound box at the outer extremity of the tubular member, a microphonic device having a sound sensitive portion with the casing, and a sound insulating lining extending throughout the inner surface of the casing and the tubular member and enclosing the sound sensitive portion of the microphonic device.

EDRED RABJOHN MOUNTSTEPHEN.