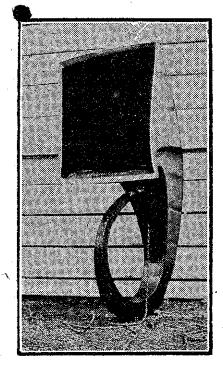
The Exponential Horn



CORRESPONDENT, "Reproduction," writes: Being interested in pure reproduction from my radio set, I constructed about fifteen months ago the six-foot exponential horn described in the "Radio News" by Mr.

Millar, and which was recently published in the "Record."

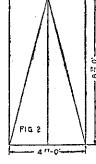
I found the reproduction from this horn with a good unit surpassed anything I had previously heard at that



About nine months later friend of mine installed a Ferrantl pushpull power amplifier with two Mullard P.M. 256's in the last stage. and the production from this with the 6ft. horn is the best I have ever heard outside a dynamic speaker, and is better than some makes of these which I have heard.



Fig 2 shows how the wall board is cut, the four pieces necessary being taken from the same sheet. Fig. 3 illustrates the method of making the corners of the square horn airtight



The only fault I had to find with the 6ft. horn was its bulkiness, so I tried to devise a method of reducing and still keep the tonal properties. photo I enclose shows how I effected this. The total beight of the speaker is 42 inches, the width 20 inches, and the depth 22 inches.

A Successful Adaptation

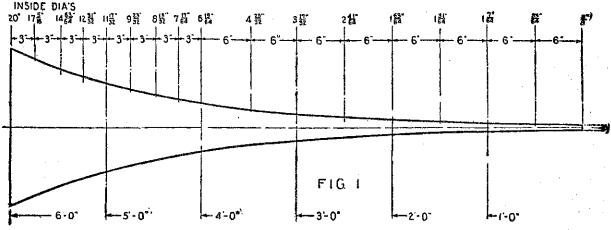
Constructional Details.

TT is made from a sheet of wallboard 10ft. x 4 ft. This is divided into the whole was given three coats of two pieces, 6ft. x 4ft. and 4ft. x 4ft. shellac all over. A piece of conduit respectively. The 4ft. x 4ft. was subdivided into two pieces, 2ft. x 4ft. On the unit connected with a rubber con-

three sections. All cracks were then filled with glue from the outside, and after the horn was completely airtight was then glued in the small end, and one of these pieces a line was drawn nection. As I intend to install the of taking up far less space.

speaker in a console I left it in this state, but if it is not desired to place it in a cabinet, it may be papered to match the wallpaper of the room.

I know of two other horns which have been built from these measurements by a friend of mine, and they are giving every satisfaction. tonal properties are identical with the straight horn, and has the advantage



Dimensions of the original Exponential Horn.

6ft. long, representing the centre of the Companies and Co curved side. This was divided up into 6 1ft. sections. The diameter of the Storm Causes Disorganisahorn was then scribed, using the same measurements as published in the "Record" for the straight horn. This was then cut out with a keyhole saw and used as a template for the other side, which was then cut out.

and 20 inches wide, in the wide end.

The length of the outside of the curved side was then measured and found to be about 7ft. 4in. This was divided into six parts of 14in, each. A centre line was drawn on one of the pieces 6ft. long, and divided into five sections of 14in. each. The diameter was then scribed with the same measurment as for the straight horn, only using the 14in, sections instead of the 12in. ditto, To these diams, are added the thickness of the insides.

From one of the other six-foot pieces a piece was scribed 14in. long to follow on from the other to complete the outside. These were then cut out with a keyhole saw. The length of the inside of the curved side was then measured and found to be 5ft. 3in. On one of the remaining 6ft, pieces a centre line 5ft. 3in. was drawn and divided into six equal parts of 10 in. Using the same diameters, the inside was marked out, allowing the thickness of the board at both edges so as to keep the inside measurement correct.

Finishing the Speaker.

THE assembly was then started. The inside was put on in sections and fastened with Iin. brads. The whole was then glued from the inside and given several coats of shellac. The outside was then coated with shellac on the inner side, and fastened in the same manner. This was put on in

Our Railways

tion

Family Concession Tickets

N November 14 London experienced the severest storm for years past. The 6ft. x 4ft, piece was divided as Much damage was suffered to shipping in "Radio Record" for straight horn, and property. Wireless broadcasting thus giving four pieces about 6ft. long programmes all over the country were seriously interrupted. An official of the B.B.C. reported:— "The first trouble occurred when

telephone lines between Daventry and Birmingham were blown down this afternoon. Both the Daventry stations, 5GB and 5XX, had then to take the London programme, But at 4.55 p.m. the last of the telephone lines used by the B.B.C. between London and Daventry were thrown out of order, and a special wireless receiver had to be used at Daventry to pick up the 2LO transmission from the ether. Seventeen of our stations are isolated to-night. The only three we are connected with by telephone are Leeds, Bournemouth and Gloucester. are presumably picking up the Daventry transmission from the ether, and rebroadcasting the London programmes. That means that the interferences caused by electrical dis-

IT is not generally known that the Railway Department grants a liberal concession to parents travelling, accompanied by their children, for journeys of not less than 20 miles. The

price of three adult second-class return

fares provides tickets for father,

mother, and ALL thei, children under sixteen years of age.

The following examples are typical of the substantial savings made possible by the concession rate: parents and four children, aged 14, 13, 10 and 9 years, may make the return journey between Wellington and Napier at a cost of £6 5s. 6d.—saving £4 3s. 8d. on the ordinary fare. A family of similar proportions travel-ling between Christchurch and Dunedin would pay £4 16s. 8d. less than the ordinary rates.

The provision of such a liberal con-

cession will doubtless be a boon to many families, who would otherwise be debarred from the benefits of an occasional holiday jaunt.

A SERIES of regular clicking or turbances are magnified, resulting plopping noises in a set generally in considerable deterioration of the indicates that a grid leak of too high quality of the reception." a value is being used.

Burgess Batteries are used in all big events.

BURGESS RADIO Why? BATTERIES More Burgess Batteries are sold in New Zealand

Why?