

A Radio Robot

Constructional Details of an Amusing Robot that Talks and Sings are Given in this Article. By EVERARD EDMONDS

MAN has created figures in his own image from the very earliest times. One recalls the Colossi of the Ancient World; the marble statuary of Phidias, so perfect that it became imbued with life; the figurehead that, bound to the bow of their ships, brought our Norse forefathers to this England; and, finally, those re-creations of historical characters which have made Mme. Tussaud famous.

speaking doll of a ventriloquist, my excitement knew no bounds, and I sent a shilling off post haste to learn this fascinating art—but, alas! for my ambition, my patience failed to match it, and the power was never acquired.

Simple Construction

To-day, however, it is possible for almost anyone to construct in relatively little



Fig. 4 (above).—The completed robot ready for work.



Fig. 1.—The robot mounted on a chair with the portable set underneath.

I remember, as a lad, becoming so enchanted with the Sleeping Beauty and her clockwork-heaving breast that I could scarcely be dragged away! And, on another occasion, when I first witnessed the

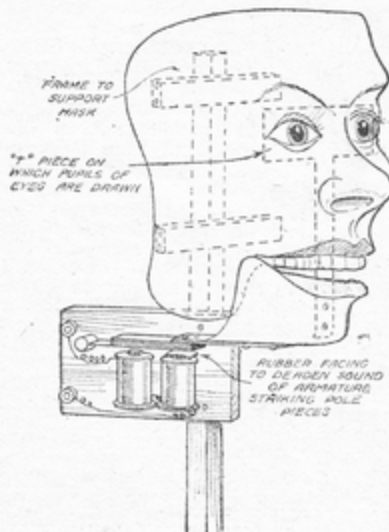


Fig. 2.—Method of mounting the face mask and lower jaw.

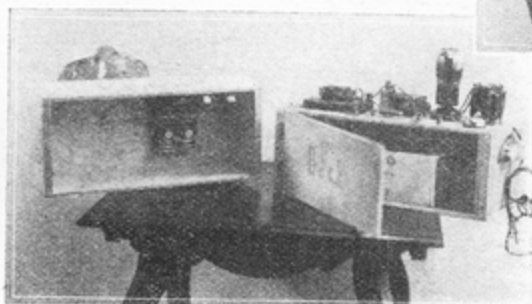


Fig. 3. (left).—The battery and relay sections of the apparatus.

time, and with inexpensive materials, a most amusing Robot, whose active jaw and dancing eyes as he recites a poem or sings a song will entertain for hours!

First a suitable mask is required—one of those sold for the celebrations of Guy Fawkes Day will do very well. This may be mounted as shown in Fig. 2—the lower jaw having been first cut away. To the latter a T-shaped piece of paper may be glued, so that, when the jaw is fixed in position, the cross of the T stands behind the eyes, and may have drawn upon it two lovely black—er—pupils!

On the upright support are mounted the magnets and armature of a discarded electric bell. To the armature the lower jaw is now affixed, and we have the simple elements of our Talking Robot.

As the actual operating current will be relatively large, it is necessary to construct the following relay system—a system well worth assembly, as it may be used for wireless control of models, selenium cell operation, etc.

Referring to Fig. 5, the wires leading from the Robot are connected to a relay R1, also made from a discarded bell, which closes the circuit of a two-cell cycle lamp battery (Fig. 6), thus operating the jaw and eyes of the figure. The contacts of this relay are the armature itself, and the pole

pieces of the magnets, and, in order to prevent sticking, a small square of thin sheet-copper was soldered to the contact face of the armature.

Relay R1 is operated by R2 and a small 4.5 volt flashlight battery. R2 is the sensitive 5mA "Fulton" Relay sold by Electradix, Ltd., and it, in turn, is actuated by a valve. The latter may be any amplifying or power valve, and should have the requisite grid bias battery, as indicated

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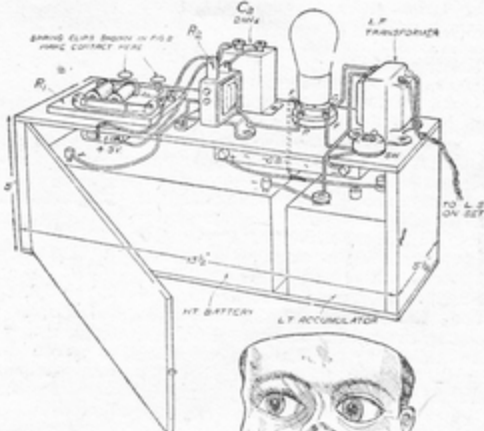


Fig. 5 (above).—The arrangement of batteries, components and connections.

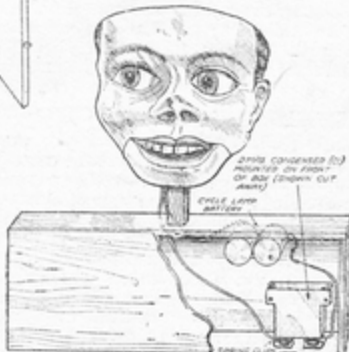


Fig. 6 (right).—How the relays are covered to deaden sound.

RADIO CLUB REPORTS

(See also page 358 for further Club Reports.)

PROPOSED CLUB FOR PORT ISAAC

It is proposed to form a Radio Club at Port Isaac, Cornwall, and any readers residing in the district, and who are interested in the idea, are invited to get in touch with Mr. J. W. Rowe, 3, Alma Place, Port Isaac, Cornwall.

NEWCASTLE RADIO SOCIETY

The above Radio Club was formed on April 18th, 1937, to further the science of radio, to increase the knowledge of members, to cover all aspects of Radio Theory and Construction, and to make wireless construction and listening more interesting, as well as instructive.

The newcomer to Radio will be given tuition in constructional work and theory, while the experienced members find pleasure in teaching, and the advance-

ment of themselves through the facilities of this Society.

Demonstrations, lectures, visits to places of interest are included in the programme, and instruction in Morse code is given in the final half-hour of every meeting. One of the aims of this club is to have a transmitter installed, built by the members as funds allow.

Competitions and co-operation with other clubs throughout the country are other items to add to members' interest. The headquarters have ample accommodation.

The present entrance fee is 1s., and the weekly subscription, 6d.—until sufficient members have enrolled to reduce these fees enabling the club to be self-supporting.

SHEFFIELD SHORT-WAVE CLUB

The above club has been rehoused in new premises in Ebenezer St., Shalesmoor. Meetings are held every Wednesday at 8 p.m., and special meetings for classes, etc., will be held on other nights. Various pieces of apparatus are being set up for use of the members, including oscillators, receivers, resistance and capacity bridges, etc., and very shortly an artificial aerial transmitter will be installed.

Morse classes are held regularly now, as well as classes for beginners, and for set building. We shall be glad to see any readers of PRACTICAL AND AMATEUR WIRELESS at the meetings, and any further details can be obtained from the Hon. Sec., D. H. Tomlin, 22, Moorsyde Avenue, Sheffield, 10. Subscriptions are 10s. per year, payable quarterly.

PARTY LIGHTS

OSRAM "Party Lights" and Christmas Tree outfits can be used very effectively for adding to the Christmas atmosphere.

These "Party Lights" with their coloured shades representing English nursery rhymes are certain to be in wide demand. They are non-inflammable, and translucent, and are supplied in assorted colours, complete with twelve 19-volt 3-watt cone type Osram lamps, one spare, substantial flex (braided in three colours to match the bakelite lampholders) complete with adaptor for attaching to lampholder.

The popular Osram Christmas Tree Outfits consisting of twelve 19-volt 3-watt lamps in assorted colours, and the small illuminated Christmas Trees for use as table centres provide an ideal decorative setting for Yuletide festivities. An illuminated cakestand is an attractive addition to the Osram range. It can be used alternatively as a cakestand or a hanging centre light.

There are also outfits suitable for shop-windows, hotel bars, ballrooms, restaurants, cinemas, and scores of other situations where light and colour contribute materially in creating a cheerful atmosphere—a range of decorative lighting material which should certainly warrant a comprehensive display from now until Christmas, and indeed until well into the New Year.

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in Fig. 5. The plate and H.T.+ terminals go to the relay, and the grid and filament to the secondary of an ordinary intervalve 4.L.F. transformer in the usual way.

A lead from the primary of the transformer is plugged in to the loudspeaker output terminals of a wireless receiving set (a portable receiver makes the whole assembly entirely independent of connecting wires to the mains, etc.) and it is now only necessary to tune in to a broadcast of speech or song when the Talking Robot will tell you all he hears! A microphone connected to the pick-up terminals of the wireless set will enable you to talk through the figure so that, with a friend, you might give a most entertaining dialogue!

The figure may be completed with an overcoat and hat (Fig. 4) or in almost any way the constructor fancies. My own model sits on a chair the portable receiver being arranged underneath (Fig. 1) so that there shall be no interaction between the relay circuits and the aerial of the set. Condensers C1 and C2 have been included for this reason, but, of course, there is still a little interference, which can only be entirely eliminated through the use of separate wireless sets for the sound, and for the operation of the figure—the latter set having the loudspeaker switched off.

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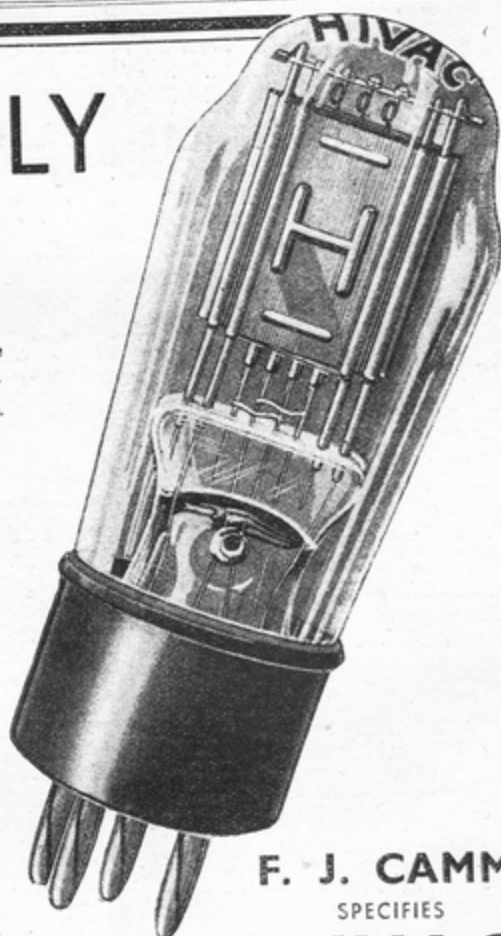
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