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O. B. EMERSON

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TELEGRAPH RELAY AND SOUNDER

Filed Dec. 13, 1927

Fig. 1.

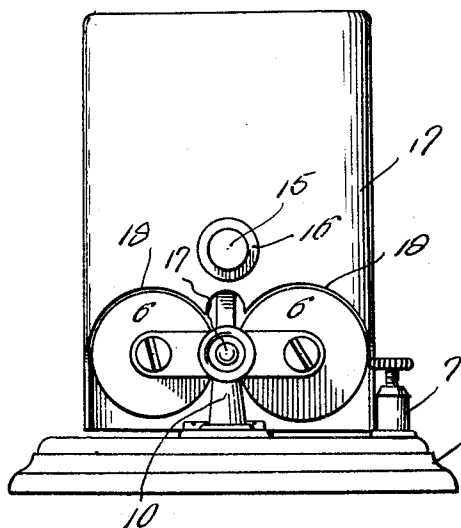


Fig. 2.

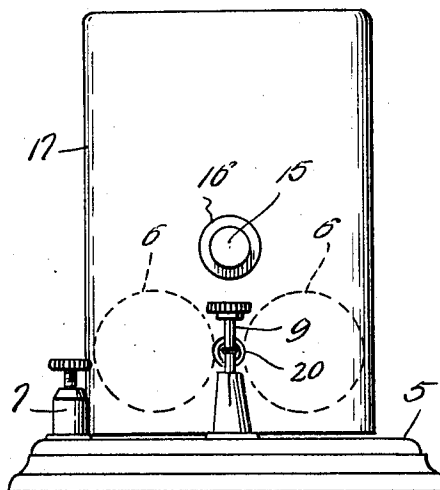


Fig. 4.

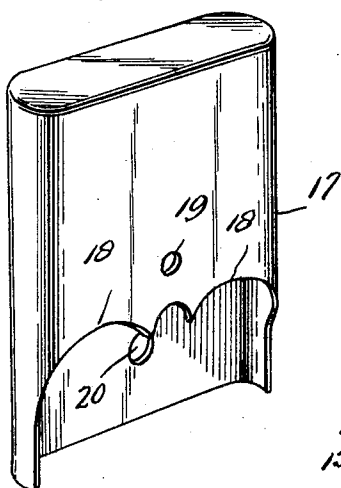
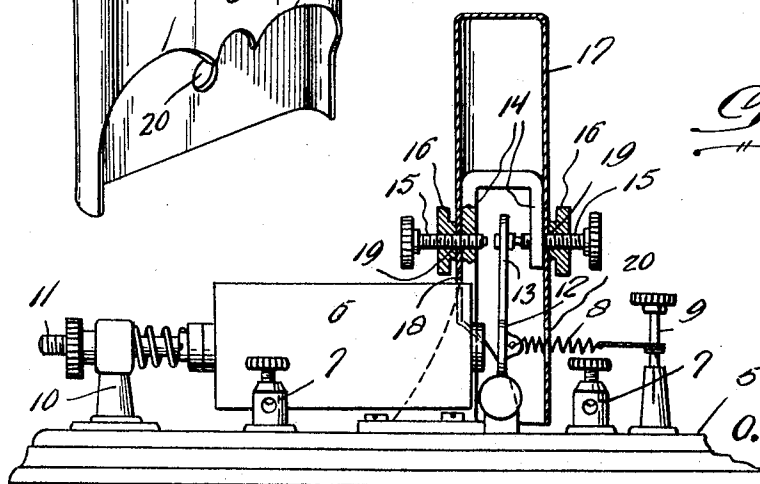


Fig. 3.



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TELEGRAPH RELAY AND SOUNDER

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This invention relates to a combined telegraph relay and sounder, and has more particular reference to a device for increasing the volume of sound produced by the vibratory movement of the armature of an ordinary telegraph relay instrument, whereby a clear distinct sound is produced and the use of a local battery or an ordinary sounder is dispensed with.

10 An important object of the present invention is to provide a sound amplifier of the above kind which is simple in construction, efficient in operation, and capable of ready attachment to an ordinary relay by utilizing existing parts of such relay.

The invention consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

20 In the drawing:

Figure 1 is an elevational view looking at one end of an ordinary relay with the present sound amplifier attached thereto.

25 Figure 2 is a similar view looking at the other end of the relay.

Figure 3 is a view of the device shown in Figures 1 and 2, partly in side elevation and partly in section; and

30 Figure 4 is a perspective view of the sound amplifier, detached.

Referring to the drawing in detail, 5 indicates the base, 6 the magnet coils, 7, the binding posts, 8 the armature-withdrawing spring, 9 the spring tension adjusting screw, 10 the supporting post, 11 the magnet-adjusting screw, 12 the pivoted armature arranged to cooperate with the magnet and having an upright arm or lever 13, 14 the sounding posts provided with the contact screws 15 which are adjustable to vary the effect produced by the arm 13 which acts in conjunction therewith, and 16 the jamb nuts to secure the contact screws 15 in adjusted positions, all of said parts being of common form as used at present in an ordinary relay.

45 The present invention embodies a sounder or sound amplifier consisting of an elongated box 17, closed at the top and open at the bottom, and having a body in the form of a wide flattened tube. One of the wide walls of

the amplifier body is cut-away at its lower end, as at 18, to fit over the relay coils 6, when the amplifier is fitted over the sounding posts 14, and to allow the other wide wall of the amplifier body to project to a point adjacent the base 5. The opposing wide walls of the sound amplifier are further formed with central holes 19 through which the contact screws 15 freely pass, and the jamb nuts 16 firmly clamp the wide walls of the amplifier against the sounding posts 14 so that the full vibratory action of the latter and the screws 15 is communicated to the amplifier and the latter is firmly secured in place. A further central hole 20 is provided in the lower end of the wide wall of the amplifier which is not cut-away, and the tension spring 8 passes freely through this hole.

By varying the size and shape or the material from which the amplifier is formed, the volume and tone of sound can be changed, and by adjusting the screws 15, the sound volume and tone can be adjusted.

From the above description, it will be seen that I have provided a simple and efficient sounding device which may be readily applied to existing relays and secured without special devices.

Minor changes may be made without departing from the spirit and scope of the invention as claimed.

What I claim as new is:

1. As a new article of manufacture, a sound box attachment for a conventional relay comprising a flattened tubular body including a top wall, relatively wide side walls and relatively narrow end walls and having the lower end thereof open, the side walls having formed therein at the vertical center thereof contact screw receiving holes arranged in transverse alinement with one another, one of said side walls having magnet coil receiving notches therein, the other side wall having a biasing spring receiving opening disposed in a plane below the upper walls of said notches.

2. The combination with an ordinary relay having a base, horizontal magnet coils, sounding posts with opposed contact screws, an armature lever arranged between and

adapted to alternately strike said contact screws, jamb nuts on said contact screws, and a spring for withdrawing said armature lever, of a sounding box disposed over the armature lever including a top wall, inner and
5 outer side walls, and end walls fitted over said sounding posts in snug contact therewith and having opposed openings therein to receive said contact screws, said sounding box
10 being clamped into engagement with said sounding posts by jamb nuts engaging said inner and outer side walls, the inner side wall being cut away at its lower end to fit over the magnet coils, the outer side wall having an
15 opening in the lower end thereof through which said armature withdrawing spring freely passes, the outer side wall and the end walls extending downwardly toward said base and terminating in close proximity
20 thereto.

In testimony whereof I affix my signature.
ONO B. EMERSON.

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