



Ericsson News

1930

English edition

Managing Editor:

Woldemar Brummer

No. 7-10.

The Telefonaktiebolaget L. M. Ericsson Board of Directors.



Director H. Johansson.



Consul General W. Ahlström.
Chairman.



Professor H. Pleijel.



Bank Director H. Stén.



Bank Director O. Rydbeck.

The Telefonaktiebolaget L. M. Ericsson Board of Directors.

At the annual general meeting on June 2nd it was decided to increase the Board of Telefonaktiebolaget L. M. Ericsson by three new members and to elect a new deputy member. Messrs. O. Rydbeck, of Skandinaviska Kreditaktiebolaget, O. Stén, of Svenska Handelsbanken, and Consul General W. Ahlström, member of the Board of Sv. Tändsticks A.-B., were elected new members of the Board. Major General A. Hulterantz was elected third deputy member.

On September 3rd 1930 the Chairman of the Board, Mr. Carl Ramström, resigned his position.



Captain Johan Grönberg.
Managing Director.

Consul General W. Ahlström was elected Chairman in his place.

On the same day Director K. F. Wincrantz resigned his post as Managing Director of the Company. The Director of the Swedish Match Company's monopoly company in Bucharest, Captain Johan Grönberg, was appointed Managing Director.

The portraits of the present members and deputy members of the Board, and of the Managing Director of Telefonaktiebolaget L. M. Ericsson are reproduced herewith.



Director B. Almgren.



C. Montelius.
Superintendent Engineer.



Major General A. Hulterantz.

Deputy Members.

Changes of Staff in the Ericsson Concern.

On July 1st Mr. Helge Ericsson, C. E., of the Concessions Department of the Telefonaktiebolaget L. M. Ericsson Head Office, was appointed Director of the Royal Telegraph Office Workshops at Nynäshamn, vice Mr. Klas Weman, C. E., who has joined the Ericsson Concern.

Mr. Helge Ericsson entered the Telegraph Service in 1912 after the completion of his studies at the University of Technology, and was in 1918 promoted Assistant Chief Engineer to the Stockholm Telephones, which at that time had just been taken over by the Swedish Government. In 1920 H. Ericsson was appointed 1st Bureau Engineer of the Construction Department, which post he held until June 1st 1928, when he transferred to the Ericsson Concern.

The comparatively short time that H. Ericsson has served in the Concern has proved sufficient to gain him a prominent position among his co-workers in the Concern; he was well liked by his fellows, and highly esteemed by his superiors.

Mr. Klas Weman is no stranger in the Ericsson Concern. He was engaged in 1896 by the then L. M. Ericsson & Co. as workshop engineer, and later served in the company factory in Petersburg, as well as in the branch which was established for some time in New York by L. M. Ericsson & Co. In 1910 he was appointed Director of the Telegraph Office Workshops in Nynäshamn, and now returns, after an interval of 20 years, to the firm he has served for eighteen years.

— In succession to Director K. G. Gustafsson,



R 1710 Director K. Weman.



R 1709 Civil Engineer H. Ericsson.

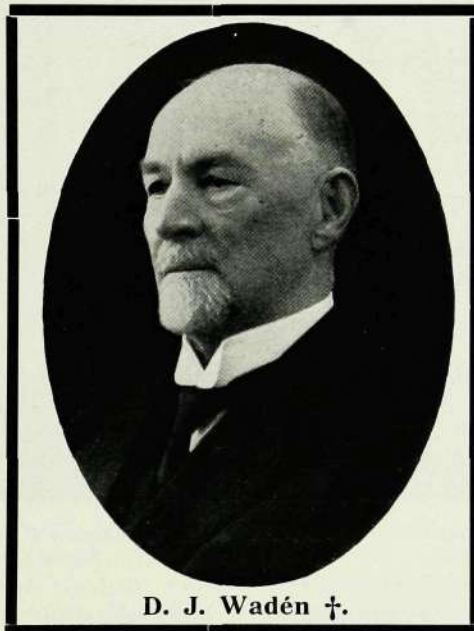
who has been the Managing Director of *Aktiebolaget Alpha, Sundbyberg* — affiliated to the Ericsson Concern in 1929 — ever since the

foundation of that factory and who has now resigned this position, Mr. H. Berlin has been appointed Managing Director.

* * *



R 1707 Director K. G. Gustafsson.



D. J. Wadén †.



R 1708 Civil Engineer H. Berlin.

On August 25th 1930 the "Grand old man" of Finnish telephony, Mr. Joh. Wadén, died at Helsingfors at the age of 80. During the whole of his long life Mr. Wadén has devoted his interest and efforts to electrotechnics.

In 1876 he started an electrotechnical workshop of his own in Helsingfors, and some time later the *Dan. Joh. Wadéns Elektriska Affär*,

which for a number of years — right up to 1918 when it was amalgamated with the then founded A.-B. L. M. Ericsson in Finland — cooperated with the Swedish parent company of the last named firm.

In 1882 Wadén obtained the first telephone concession in Finland, and in the same year he built the first telephone lines in Helsingfors.

This movement was later carried on by the Helsingfors Telephone Company under the leadership of Dan. Joh. Wadén until 1895, when it was taken over by the Helsingfors Telephone Association.

On the initiative of Wadén, the South Finland Intercity Telephone Company (Södra Finlands Interurbana Telefonaktiebolag) was formed in 1894, and from the very first until 1928 Wadén was Chairman of the Board. At the present time this company has the most extensive trunk lines in the country.

From 1918, when the A.-B. L. M. Ericsson in Finland was formed, Mr. Wadén has been a member of the Board, and Chairman since 1920.

As is clearly indicated by the short data above, the life work of Dan. Joh. Wadén has been important, and he has contributed more than anybody else to the development of telephony in Finland.

On July 27th, his 80th birthday, Mr. Wadén donated a sum of 200 000 Fmks to form a nucleus of a pension fund for the staff of A.-B. L. M. Ericsson in Finland.

The Ericsson Concern at the Stockholm Exhibition.

A special section of this Exhibition, called "Svea Rike", is devoted to the history and culture of Sweden. Ample illustrative material and well designed decorations give the visitors an

1876 — when Lars Magnus Ericsson founded his modest workshop — to our days, when the world-embracing Ericsson Concern includes about fifty affiliated companies, all manufactur-

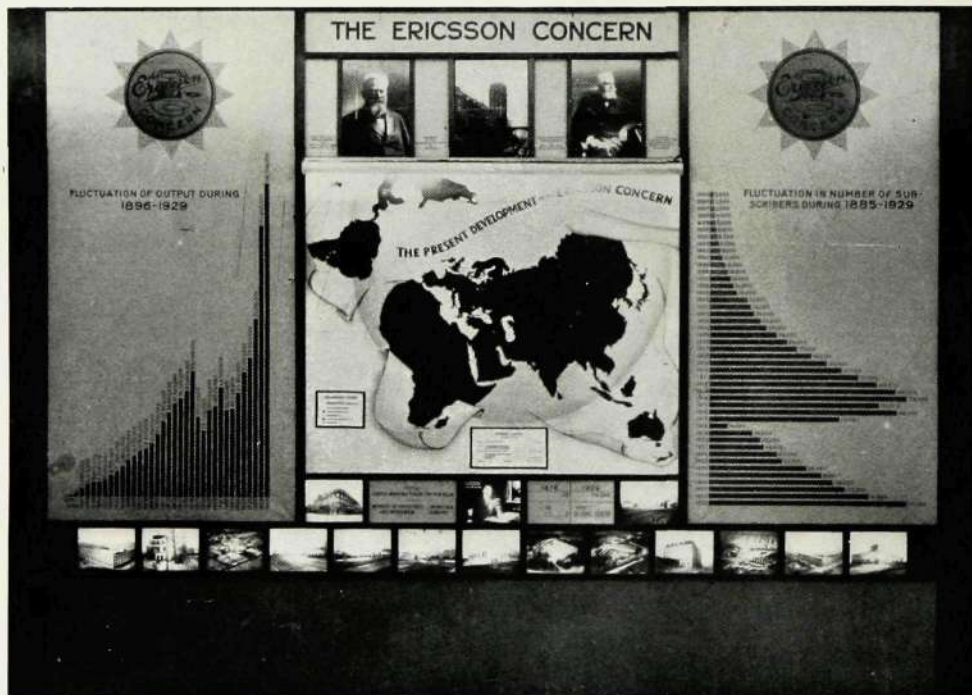


Fig. 1. The Ericsson Concern stand in the Stockholm Exhibition 1930.

opportunity to learn to know the varying natural scenery of Sweden. Instructive tables and diagrams show the cultural progress of the country in the fields of communications, utilization of natural forces and resources, etc. Some of the large industries of Sweden, and among them the Ericsson Concern, show by maps and diagrams their progress from the inception of each up to the present time. Above we show (fig. 1) a photograph of the Ericsson stand.

The left panel gives the annual turnover from

ing and selling its products as well as installing and operating telephone lines. From L. M. Ericsson's turnover of only a few hundred kronor in 1876, the total turnover of the Concern has risen to more than 116 000 000 kronor in 1929.

The right panel shows the total number of subscribers to the telephone lines controlled by the Concern from the year 1885. The increase of subscribers was steady, to begin with in the only net then exploited, that of Stockholm. Later the new concessions obtained in Moscow,



Fig. 2.

Warsaw, and Mexico added to the number of subscribers. In 1917 the total had risen to c. 175 000, but was momentarily reduced to 115 000 when the Soviet Government in Russia impounded the Moscow telephone system without any compensation, although this had previously been sold to the Government. The sum agreed upon, over 60 000 000 kronor, had not yet been paid when the Czarist Government was destroyed. The following year, 1918, the Swedish Government took over the Stockholm telephones by purchase. In 1919 the Mexican lines alone remain, with 16 000 subscribers, the Warsaw lines being closed to the public during the German occupation. Subsequently the number of subscribers steadily increases, by the Warsaw lines being again opened to the public, by new lines added in Poland, by the rapid progress of the Mexican lines, and finally by concessions in other countries also: Italy, the Argentine, Turkey, and others. In 1929 the number of subscribers reaches the same high total as once before, viz. 175 000.

In the centre of the stand is a map of the world, indicating the positions of all the affiliated companies and agencies. An enlarged reproduction of this is shown in fig. 2 to give the details more clearly. Above the map are diapositive portraits of Lars Magnus Ericsson, founder of the Swedish telephone industry, and of Henrik Tore Torsten Cedergren, pioneer of Swedish telephone service and builder of the Swedish lines.

At the bottom, the map is framed by diapositive pictures of the 16 factories belonging to the Concern in Sweden and abroad.

From the statistical data we quote the total invested capital of the Concern, which was 1 000 kr. in 1876 and now approaches 300 000 000, also the total utilized floor area of the workshops in Sweden and abroad, which in 1876 was 13 sq. metres and now amounts to 170 000 sq. met., and finally the number of employees and workmen, 3 in 1876 and nearly 18 000 in 1929 — nearly 5 000 in Sweden and c. 13 000 abroad.

The central Timekeeping Plant in the Stockholm Exhibition.

At the corner of the Public Rooms Building and the Main Restaurant in the north east corner of the Festival Place, one of the most frequented spots in the Exhibition, one display window has daily attracted interested spectators, who have inspected its contents attentively.

This is where the *L. M. Ericssons Anläggningsbolag* exhibits the Master Controller for the future Stockholm Timekeeping Plant, an installa-

tion at a distance, well lit up after dark, and above all *reliable*. These clocks contain no driving mechanism, only a so called secondary clock movement which receives an electric impulse every minute from the above-mentioned central apparatus. This principle has the great advantage that all delicate parts (clockwork, relays, etc.) are brought together in a central place where they can be well protected and easily supervised.

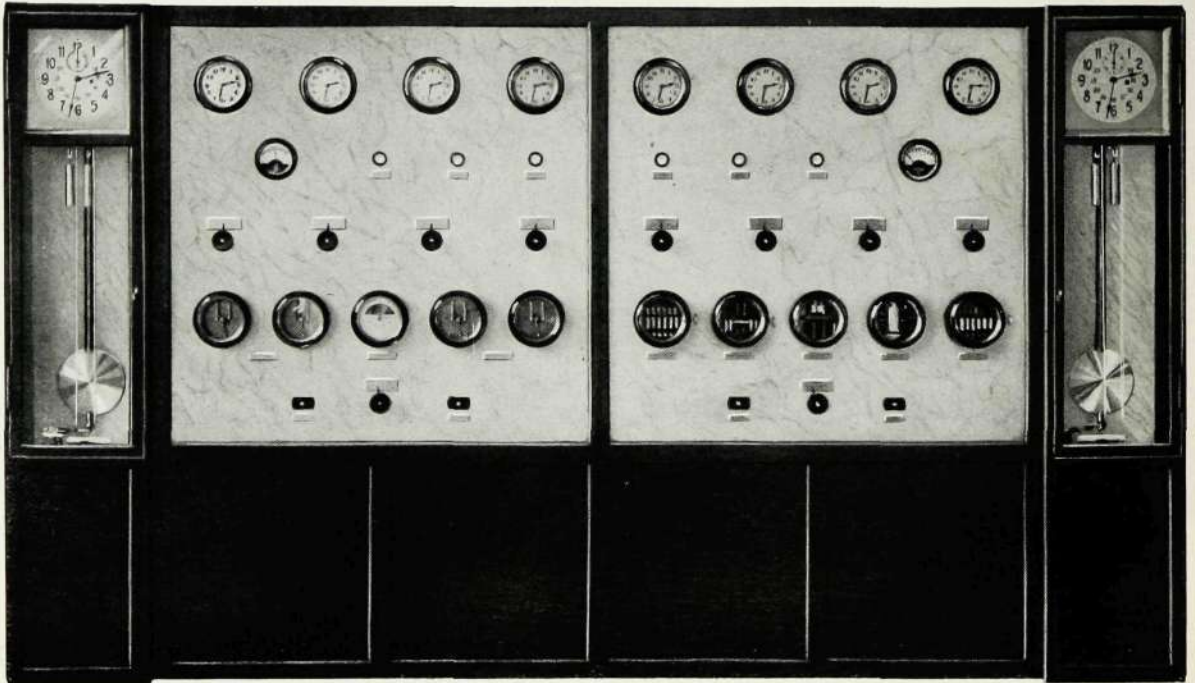


Fig. 1. Master Controller of Timekeeping Plant.

tion at present under completion, a concession to lay the necessary lines having been granted the Company by the Authorities.

Embodying, among other apparatus, two precision clocks, control clocks, relays, and a number of other instruments which will be fully described in another connexion, this controller is not only for "show", but serves all the electrical clocks in the Stockholm Exhibition. That plant comprises about fifty timepieces of various types. Of these the so called street clocks in particular have been much appreciated, and we are informed from many quarters that the public has found in them what is badly needed in the majority of our streets and squares: clocks with distinct, simple dials, easily seen even from

The clocks themselves, on the other hand, are very robust and will stand shocks, changes of temperature, and other factors which would disturb ordinary clocks.

Two different types of street clocks are found in the Exhibition. One is a three-cornered pillar with dials facing three ways. The other type is a telephone call-box provided with a two-faced clock.

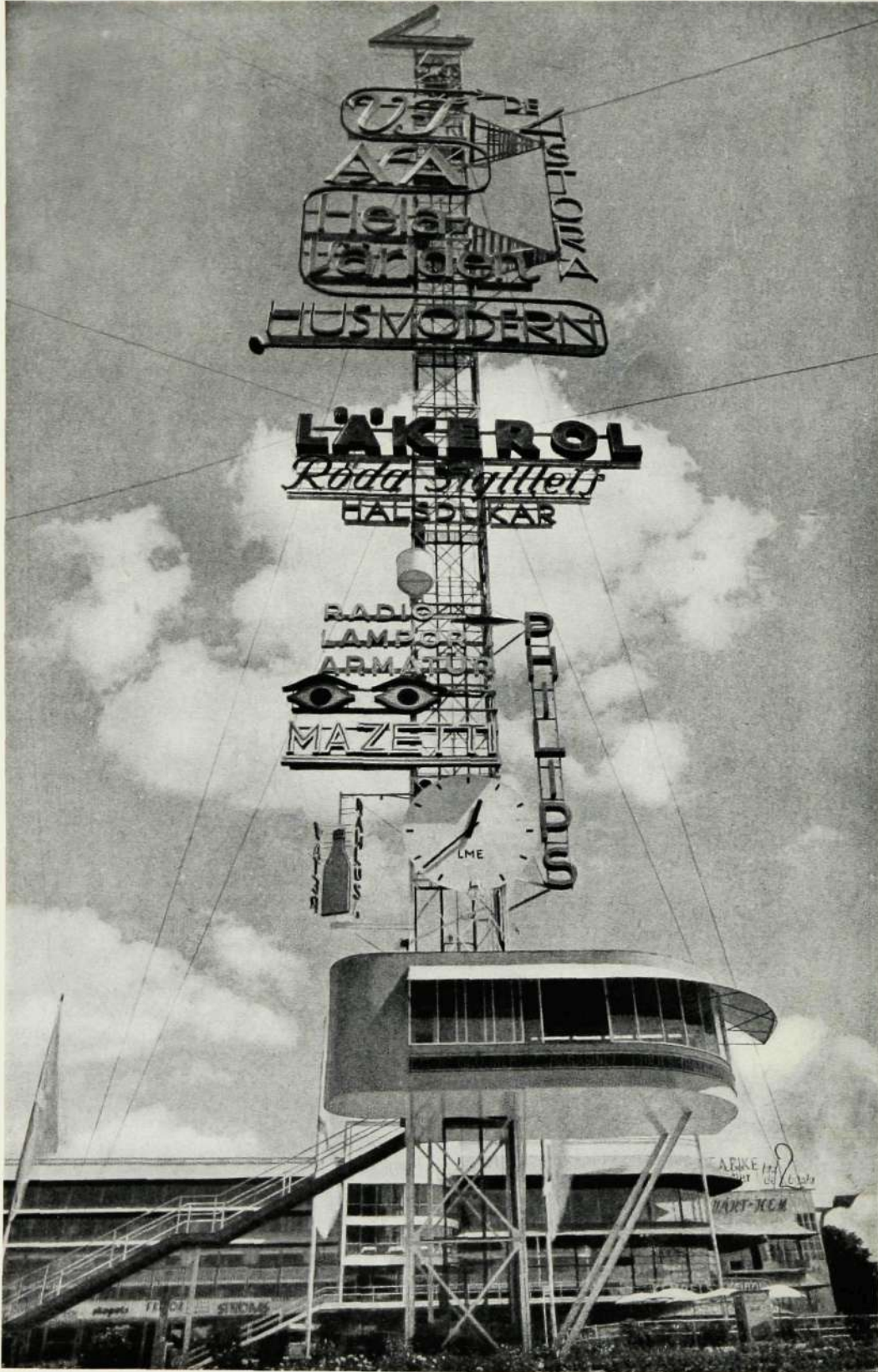
Street furniture also enters into the programme of the Stockholm Exhibition, and the street clocks in the Exhibition described here are therefore not only utilitarian, but also exhibits. A great deal of work has been devoted to the design of these "street furnishings". The architectural portions of this work has been executed



Electric street clocks of the new Ericsson type.



The dials are transparent and lit up from within.



The Exhibition mast with the large clock. The dial is nearly 5 m. in diam., and lit up by a searchlight from in front.

by two architects, Messrs. O. Thunström and O. Hult.

These gentlemen are also responsible for the dial and hands of the large clock on the Exhibition mast. The diameter of this dial is 4.5 metres, and the clock is driven by an electric motor, started by an impulse from the master controller and moving the hands forward a minute at a time. In this manner clocks of any size may be attached to the master clock and still retain perfect reliability with respect to uniform timekeeping.

That the clock standards have been used for advertisements is no chance matter. From many quarters a demand has been made that the street advertisements be given a more dignified form than has hitherto been the case. Other people demand that the limited space in the streets should be utilized, and that therefore the installation of clocks should be used as an advertising medium.

In the opinion of many experts, the street clocks designed for the Stockholm Exhibition satisfy these demands exceedingly well.

Whether electric clocks will be provided for the Stockholmers in the streets in connexion with the forthcoming timekeeping plant is not yet decided. Plans in this respect have long been submitted to the authorities by L. M. Ericsson.



Telephone box with electric clock.

Beside these outdoor clocks, a number of indoor clocks are also provided in the postal, telegraph, telephone, banking, and travelling bureau departments, etc.

During the month of October the Master Con-



Interior view of the Public Rooms Building.

Telephone and Postal Department.

troller of the timekeeping plant will be completed in the Södra Kungstornet. The lines in certain districts will be ready simultaneously, and the company will then be prepared to supply subscribers with clocks for offices, workshops, business premises, and private houses.

The demand for uniform time is increasing year by year. Punctuality and precision are required from all members of modern society, the factory worker as well as the bank director, business man, lawyer, doctor, domestic servant, and schoolboy. Ample provision of clocks showing a uniform time is of great assistance to them all. The modern timekeeping plant offers this convenience to the community.

From the Finnish Ministry of Defence:

A number of portable field telephone switchboards and field telephone sets of new design. The switchboards and the sets will be manufactured by the Tartu Telefoni Vabrik in Esthonia (Dorpat), a factory affiliated to the Ericsson Concern whose production has thus successfully competed with that of British, French, Czechoslovakian, German, and other factories.

— **News from Vienna.** Dipl. Ingenieur Frischauf of the Austrian Ericsson Company has read a paper at the Technological High School in Vienna on the L. M. Ericsson Automatic 500-line Selector Telephone system. This was



TARTU TELEFONI VABRIK AKTSIA SELTS
DORPATER TELEPHONFABRIK AKT.-GES.
TARTU (DORPAT), EESTI.

R 1702

— The following orders have been obtained by the **A.-B. L. M. Ericsson in Finland.**

From the Board of the Post Office and Telegraphs in Finland:

A 10-kw broadcasting station for Wiborg. The apparatus will be manufactured by the Marconi Wireless Telegraph Company Ltd., and must be completed before the end of this year. Both "Telefunken" and "Standard Electric" competed for this station.

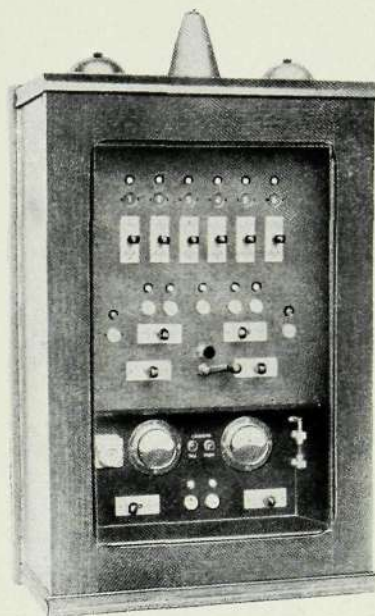
arranged by the Film Service of the German Student Association, and the lecture was attended by representatives of the Austrian industry and State Railways. The lecturer illustrated the details of the system by lantern slides. The lecture, which from lack of space we are not in a position to quote at length, was followed by a film demonstrating the working of the system, taken in Stockholm on the premises of the Telefonaktiebolaget L. M. Ericsson. The general acclamation with which it was received gave ample evidence of the interest roused in the audience by the lecture and the demonstration.

— On the occasion of the **Ninth International Congress of Actuaries in Stockholm** the *Gjal-larhornet* (the organ of the Swedish insurance companies) issued a special number (14/6/30, No. 12) which was also published in English. From this number we cull the following notice:



*From Horn signals of Automatic
Fire Alarm.*

The American journal "The Fire Protection" recently reproduced the appended illustration of a Swedish fire alarm box, and intimates that the Swedish fire alarm system is still of an obsolete type. Anyone interested in fire protection, however, knows that fire alarm horns are entirely out of date and have been replaced by the fire telegraph system. Fire alarm systems are by this time installed in most Swedish towns and villages, and Sweden is, for that matter, thanks to the firm of L. M. Ericsson, a leader in this department, Swedish automatic fire alarm systems of their type being now installed in all countries of the world.



R 877

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— **News from Prague.** At a meeting of the "Hauptverband der Deutschen Industrie" in Aussig, Mr. Köhler, of the "Ericsson" Elektrizitäts-Kommandit-Gesellschaft, Prague, gave a lecture on modern *fire alarm systems*. Beside by the members of the Association and their Chairman Dr. Besirske, the meeting was attended by representatives of the Aussig Electricity Works, the Government Police, Fire Protection Associations, the Town Voluntary Fire Brigade headed by its Captain Mr. Schäfer, and by representatives of the Press. The lecture was accompanied by demonstrations of all fire alarm and fire protection apparatus made by the Ericsson Company, which are in use in almost every town and village in Sweden. The designs of these devices are based on the long and varied experience of the Company in this field. The lecture familiarized the audience with fire alarm plants suitable for small communities with a voluntary fire brigade organization, the members of which must be alarmed in their individual homes or at their workplaces. Further devices were demonstrated for larger municipalities, and finally also those for alarming professional fire brigades. The lecturer demonstrated the apparatus at work, including cases of line faults of various kinds. The greatest impression was

naturally made by the plant for large cities, in the demonstration of which even the most difficult conditions were shown, to the great delight of the audience, and was found to function satisfactorily and with perfect reliability. In the following discussion a general wish was expressed that the towns of Czecho-slovakia should be supplied with these modern devices for protection against fire at the earliest possible opportunity.

In the following pamphlets, which will be forwarded on request, anybody interested will find full information regarding the L. M. Ericsson products in this branch:

- The L. M. Ericsson Fire Signalling System. (B 12.)
- The L. M. Ericsson Fire Alarm System for Cities and great Communities. (B 19.)
- The L. M. Ericsson Fire Alarm System for small Communities. (B 18.)
- A suitable Fire Alarm System for small Communities — the Morse System. (B 5.)
- A suitable Fire Alarm System for small Communities — with ringing Indicator. (B 1.)
- The Ericsson Automatic Fire Alarm. (B 4.)



R 1694 The entrance to the Ericsson Branch at Layetana 18, Barcelona.



R 1695 View of the building, Layetana 18, Barcelona.

— **News from Spain.**

As we have mentioned earlier in this journal, the Madrid subsidiary company of the L. M. Ericsson Telephone Company, the Compañía Española de Teléfonos Ericsson S. A. has opened a branch at Via Layetana 18, Barcelona, for the sale and installation of the Ericsson Concern products. We reproduce a picture of the magnificent building in which the offices of the branch is housed, a view of the entrance, and another of the showrooms.



R 1696 The Ericsson Barcelona showrooms.

— **News from Norway.** The *Haugesund Telefonselskap* has recently made a contract with the A/S Elektrisk Bureau for the supply of an automatic telephone exchange. This exchange will be built on the Ericsson system, of the same design as the exchanges which this firm is now making for Reykjavik and Hafnafjördur (Iceland).

The history of the *Haugesund Telefonselskap* goes back to 1888, when I. Th. Thengelsen took the initiative in introducing telephones in the town. According to the minutes of the "Formandskap" of the 17/8 1889, he was granted the sole rights of concession for the *Haugesund* telephone lines, on condition, however, that these were opened for traffic not later than 1889 and with a minimum of 25 subscribers, which number was soon obtained.

The same year (1888) Mr Thengelsen transferred his concession to a company called the *Haugesund Telefonselskap*. The lines grew apace. In 1907 the extension of the exchange was entrusted to the A/S Elektrisk Bureau. In the course of time the exchange was extended several times, and at present consists of 12 work places of 140 numbers each. The frequency of calls is about 15 000—20 000 calls per diem.

The lively traffic now necessitates the provision of a new exchange altogether. Last year the Director of Telephones, Mr. Ask, and the Board of the Company consisting of Mr. Ingv. O. Gaard, Chairman, Consul Birger Pedersen, and



R 1705

View of Haugesund, Norway.

Shipowner Erling Lothe, therefore made a journey to study the working methods of various systems and the experiences gained in the telephone services of other towns.

These investigations led to the choice of the automatic system for the *Haugesund* telephones. On May 15th this year the Company general meeting approved the decision of the Board. After keen competition with foreign telephone firms, the A/S Elektrisk Bureau received the order for the new exchange, to be constructed according to the L. M. Ericsson automatic telephone system.

The exchange will be built for 1800 lines, with provision for extension to 3 000. Both the exchange and the station sets will be manufactured at the Oslo factories of Elektrisk Bureau. The exchange will be ready for use in June 1932. A new building will be erected for this exchange. Below we give some views of the idyllic town.

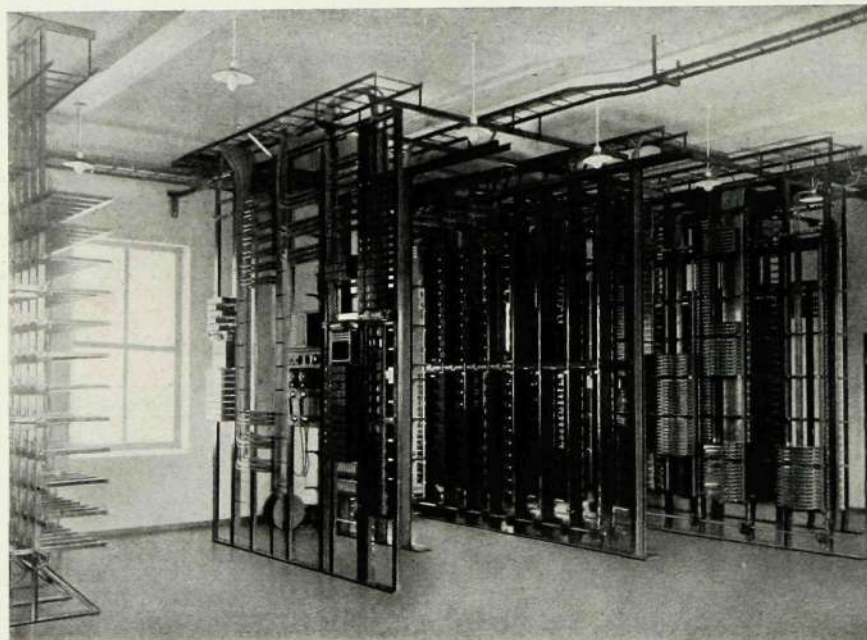


View of Haugesund, Norway.



R 1711

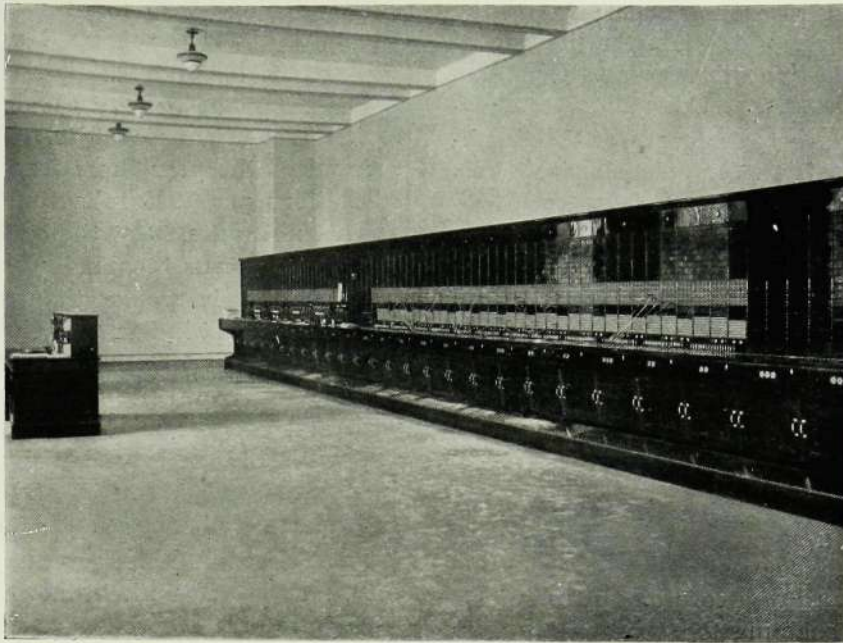
The Larvik Telephone Exchange, Norway, exterior view.



R 1712

The instrument room.

— In the "Ericsson News" Nos. 5—6 for this year a notice of the opening of the automatic exchange on the Ericsson system at Larvik, Norway, will be found on page 5. The Editor is now in a position to give some photographs from this telephone exchange.



R 1719

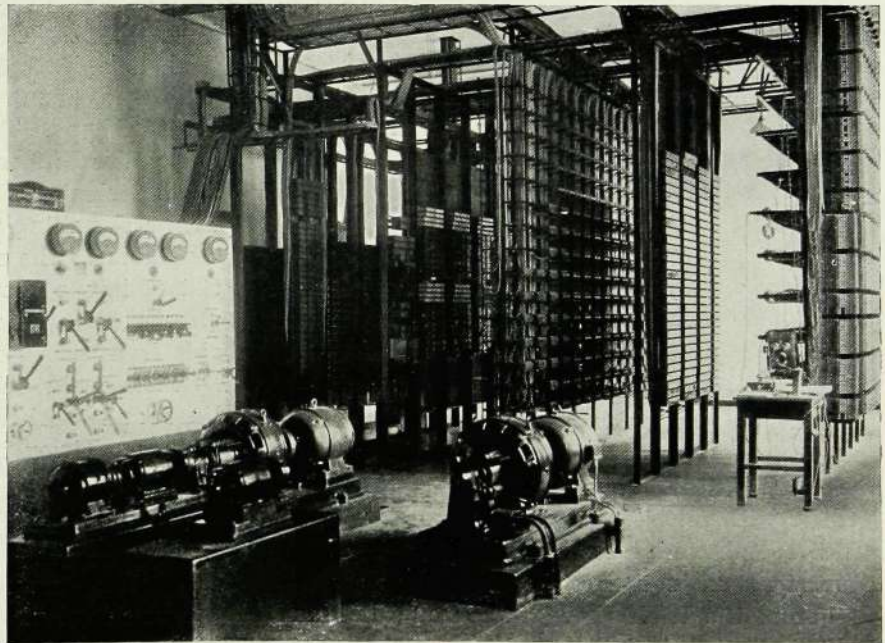
The Switch room at Győr, Hungary.

— **News from Hungary.** The Győr telephone exchange was opened for traffic in April of this year. The technical telephone equipment is supplied and installed — by order of the Hungarian Post Office — by the “Ericsson” Ungarische Elektrizitäts A/G (Budapest). The plans of this exchange and the whole scheme of the plant, constructional drawings, and diagrams of connexions, were worked out by that company in cooperation with the Post Office technical staff.

Győr is a lively centre of communications, industry, and commerce in western Hungary, favourably situated on the Budapest—Vienna railway. The present number of subscribers is 1200.

The order comprises a manual C.B. exchange for local traffic and a trunk line exchange. By constructional details of design the telephone system has been planned so as to obtain a maximum capacity of the operators and to reduce the time for making connexions, and a special signalling system makes it possible for the calling party to follow the making of connexions. The local exchange is thus provided with automatic reply- and ringing devices, by which

the switchboard operator's set is automatically connected when the reply plug is inserted in the local jack, and a periodical calling signal is automatically sent out to the called party when the plug is inserted in the multiple jack. Synchronously with the calling signal, a dial tone is sent out to the calling party, who is thereby informed that the connexion has been completed. The calling signal and the dial tone cease when the called party lifts his microtelephone. Simul-



R 1720

Cross connexion field, Relay frames, and Power plant at Győr, Hungary.

taneously the call recording apparatus of the calling party is connected, when the lighting of a control lamp and the calling party's clear line signal lamp indicates that the call is recorded.

The local exchange is designed for 2 400 subscribers, with provision for extension to 6 000. The number of work places is at present 12, with 16 pairs of cord circuits each. Each work place now comprises 200 local lines distributed over 3 panels. The number of local lines per work place can be increased to 300.

The trunk line exchange consists of 8 work places for a total of 32 trunk lines, multiplied over two switchboards and provided with signal lamps to mark engaged lines. There is no special junction switchboard, the local 6-panelled multiple being produced to the trunk exchange also. The same cord circuits may be used for both local and through connexions. Both the reply and the ringing cord of a cord circuit each have a service switch enabling the operator to reply and to send out calling signals in either direction at will. Each cord circuit is further provided with a key for testing and for preparing subsequent calls. When a reply plug is inserted in the multiple jack of an engaged trunk line and the preparatory key is depressed, the lamp attached to that reply cord will flash as soon as the line is disengaged.

— **The 1929 Annual Report of the Royal Board of Telegraphs** shows increased figures in comparison with those of last year, which characterize the progress of telephony in Sweden.

The number of stations has risen this year by 23 107 to 495 312, while the 1928 increase stopped at 18 692. The number of local calls increased by over 32 millions, from 677 836 700 in 1928 to 710 085 000 in 1929, or by 4.8 per cent. (in 1928 by 3.5 per cent.) and the inland trunk calls from 40 264 812 in 1928 to 42 355 225 in 1929, or by 5.2 per cent. as against c. 9 per cent. the previous year. The total increase of trunk traffic was 5.4 per cent. against 3.4 in 1928. The number of periods per trunk call during 1929 averaged c. 1.4, the same as in 1928.

The traffic with Denmark, Norway, and Germany in particular increased by 13—19 per cent., while, thanks to the new telephone cable, the traffic with Finland was more than trebled. Traffic with other countries rose by 46—95 per cent. Telephone intercommunication with 8 new countries was inaugurated during the year, viz. Esthonia, the Irish Free State, Italy, Lettland, Poland, Portugal, Spain, and the Argentine.

The foreign pictorial telegram traffic intro-

duced during 1929 totalled 227 telegrams, of which 157 were exchanged with Denmark, 2 with Great Britain, and 68 with Germany.

The telephone density rose still more thanks to the great increase of telephone stations. At the end of the year there were something over 83 stations per 1000 inhabitants in Sweden, as against not quite 80 at the end of last year. Of the several towns Stockholm, where the density of telephones is greater than anywhere else in the world except in San Francisco, was first with 305 stations per 1000 inhabitants, next followed by Sundsvall with 210, Uppsala with 186, Falun with 174, Örebro and Umeå with 161, Kristianstad with 160, Östersund with 156, Växjö with 150, Härnösand with 149, and in the 11th and 12th places Gothenburg and Malmö with 146.

The Telegraph Office revenue increased during the year by 3.46 mill. kronor to 94.14 mill. kr. In spite of the vigorous growth of business, it was possible to reduce the number of employees by 269 in consequence of the progressing automatization of the telephones in Stockholm and Gothenburg, and the staff at the end of the year numbered 15 395 persons.

— **Police Telephones.** The Stockholm police will test a new patrol system, with so called police boxes distributed in the patrol areas. These boxes will be provided with telephones connected to an exchange in the police station of the patrol district. The telephone equipment will be supplied by the L. M. Ericsson Telephone Factory, and will be installed by the L. M. Ericssons Anläggning A.-B.

The telephone exchange is made on the central battery system, and the box stations are of standard type. To get into touch with a patrolling police officer, even when he is not at any of the telephone boxes, the plant is combined with a signalling system which will summon the constable to the nearest box. The signals consist of lamps showing a yellow light, set up at street crossings near the boxes and easily noticeable from neighbouring streets. The lamp is lit by means of a relay connected to the telephone lines and worked from the police station exchange. Through the exchange the patrolling officer may get into communication with the superintendent or with the Main Police Station in Kungsholmen.

By this arrangement the possibility of cooperation between the station and the patrolling officers is improved, and the control of the patrols will be easier.