



CERTAIN school of philosophy holds that progress does not follow what may be called a straight-line law, but rather tends to go round and round in cycles. Civilisations arise and flourish up to a certain point, and then disappear and are forgotten—to be followed in due course by others. The root of the well-known saying that there is "nothing new under the sun." From some points of view it might be thought that radio is about the last thing on earth to which this could be applied. And yet one cannot fail to perceive a certain tendency in modern wireless practice to resuscitate ideas that have previously been thrown on one side as old-fashioned and obsolete.

Inventors Who Look Back.

ONE of the most striking illustrations is perhaps to be seen in the revival of short-wave signalling. Hertz manipulated waves of the order of only a few metres in his laboratory at the very birth of wireless. Later on, when Marconi first tackled the problem of signalling over long distances by means of wireless waves, he found it necessary to use high aerials having large capacity and inductance. In this way he was able to pour a greater amount of energy into the ether, and so to cover long distances.

At the same time this meant that his aerials were tuned to wavelengths of the order of some thousands of metres. In fact, the development of commercial wireless was for many years almost entirely concerned with long-wave working. Apart from

a few pioneers, no one had any use for or interest in the shorter waves.

Then new methods of generating and handling very high-frequency energy were discovered, and the so-called Beam system of directional transmission was developed. This proved so successful in practice that, for the first time, commercial wireless signalling began seriously to threaten the position of the cable companies.

The two industries, cable and wireless, have now been merged into a common interest, but it took a long time for inventors to look back and exploit what those who followed Hertz had thrown contemptuously aside as of no value.

Taking another point of view, the new English Regional scheme is to some extent a throwback to the state of affairs which existed when broadcasting was first introduced. Then there were but a few isolated stations, each serving as wide an area as possible.

This was followed by the gradual establishment of a regular network of subordinate and relay stations dotted here and there over the country, and imparting a certain amount of local atmosphere to the programmes. Now we are aiming to go back to the use

of only a few stations, to serve the whole country.

Amazing Ups and Downs.

AS a side issue it is not without interest to note the volte-face that has taken place in the early relations between wireless and the gramophone industry. The introduction of broadcasting was at first generally expected to deal a death blow to the gramophone.

There is no need to dwell on this mistake. One does not whip a dead horse. Instead of disappearing, the gramophone industry found an amazingly successful new lease of life, and is now more flourishing than ever.

Another curious turn of the wheel is evidenced by the recent revival in the use of high-frequency amplification. All modern sets comprise at least one, and generally two, H.F. stages. Yet not long ago it was the fashion to decry the high-frequency valve as of no value.

At one time, owing to inefficient tuning coils and high damping losses, a single stage of R.F. amplification added practically nothing either to the range or selectivity of a set. Also, owing to the difficulty of stabilisation, it was a troublesome matter to handle

two stages of R.F. amplification when used in cascade. And so listeners grew tired of the R.F. amplifier, and, figuratively speaking, pitched it overboard.

Nowadays quite a different view is taken. It is beginning to be realised that R.F. amplification is the only sure solution to the problem of selectivity. Not only that, but the R.F. side is actually threatening to displace A.F. amplification, for the reason that amplification applied before the detector valve leads to much less distortion than amplification applied afterwards. Present indications are that the set of the future will comprise three or four R.F. valves followed by a detector and one high magnification stage for loud-speaker work.

However this may be, the fact remains that what was thrown on one side in contempt a few years ago has again sprung into favour, owing to later improvements and a more enlightened point of view.

The revival in R.F. leads one quite naturally to notice the equally remarkable falling-off in the use of reaction. In most up-to-date sets fitted with ganged R.F. stages there is usually no deliberate back-coupling.

This is an amazing contrast with the "Don't do it" campaign, and the efforts of the P. and T. Department to prevent the ether from being made hideous by the persistent "knob twiddler."

Transformer Transformation!

AGAIN take valve couplings. The first coupled valves were linked together by a transformer. Then came

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HEAR!

The

HEAR!

Farrand Inductor Dynamic Speaker

A New type of Unit with many Outstanding Qualities.

Tone ?

True and lifelike—with full round bass—yet with no sacrifice of those subtle higher tones which are so important and which so many other speakers fail to reproduce satisfactorily.

Volume ?

Yes—decidedly yes—if you desire it, as you may judge for yourself.

Adaptability ?

Wonderful—sensitive enough to work beautifully from a one-valve amplifier, and yet has ability to handle the output from a large push-pull amplifier.

Any current supply required ?

None— isn't that splendid! No field to feed either by battery or rectifier from main supply.

Baffle ?

Yes—all good cone speakers use a baffle, but as the deep bass notes are there naturally in this speaker, the baffle may be of the simplest.

Hum ?

Whisper this—none!—from its very nature this speaker cannot add any.

Price ?

Ah! the price—a pleasant surprise awaits you on enquiry from

L. M. SILVER & Co. Ltd.,

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