

**L**OCAL authorities in French Morocco are making great efforts to extend the use of radio more and more through the country, and the number of persons using it—both Europeans and natives—is increasing every day. In 1926 the value of sets imported was 195,000 francs, in 1927 the value was 335,000 francs, and last year the imports reached a total value of 1,930,000 francs. Through the enterprise of the "Amicale Radio-Alger," a powerful broadcasting station has been built in the immediate environs of Algiers. The transmissions of the new station, with its power of 15 kilowatts, are expected to cover a radius of some 1250 to 1875 miles. It will be, in fact, the most powerful broadcasting station in the whole of French North Africa, and the equal of the powerful Continental stations.

**S**EVEN years ago the London, Birmingham and Manchester stations broadcast their first programmes under the auspices of the British Broadcasting Company, Ltd. A year later listeners, who then numbered less than 500,000, were entertained with a birthday programme, the items of which were given by the regular B.B.C. staff, including its technical members, a particular star amongst the latter being Captain Eekersley. Each year since 1923 the Savoy Hill staff have brightly celebrated the birthday of regular broadcasting in this country, and recently, once more, listeners—there are now 2,760,000 licences—heard a staff entertainment. Programme organisers, an engineer, an announcer and several secretaries united to produce a highly successful evening's entertainment.

**L**AST April, when annual wireless licenses in Denmark expired, many listeners refused to renew their licences owing to the interference caused to broadcast reception from Copenhagen by the Government's own wireless telegraph and telephone station at Soro, which maintains a service between the mainland and the island of Bornholm. In response to the listeners' attitude, writes a correspondent, the Government has now decided to close down the Soro station and lay a cable to Bornholm.

**R**ECENT research work on skip-distance effects and fading has shown that on all wave lengths from 15 to 100 metres signals fade in strength up to 100 miles, but as the distance increases those waves below 60 metres increase in strength, the extent of the recovery being greater the shorter the wave-length; thus 15 metres will give a strong signal during daylight at 9000 or 10,000 miles. This is said to be due to the facts that up to 100 miles the wave propagation depends mainly on direct rays leaving the aerial at low angles, the energy being soon absorbed; the rays which are shot off at greater angles enter the Heavenside Layer and are finally shot off it down to earth again, reaching the receiving aerial at about 15 degrees.

**T**HE radio valve in the make-up of its chemical and physical properties, is one of the most complex products of an age of scientific wonders. These every-day valves comprise no fewer than forty-three elements, together with fourteen rare earths. Among the better known metals incorporated in their composition are: silver, copper, aluminium, mercury, tin, lead, iron, nickel and tantalum. Among the gases employed are hydrogen, argon, helium, nitrogen and chlorine.



**A** FALSE report concerning the death of King George was recently broadcast by Radio-Paris, a well-known Continental wireless station. The broadcasting station was rung up about eight o'clock by a person pretending to be one of the staff of the Havas Agency, who said that the agency had just received from London the news of the King's sudden death. Radio-Paris has an arrangement with the Havas Agency by which the latter telephones immediately any important news received, and the information was accepted at once as authentic. After the news had spread and the newspaper offices had been besieged by people asking for further information, the Havas Agency rang up Radio-Paris to ask the source of the information, and the hoax was revealed. Radio-Paris at once broadcast the fact that the information was false.

**T**HERE was a state of ferment in the B.B.C.'s studios at Savoy Hill recently when a listener whose opinion carries weight telephoned to say that the bass notes were not coming through. A rushing hither and thither with hurried consultations in the control room, revealed nothing amiss on the technical side. Then somebody smitten with a brain-wave dashed to the studio in which a well-known "Auntie" was providing a pianoforte interlude. "Bass notes not coming through?" said the pianist. "No, of course not. That last piece was for the right hand only!"

**T**HERE has been a very appreciable increase in Canada with regard to the turnover in radio sets and accessories during 1928 as compared with 1927, the business during 1928 being approximately 50 per cent. greater than in the previous year. The actual figures given in a statement by the Dominion Bureau of Statistics at Ottawa are roughly 12 million dollars in 1928 as against 8 million dollars in 1927. The greatest number of registered listeners are to be found in Ontario, close upon 300,000 being registered in that province at the early part of last year. The province of Quebec comes next with about 50,000, whilst, on the other hand, in some of the more remote territories the numbers of listeners are quite insignificant.

**T**he possibilities of carrying education to students in schools by means of radio was recently discussed in Washington by a committee specially appointed for the purpose. Reports received from schools in Ohio and California in particular indicated that the use of radio in education has made rapid strides. Some communities in these States have equipped each school-room with receiving sets, making it possible to receive programmes educationally worth while whenever they

are being broadcast. It was also reported that many rural schools are being similarly equipped. As a result of a further discussion on the possibilities of radio education of adults, questionnaires have been sent out seeking information from seventy-three colleges and universities which own radio stations and which broadcast educational programmes.

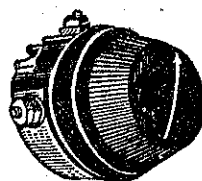
**A** VERY curious apparatus has been installed at the experimental short-wave station of the International Telegraph and Telephone Corporation at St. Cyr, France, intended to prevent telephony transmissions from being picked up by broadcast listeners. This apparatus has the effect of converting low frequencies into high frequencies and vice versa. A similar or converse arrangement is provided in the various receiving sets so that the frequencies are brought back to their proper values. If the transmissions are received upon an ordinary radio receiver they simply produce a succession of unintelligible screeches and low growls.

**A** RADIO directional device which may be actuated by signals received from a broadcasting station has recently been invented in America. This will obviate the necessity for the construction of special radio beacons, which, up to the present, have been necessary to accurately guide aeroplanes over regular commercial and

mail routes. If the apparatus is set in a plane and the plane should hover above the broadcasting station, the needle will point directly down to the ground. This indicator has been sold to the American Government and will be available to foreign governments and private organisations.

**W**ITH highly sensitive instruments covering a wave-length range from 7 to 30,000 metres, the frequency monitoring station to be erected by the United States Government at Grand Island, Nebraska, will benefit approximately 20,000 radio stations. The first and only one of its kind, the station will serve as a check on frequency transmission channels. If the operator of a station finds that it is not operating on its authorised frequency, he may telephone the monitoring station and request that his frequency be checked or measured. The only cost to the radio station is the telephone toll. By doing this, a broadcasting station can be put right on its frequency and will be able to eliminate the heterodyne or whistle from the receiving set, directly benefiting the listeners. More than 600 commercial broadcasting stations, 2000 ship stations, all of the commercial transoceanic and transcontinental services, short line point-to-point services, 16,000 amateur stations and approximately 1000 Government stations will be able to avail themselves of the service.

**A** development of the principle of the radio beacon in a manner which would enable ships and aircraft to follow routes plotted out for them from hour to hour while en route is contained in an invention submitted to the French Academy of Sciences by M. Guillaume Loth. The invention, which is endorsed by the head of the French Army's wireless services, makes use of intersecting beams of Hertzian waves. When a vessel is likely to enter a stormy area the beam angles can be altered to indicate the safest route.



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