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D. DESPLATS

ELECTRIC SIGNAL TRANSMITTER

Filed Nov. 4, 1919

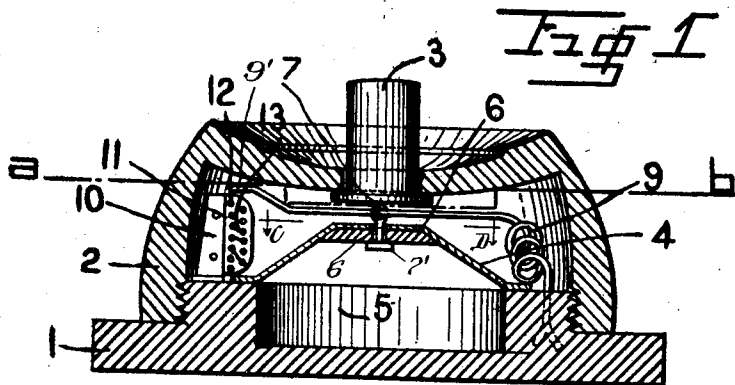


Fig 2

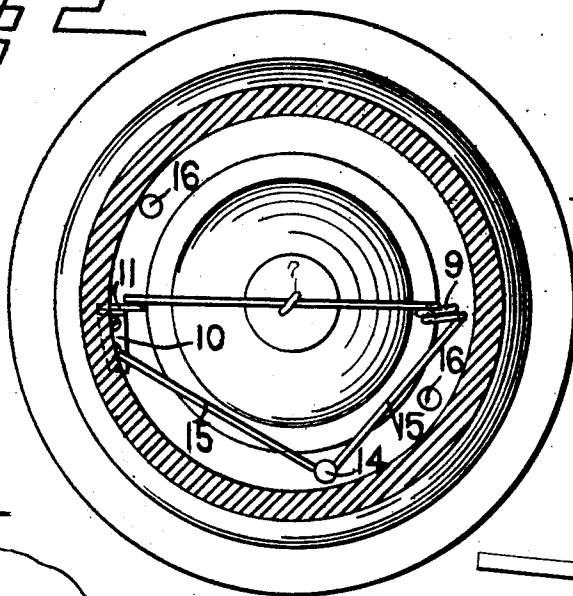


Fig 4.

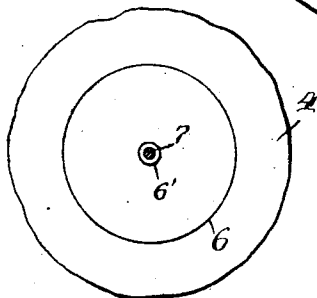


Fig 5.

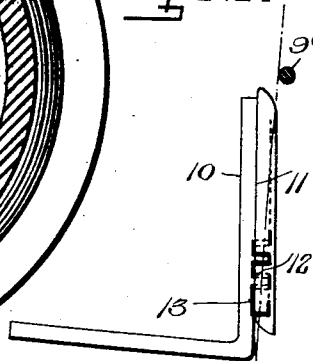
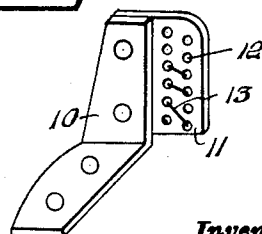


Fig 3



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UNITED STATES PATENT OFFICE.

DOMINGO DESPLATS, OF BUENOS AIRES, ARGENTINA.

ELECTRIC SIGNAL TRANSMITTER.

Application filed November 4, 1919. Serial No. 335,729.

To all whom it may concern:

Be it known that I, DOMINGO DESPLATS, a citizen of the Argentine Republic, residing at Buenos Aires, Argentina, have invented certain new and useful Improvements in Electric Signal Transmitters, of which the following is a specification.

The present invention relates to an electric signal transmitter of the push button type, and it consists essentially of a mechanism by means of which a predetermined combination of signals can be transmitted by a single depression of the push button.

The object of the present invention is to obtain a device which will be simple in construction and reliable in action, and which will have the advantage over existing devices of a similar character in that, by a single operation of the push button, a predetermined combination of signals can be transmitted.

For further comprehension of the invention reference will be had to the following description and accompanying drawings in which is described and illustrated the preferred embodiment of the invention.

Figure 1 is a vertical section of an electric signal transmitter constructed according to the present invention,

Figure 2 is a horizontal view taken on the line *a-b* of Figure 1,

Figure 3 is a perspective view of an essential part of the present device,

Figure 4 is a horizontal view taken on the line *c-d* of Figure 1, and

Figure 5 is an enlarged view showing the distributor plate 11 and contacts thereon.

In the drawings, 1 represents the base, 2 the cover and 3 the push button of the transmitter, all of which parts are known and common in devices of this kind.

Within the base 1 is a recess enclosed by a waterproof and flexible membrane 4 which forms an air chamber 5. The membrane 4 is provided with a disc 6 in which is formed an opening 6' adapted to be closed by a valve 7 formed at one end with a ring or other suitable connection to permit the valve to be detachably connected to a spring 9, and at its opposite end with an enlarged base 7' adapted to close the opening 6' at the times desired.

One end of the spring 9 is secured to the base 1 of the transmitter, whilst the other end thereof is prolonged and supports the

valve 7 by passing through the ring thereof and also serves the purpose hereinafter to be described.

This spring also constitutes one of the poles of the transmitter, a free end 9' thereof acting as a contact.

Secured to the base 1 by means of a support 10 is a contact plate 11, made of insulating material, in which is formed two rows of small holes 12 adapted to receive a wire 13, which constitutes the other pole of the transmitter, and this wire is threaded through the holes in such a manner as to produce signals, on the pressing of the push button, of the desired length and in the desired combination.

The wire 13 projects laterally beyond the surface of plate 11 on one side thereof only, that is to say, for example, on the surface nearest the observer in Fig. 3, but on the opposite face it is inlaid so as not to project, the reason for which will hereinafter appear.

The base 1 is provided with a hole 14 through which the two wires 15, 15 of the circuit are led into the device. These wires 15, 15 are, of course, respectively connected to the spring 9, constituting one pole of the device, and to the wire 13 constituting the other.

Holes 16 are provided for the reception of means for attaching the device in the desired position.

The operation of the device may be described as follows:

On the button 3 being pressed the flexible membrane 4 is depressed and the valve 7 opens by reason of the enlarged base 7' thereof moving from its seat against the underside of the disc 6, thus allowing air to pass from the air chamber through the opening 6' in said disc. At the same time the free end of the spring 9 is depressed in contact with that vertical face of the contact plate 11 on which the wire 13 is inlaid; therefore in its descent the spring does not contact with such wire and the circuit is not completed.

When the button 3 is released, the spring 9 will re-act and the free end thereof will, in its upward movement, travel up the opposite vertical face of plate 11 contacting with the wire 13 projecting therefrom, thus completing the circuit and transmitting signals of a predetermined length and in the desired combination. The downward and

upward movements of the free end of the spring 9, respectively on the opposite vertical faces of the plate 11, is rendered possible by the disposition of the plate 11 obliquely to the vertical line which said free end would normally follow when the button 3 is pressed.

The re-action of the spring 9 is prolonged and regulated by the valve 7, which permits the air to flow but slowly back past the same into the air chamber 5.

Furthermore, it will be seen that the signals transmitted, on the pressing of the button 3, can be varied as to length and combination by threading the wire 13 through such holes 12 in the plate 11 as will give the desired signals. For example, in Figure 3 the wire 13 has been threaded through such holes 12 as will result in one long signal followed by two shorter ones each time the button is pressed.

The construction hereinbefore described is primarily intended for use in connection with an ordinary bell circuit, but it will be understood that the invention may be used in various other situations, such for example, as in telegraphic systems operated with the Morse system of signalling.

In accordance with the provisions of the patent statutes, I have described the principle of my invention, together with the apparatus which I now consider to represent the best embodiment thereof, but I desire it understood that my invention is not confined to the particular form of device herein shown and described, the same being merely illustrative, and that the invention can be carried out in other ways without departing from the spirit thereof.

40 Claims:

1. Electric signal transmitter comprising, a base, a cover for said base, a push button, a spring engaging the push button, a dashpot adapted to delay the movement of the spring in one direction, a contact movable with said spring, a plate so arranged relatively to the said contact that the latter moves over one side of the plate in one part of its travel and over the other side thereof in a succeeding part of its travel, and contacts on the plate co-operating with the movable contact during one of said parts of its travel.

2. Electric signal transmitter comprising, a base, a cover for said base, a push button, a spring engaging the push button, a dash-

pot adapted to delay the movement of the spring in one direction, a contact movable with said spring in a path substantially at right angles to the base but with a slight degree of lateral freedom, an oblique plate of insulating material so disposed adjacent to the contact that the latter moves over one side of the plate in one part of its travel and over the other side of the plate in a succeeding part of its travel said plate having a series of perforations, and a contact member threaded through the perforations in such a manner that one side of the plate presents a series of projecting fixed contacts of any desired widths and spacing, the contact member being sunk on the other side of the plate out of contact with the movable contact.

3. Electric signal transmitter comprising, a base having a recess therein, a cover for said base, a push button, a spring engaging the push button, a flexible membrane enclosing the recess to form an air chamber, a valve in the membrane and connected to the spring, a contact plate co-operating with the spring and arranged obliquely to the free path of the end thereof whereby the said end moves over one side of the plate in one part of its travel and over the other side thereof in a succeeding part of its travel, and a series of spaced contacts on the plate co-operating with the said end of the spring during one of said parts of its travel to transmit a predetermined combination of signals by a single depression of the push button.

4. Electric signal transmitter comprising, a base, a cover therefor, an air chamber formed by a flexible membrane within the base and cover, a valve in the membrane, a spring forming one pole of the circuit connected to said valve, a push button movable in the cover and engaging the spring, a contact plate having a plurality of holes therein and mounted on the base obliquely to the free path of one end of the spring, and a wire forming the other pole of the circuit threaded through such holes as will produce signals in the desired combination on a single depression of the push button.

In testimony whereof I affix my signature in presence of two witnesses.

D. DESPLATS.

Witnesses:

J. N. GRAY,

JULIAN CHAS. FAGUER.