TABLE 2

BAND	ELEMENT	MODE	COMMENTS	LENGTH
80	A	¼ WAVE	USE HEAVY GAUGE WIRE	65.91 ft.
40	B	¼ WAVE	CAN BE LIGHTER GAUGE WIRE	33.3 ft.
30	C	¼ WAVE	CAN BE LIGHTER GAUGE WIRE	23.11 ft.
20	D	¾ WAVE	USE HEAVY GAUGE WIRE	49.96 ft.
15	B	¾ WAVE	USES 40 METRE ELEMENT ON 3rd HARMONIC	See "B" above
10	E	¾ WAVE	CAN BE LIGHTER GAUGE WIRE	25.02 ft.

— ITEMS MARKED 'i' on Fig. 2 are lightweight insulators.

— * USE LIGHTWEIGHT ROT-PROOF CORD, AND **NOT** WIRE. WIRE WILL CAUSE DE-TUNING.

ALL ELEMENT LENGTHS ARE FOR CW END OF BANDS. PRUNE ELEMENTS FOR BEST V.S.W.R. STARTING ON *HIGHEST* BANDS *FIRST.*

thirty feet above ground level. Like the Tee, the Bobtail is not very critical regarding the lengths of its elements being *exactly* a quarter wavelength long.

And For 160m. . .

Once I had got the vertical aerial for 80-10 metres going I did not feel inclined to disturb this set-up in trying to get back on 160 metres, so a separate 160m aerial was made, initially just to keep in touch with some local friends who had decided to use '160' as their local natter-band. By now I was beginning to run out of horizontal space so I thought: 'How about an enormous sort of mobile whip?' Well not exactly that, but something along those lines, especially as I had heard G5PP/M doing some amazing things with his mobile set-up on 160.

Anyway, out came the tape measure. I had a space where I could just get a 66 foot horizontal span with a 40 foot vertical section feeding into the centre of the horizontal 66 foot span, with a loading coil between the two sections (see **Fig.5**). The whole contraption was fed via an ATU and, as a counter-poise, a large amount of wire was buried under the lawn before putting the turf down.

The results obtained on the local net were much better than I had dared hope for. During the following two-year period, a number of W and VE stations were worked with this simple aerial, the only draw-back being that I had to tune the ATU to the part of the band I wished to use. I ended up with two pencil marks on the tuning scale of my ATU (which was hidden in the garage): one mark for 1910KHz, the other for 1827KHz.

To tune the aerial in **Fig.5**, initially do not connect the ATU. Connect a three turn link approximately 1" dia. between the bottom of the vertical part of the aerial and the earthing system you propose to use. Couple a GDO or similar to the link and tune the GDO around 1.8MHz. By adjusting the number of turns of L2 you should be able to achieve resonance at your favourite frequency. The exact number of turns on L2 is dependent on a number of variables, including height, length of horizontal top, and proximity of near-by objects.

However, I found that 80 turns was a good starting point with the dimensions given. Having obtained resonance at the frequency of your choice, connect the aerial to the ATU and by adjusting the position of the tap on L1 and tuning of C1, tune for the maximum current into the vertical section which is consistent with reasonable VSWR at the co-ax input to the ATU. Do not adjust the tapping on L1 with the TX radiating, as you can get a nasty burn doing it. I found out the hard way! It's darned painful!

It is possible to reduce the height of the vertical section at the expense of

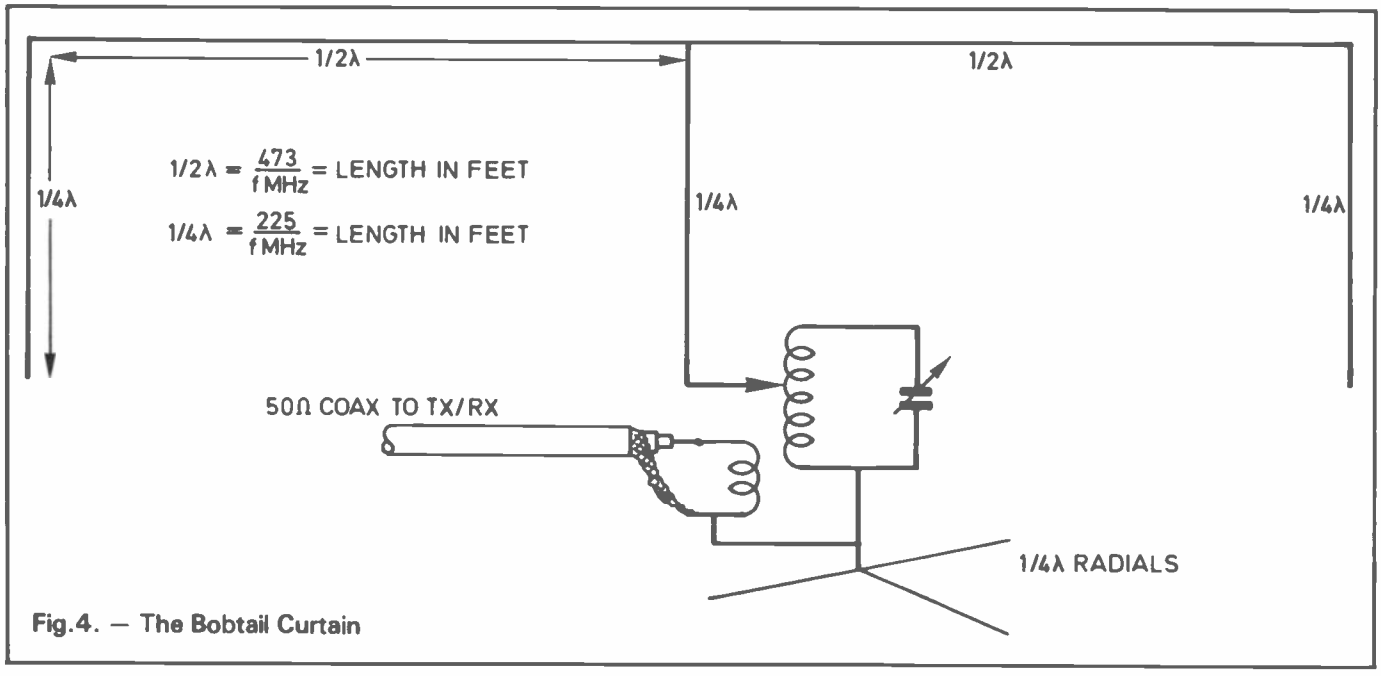

Fig.4. — The Bobtail Curtain