Ericsson News

1932 | English edition | Managing Editor: Woldemar Brummer | No. 1—3

— **Announcement by the Editor.** As circumstances made it impossible to publish last quarter's number (10—12, 1931), its intended contents will be published partly in this number and partly in the next.

— **"Elektromekano" exporting to Lithuania.** At the beginning of December, "Elektromekano", Hälsingborg, made a large delivery of machines for a paper mill which is being built at Kovno in Lithuania. This mill belongs to the Kreuger Concern.

The shipment comprised some 50 electric motors, in sizes varying from 1,000 H. P. down to 1 H. P. All the motors are made for 380-volt 50-cycle A. C.

The large motors are slip-ringed, and are provided with oil-cooled starting resistances. The largest motor is illustrated here, 1,000 H. P., 240 r. p. m., of open design, and intended for driving a wood pulp grinder. Its weight comes to something like 15 tons, and it was therefore shipped in sections.

R 4089

All the other motors are of the standard Elektromekano splash-proof design. Motors up to about 70 H. P. are of the squirrel-cage type, for connexion to a starting switch or a star-delta startor. Such of them as are heavy to start are also fitted with Pulvis couplings.

A number of the motors are also provided with built-in helical precision gears, reducing the speed sufficiently for the work machines, and so dispensing with belt transmissions.

The motors are intended for driving several different kinds of machines in the paper mill, such as conveyors, saws, barking machines, pumps, beaters, edge runners, fans, etc.

The shipment was sent by rail (4 truck-loads) to Gothenburg, to be reloaded there with other machinery from the Karlstad Mek. Werkstad, Jönköpings Mek. Verkstad, and A.-B. Malcus Holmquist, Halmstad. The whole lot was shipped from Gothenburg by special steamer to Memel, and from there to Kovno.

A supplementary order has since been received for a couple of large transformers for supplying electric power to the mill. The incoming 3,000-volt current is stepped down by these to 380 volts, the voltage of the motors. The output of each transformer is 850 kVa.

It is very satisfactory that the Ericsson Concern should now also include a factory for high tension materials which can supply the Concern and allied firms with any such requirements. "Elektromekano" has also had increasing opportunities to do so.

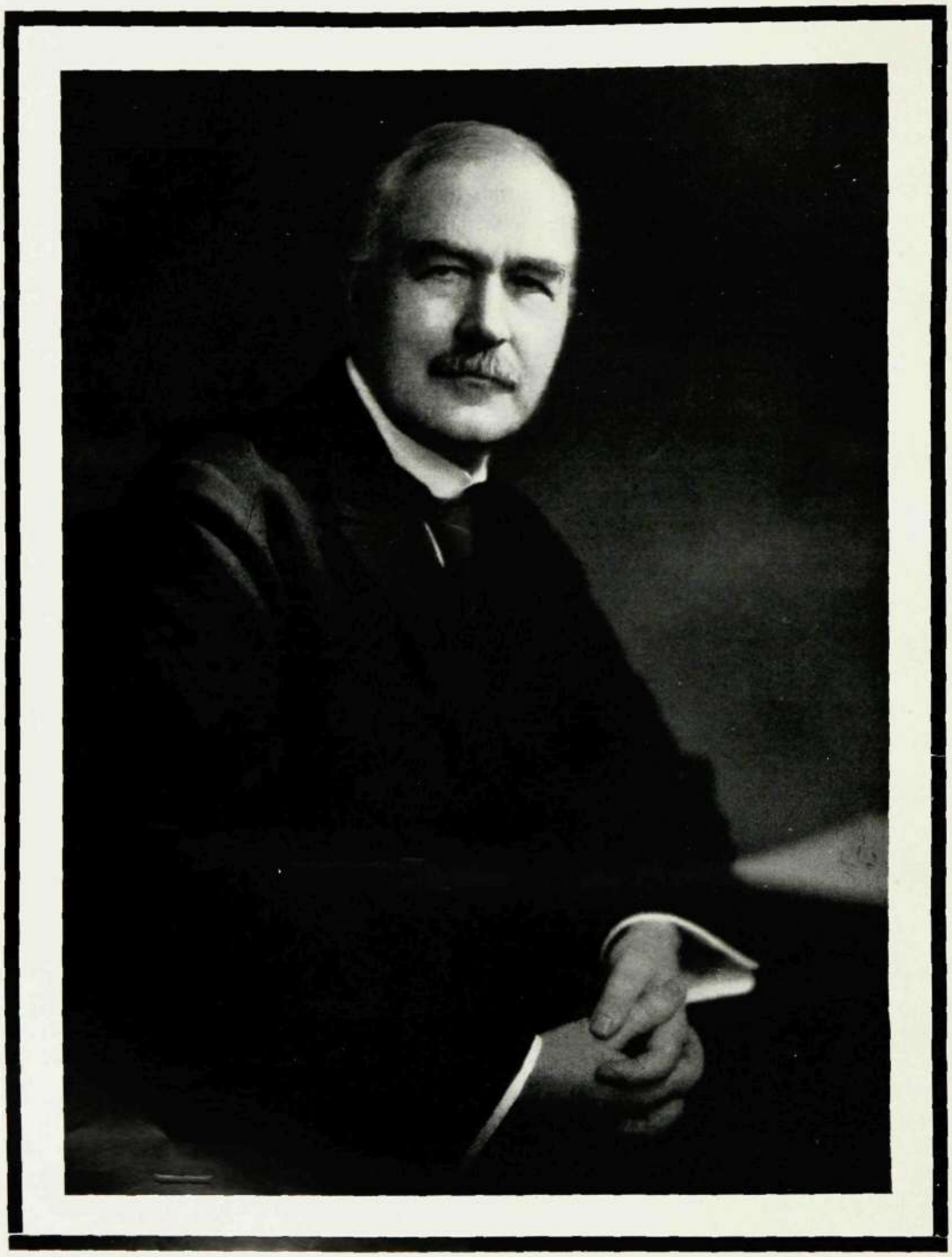
— The **Venice Mestre Trunk Exchange** in Italy on the Ericsson System was opened on Dec. 20th 1931.

— **Automatic Telephone Exchanges on the Ericsson System.** Since the publication of Pamphlet B29 mentioned on p. 10, which contains a list of automatic exchanges in use or building on Feb. 1st. 1932, the following have also been opened:

in **Italy,** at Naples, the Bagnoli Exchange,

in **Mexico,** the Mexicoac and Coyoacan Exchanges in Mexico City, and in the town of Mérida.

The new Ericsson telephone instrument, 1931 model.



KARL FREDRIK WINCRANTZ.
Died on February 6th 1932.

†

Karl Fredrik Wincrantz.

Karl Fredrik Wincrantz, born in Stockholm in 1874, graduated from the University of Technology in 1897, but already in 1893, while still a young undergraduate, he was engaged as an assistant in the Royal Board of Telegraphs, where he remained until 1900, when he entered the service of the Stockholms Allmänna Telefonaktiebolag as its Assistant Manager under Mr. H. T. Cedergren. During 1898—1906 he also served in the Royal Patent Office, where he was some time Secretary, some time Chief Engineer.

On the death of Mr. Cedergren in 1909, Wincrantz was appointed his successor as Managing Director of the A.-B. Stockholms Telefon, formed the year before, which owned and ran the large private telephone net of Stockholm and neighbourhood. He led this firm untii 1918, when it was taken over by the Swedish Government.

The Aktiebolaget Stockholms-Telefon was then re-organized as the Allmänna Industriaktiebolaget H. T. Cedergren, which firm took over the Stockholm Telephon Cable Works at Älvsjö and workshops in Stockholm. Wincrantz was at the same time appointed Manager of the new firm.

In 1922, the Industri A.-B. Cedergren was amalgamated with Telefonaktiebolaget L. M. Ericsson, and with Mr. H. Johansson Wincrantz became a co-Manager of the enlarged company.

When it was resolved at the General Meeting in 1925 that the Concern should only have one Managing Director, Wincrantzz was elected to the post, which he held until he retired in September 1930.

Wincrantz's contributions to the Swedish Telephone industry, in the three branches of erection, operation and manufacturing, made him a worthy successor to those great men who created and developed Swedish Telephony at home and abroad. The amalgamations with other firms and foundation of new ones in telephony and allied industries started at the beginning of this century and eventually resulting in the foundation of the present world-embracing Ericsson Concern, were continued by him with energy, purpose, and success, and on his retirement in 1930 he could lock back with satisfaction on what he had accomplished. The continued trying struggle of the last few years in the world market had undermined his strength. The ease and rest he hoped to find in private life could not, however, restore his health, and barely 18 months after his retirement ha was overtaken by death, loved and respected by his friends, associates, and former subordinates.

The burial service for the deceased was held on Feb. 13th in Maria Church. The Rev. Gustaf Ankar, of the Parish of Gustaf Vasa, officiated. Every seat in the church was filled by friends and acquaintances of the deceased; among those present were noted all the members of the Board of Telefonaktiebolaget L. M. Ericsson present in town, including the Chairman and the Managing Director, as well as the staff of the Concern. The Board of Telegraphs was represented by Director-general Count Hamilton, Mr. Ohrling, Chef de Bureau, and Mr. Lignell, Director of Telephones. The church was beautifully decorated. Laurels were placed along the aisle, and in the chancel were pine, laurels and ferns, lilies, and white and purple lilac. The coffin, covered with the Swedish flag, was carried to the church, where the guests had gathered, on an open carriage dressed with pine branches. On the arrival of the procession, the organist played Chopin's Funeral March, and when the coffin had been placed on the catafalque Mr. Einar Beyron, of the Royal Opera, sang "Den store vide flok", and the congregation sang in unison Hymn No. 16, v. 1 and 3. The officiating clergyman then advanced to the bier and read the burial service, ending the ceremony with an eloquent oration. Mr. Hemming Johansson, on behalf of the Ericsson Company, then addressed to the deceased a last farewell in feeling words expressing sincere respect and gratitude. Another speech was made by the Chairman of the Staff Association L. M. E., Mr. Karl Palm. Mr. Beyron finally sang Beethoven's "Hymn of Praise", after which the coffin was borne out to the mortuary chapel to the strains of Carl XV's Funeral March.

The interment took place on Sunday Feb. 14th in the Ingarö Cemetery, in the parish of Mr. Wincrantz' country house, Ängsvik, More than a hundred wreaths, sent by relatives, friends, and Associations, as well as by all the companies and other firms forming the world-wide Ericsson Concern, adorned the grave.

— **International Cooperation on Fire Prevention.** The idea of international cooperation in fire extinction probably arose at the beginning of this century in several European countries, springing no doubt from the need of studying how matters were arranged elsewhere, and how the actual fire-fighting problems were being solved. On August 12th, 1900 an International Fire Brigade Council was formed in Paris, "Le Grand Conseil International des Sapeurs-Pompiers", with the object of collecting and coordinating experience on technical questions and questions of organization, which were coming increasingly to the fore and were forcing themselves on the attention of the men engaged in this profession. At about the same time a large Fire Brigade Congress was held in Berlin, at which more than 1,400 members from Central Europe gathered to exchange ideas. But, just as none but the Latin countries had joined the French International Council, so no interest in the German initiative was aroused outside the German-speaking parts of Europe. The reasons for this were probably partly that the time was not yet ripe — the ideas of a Russtraht or a Westphalen had not yet been mooted — and partly also that the origin and development of the fire extinguishing organizations in the various countries were so different that points of comparison were lacking, and it was therefore impossible to find common ground to work on for all of them, or at least for the majority. The new ideas which were now gradually taking shape, also showed that the problem was wider than had been expected, and that the whole question reached further and involved more than the internal organization of the fire brigades alone. The preparations for war and the war itself naturally precluded any chance of going into these questions, and post-war developments and reactions were to indicate the real crux of the problem. The increasing variety and value of insurable interests, increasingly rapid mechanization and electrification, more extensive use of inflammable oils, and not least a growing carelessness and negligence in handling fire, have largely increased the fire indemnities paid, which cannot be explained merely by the reduced value of money, and has caused very serious concern to the authorities, underwriters, and general public of all civilized countries. The conviction is now gradually gaining ground that something must be done to stop this disturbing and anti-social phenomenon, which is especially injurious from the point of view of political economy. Nor has the organization and maintenance of fire-fighting bodies proved to be sufficient, however perfectly equipped and efficient these may be. The problem goes far deeper than that.

R 3099 "Comité technique international de prévention et d'extinction de feu" at the Paris Congress, July 3rd 1931.

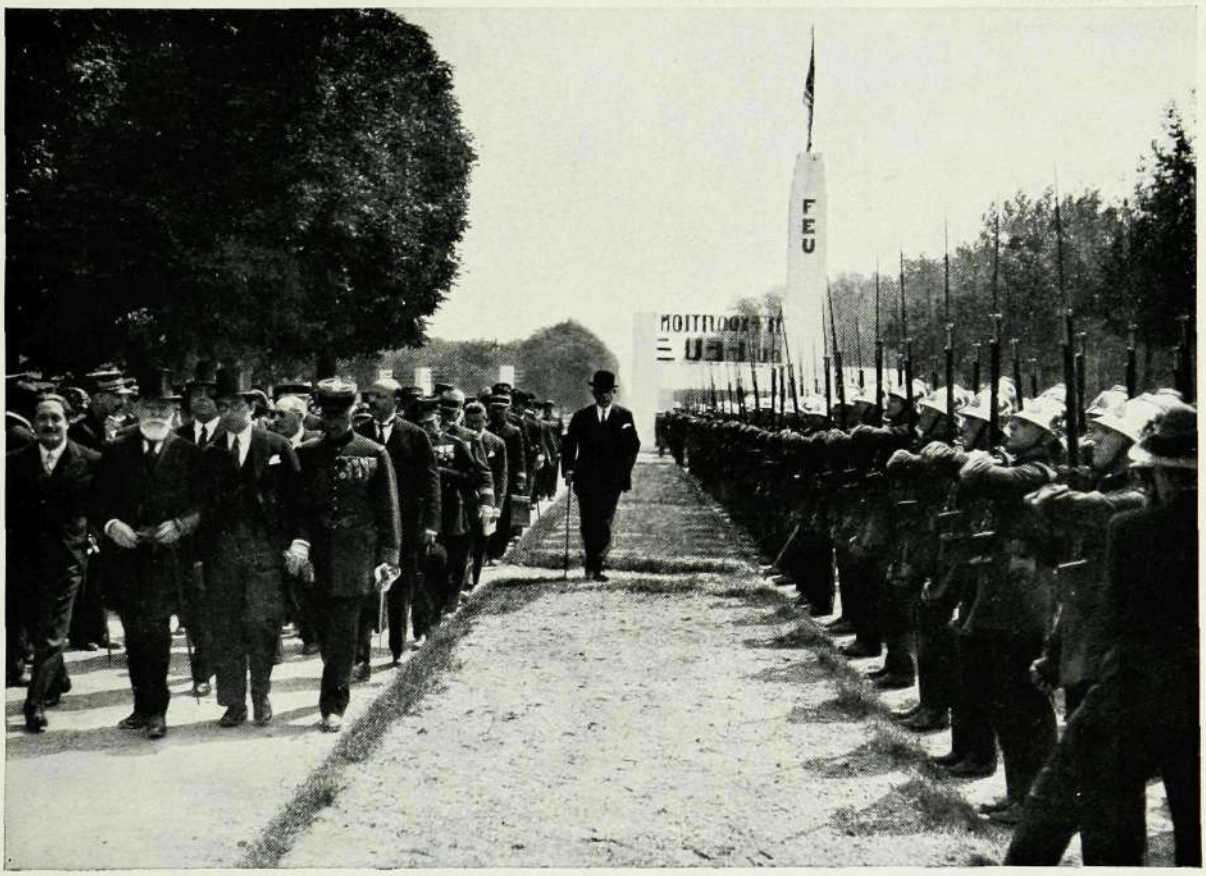
It is therefore only natural that impartial organizations for the prevention of fire should spring up. U. S. A. has long had one which to us seems gigantic: "The National Fire Prevention Committee", outside the Fire Fighting bodies, and dealing with preventive measures against fire; in Sweden the Association of Fire Brigade Commanders was in 1918 reorganized into "The Swedish Fire Prevention Association" (Svenska Brandskyddsföreningen) with preventive measures as the chief point in its program, and in the three other Northern countries associations were formed on lines similar to the Swedish. Each of these has

its program and its special sphere of action. On the whole, the British and French efforts may perhaps be said to concentrate more on testing and controlling the material, the Northern on propaganda and instruction. Carelessness and ignorance are more than ever the chief causes of most fires.

But in this instance, as in so many others, the honour of initiating the resurrection of international cooperation belongs to one of the new countries. The International Fire Brigade Meeting at Prague in 1928 decided to inaugurate international cooperation, not only in the sphere of fire extinction but also in that of fire-preventive measures, and arrangements were therefore made for another Congress in Paris the following year, 1929, at which draft regulations for an *International Fire Prevention Committee* were to be submitted. This Congress was accordingly held as arranged, on the 24th—26th June 1929, in connexion with a large International Fire Prevention Exhibition, by invitation of the French Government Fire Prevention Committee, the French Academy of Engineering Science, the National Association of Fire Brigades, and the Paris Fire Brigade, to which four institutions the arrangements for the Congress had been entrusted. Apart from all the known Fire Prevention Organizations and Fire Brigade Associations, the Governments of U. S. A., Canada, and the independent European Countries had also been invited to this Congress. To make the Congress wholly official, an Honorary Committee had been formed, of which the President of the Republic, the Presidents of the Council, the Senate, and the Chamber of Deputies, the Ministers of Finance, Foreign Affairs, Home Affairs, Commerce, and War, as well as other prominent civil and military officials, were members.

The Congress itself was a success. About 20 Governments had sent out one or more representatives, and all sorts and conditions of Fire Brigade people turned up. The draft regulations were discussed and in the main approved, while a "Bureau Provisoire" was established. Colonel Pouderoux, an imperturbable man of wide experience, commanding the Paris fire brigade, was elected President of the Committee, an excellent choice, as evidenced by his subsequently putting in a great deal of work during the discussion of the regulations in insisting on the new organization not being allowed to interfere in the fire brigade matters of the several countries, and above all that it must be perfectly impartial.

The objects of "La comité technique internationale de la prévention et de l'extinction du Feu" thus substituted for the previous International Fire Brigade Council — which had not accomplished any real results — are, according to its Statutes,



R 3099 Visit of President Doumer to the Exhibition.

to contribute theoretically and practically to the progress of fire prevention and the technical improvement of fire-fighting methods, and to strengthen the bond between the advocates of fire prevention in the several countries; these aims are to be achieved by meetings, congresses, reports, and publications on technical aspects of fire prevention. It deserves to be mentioned that both the Swedish State and the Swedish Fire Prevention Association have joined the "Comité technique" as "membres donateurs". The address of the Committee is: Colonel Pouderoux, Quartier central des Sapeurs Pompiers, 9 Boul. de Palais, Paris.

The second Congress was held this year, from July 1st—5th inclusive, this time again in Paris and with the same august patronage and interest from the authorities, and again in conjunction with an International Fire Protection Exhibition. An extra fillip to the festivities was provided by the simultaneous celebration of the 50th anniversary of "La Fédération nationale des Sapeurs Pompiers Français". As the first time, the attendance was very good.

R 1000 The large fire escapes outside the Exhibition.

The work of the Provisional Bureau was transferred to a "Bureau permanent", the economic side was organized. and four Vice-Presidents elected, representing the Romance, English, Teutonic and Slav language groups. By all these arrangements the International Committee can be considered to be definitely constituted.

The author writer, who attended this Congress, received a definite impression that interest in fire extinction is still dominant, and that as far as preventive measures are concerned interest is still almost dormant. Among the many lectures and subjects of discussion during the Congress, one alone did not deal exclusively with fire extinction or life-saving, and this was on protection against fire in warehouses, given by Mr Wagner, a senior officer of the Berlin Fire Brigade. This subject is far from new; it cropped up at the Berlin meeting in 1900 and again at the Paris Congress of 1929. This in my opinion does not indicate very great progress.

Nor did the large International Exhibition show anything of theoretical interest, apart from the stand of the Swedish Fire Prevention Association, which was unique and highly instructive, and attracted considerable attention. Unfortunately it was rather late in being put up on account of trouble with the customs, where we received much help from the kind intervention of the Ericsson Telephone Company.

With some reason it may now be asked whether all this is likely to lead to anything. Without wishing to cast any doubt on the good will of the French, the undertaking is certainly very difficult. Great Britain, where the voluntary fire brigade system is so highly developed, cannot be expected to cooperate to any great extent. It seems highly improbable that Germany, as at present situated, will be able to do as much as formerly to promote this matter. Most interest will probably be shown in the new countries of Eastern Europe, and the only question is whether their capacity will be equal to their will. As far as the Northern countries are concerned, my impression is that these have progressed much further with the problem than the others, with the possible exception of Germany. It seems fairly obvious that we have nothing essential to learn either now or in the near future.

R 1001 Pump display on the Seine.

Speaking of international cooperation in matters of fire prevention, it should not be forgotten that excellent cooperation has existed for several years between the respective organizations of the four Northern countries, and this may well serve as a model for even the largest and most extensive fire preventive schemes.

— **Swedish Instructional Course in Fire Prevention**. *The Ericsson Concern participates with special exhibits.* From September 21st to 26th the Swedish Fire Prevention Association held an interesting instructional course, in which the Ericsson Concern also took part as an exhibitor.

About 250 people from Sweden, Norway, Denmark, and Finland joined the course. Among them were commanders of Fire Brigades and Fire Insurance men, Government and Municipal officials, leading industrialists, engineers, architects, chimney sweeps, etc.

The course was opened by the Chairman of the Swedish Fire Prevention Association, Mr. Sven Lübeck, sometime Secretary of State, in the presence of nearly 400 people, including the Secretary of State for Communications, the Chief of the Royal Navel Board, the O. C. Naval Dockyards, Stockholm, and a large number of high officials.

The Ericsson Concern was represented by Messrs. Klemming, Olsson, Sundell and others. The Kreuger Concern's representative, Kabinettskammarherre E. Boström, attended the whole course.

On the first day the chair was taken by Mr. Lübeck, and on the other days by Mr. Karl Thorngren, Chairman of the Electrical Committee, and Captain Axel Svinhufvud, the popular Commander of the Stockholm Fire Brigade.

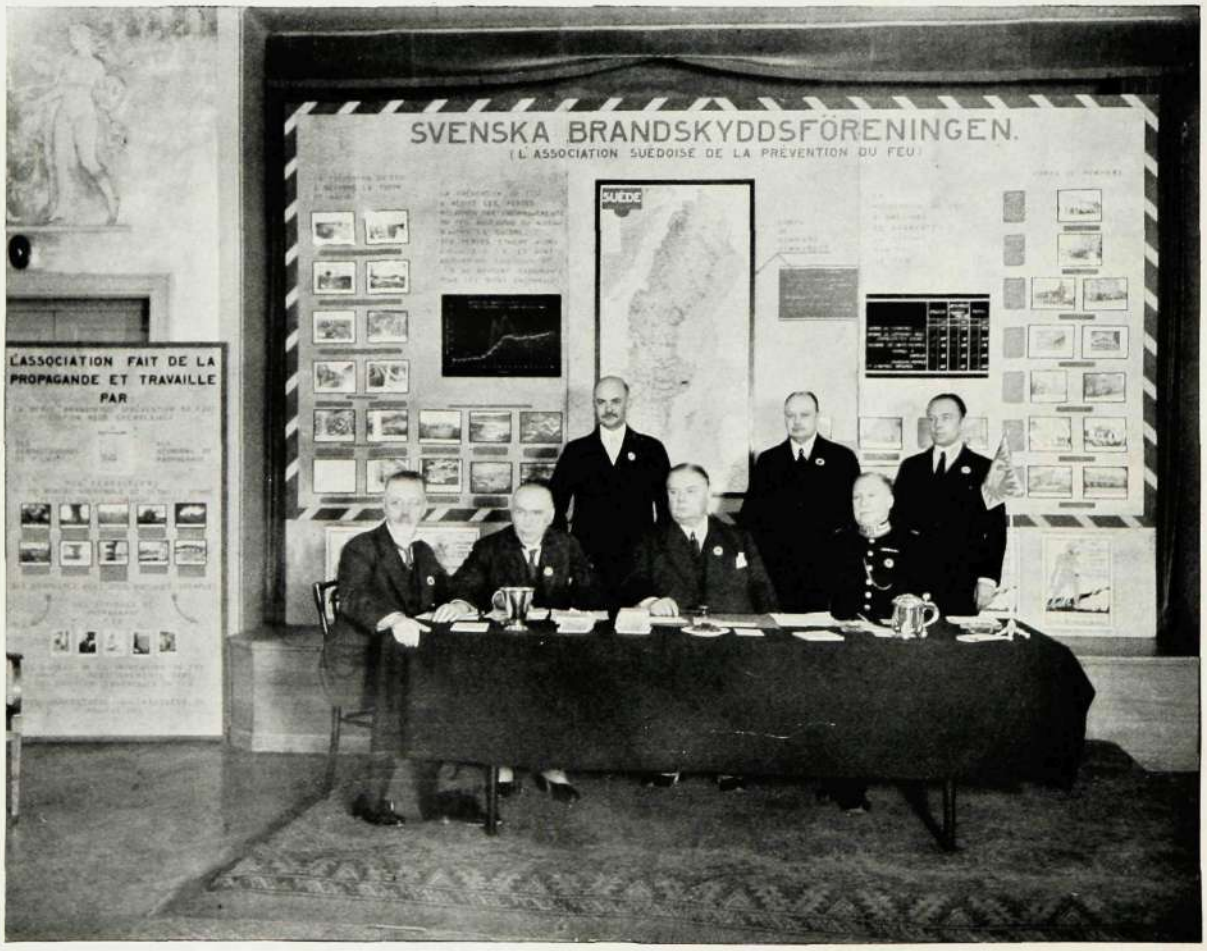
The course consisted of 15 lectures given by specialists from various parts of the country, on fire alarm, fire extinguishing, fire-drill, fire inspection and life-saving equipment, building technique, legislation on fire prevention, fire insurance, etc.

The lecture on "Modern fire alarm plants" was given by C. G. Norell, L. M. E:s veteran assistant.

A number of interesting demonstrations were arranged for those who attended the course. These included the Government Testing Institute's remarkable new fire-technique laboratory, where among other things some notable experiments were made with the first motor fire engine for mechanical foam, the University of Technology's water motor laboratory, where a number of fire brigade cars and fire engines were tested, and the Ericsson automatic fire alarm system in the Royal Opera House. All the Stockholm theatres are fitted with the Ericsson automatic fire alarm.

An exhibition had been arranged in connexion with this course, to which the Ericsson Concern contributed with several stands of modern fire alarm equipment from Telefon A.-B. L. M. Ericsson, and cables and Gebe-material from Sieverts Cable Works.

On the last day but one, Telefonaktiebolaget L. M. Ericsson invited all the leaders, lecturers, and those who attended the course to lunch at Hotel Gillet. The Company was here represented



R 3098 The leaders of the instructional course of the Swedish Fire Protection Association.

R 3097

The Stockholm Exhibition of the Swedish Fire Protection Association.
In the background the Ericsson stand showing modern fire-alarm apparatus.

by Messrs. Klemming and Grape, Directors, and some of the engineers of the Company.

This was probably one of the most comprehensive fire prevention courses ever held in Europe.

— **Swedish Participation in the International Fire Prevention Exhibition in Paris.** Having received through the Swedish Foreign Office an official French invitation, the Swedish Fire Prevention Association took part in a large Fire Prevention Exhibition in Paris this summer. Telefonaktiebolaget L. M. Ericsson and its French subsidiary Company assisted in putting up the Swedish exhibits in the French capital.

The Exhibition, "2:me Exposition Internationale du Feu" was opened by the President of the French Republic and was subsidized by the State. Fire-fighting Organizations, Fire Brigades, and Manufacturers of fire alarms, appliances for extinguishing fire and for life-saving, etc. took part in it.

The Swedish section consisted of three large stands.

The main one, 5×3 metres, was intended to show other countries how far efforts at fire prevention have progressed in Sweden. On a large scale map of the country all the professional and semi-professional fire brigades were marked by pins. Tables were included showing that Sweden at present has 34 professional fire brigades, 179 semi-professional brigades, where the firemen do not live in, 620 organized voluntary corps, and 350 industrial fire brigades.

Photographs with explanatory texts showed the advance in building caused by fire prevention. By means of energetic propaganda and the spreading of information — in which the Ericsson Concern has taken an active part with its courses of instruction in electrotechnics, attended by very nearly 8,000 persons — the ratio of fire indemnities to values insured has been reduced to less than the pre-war level.

The fire-fighting organizations of Sweden have also been considerably improved during these last decades, in fire-alarm systems not less than in fire-engines, motor pumps, hydrants, etc., while the fire brigades are also much better organized now.

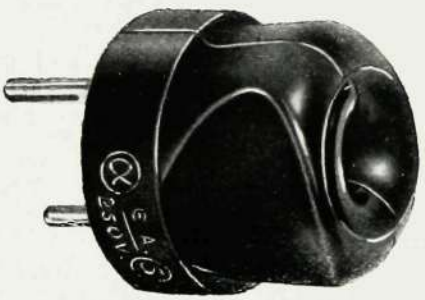
A special stand in the Paris Exhibition showed how the Swedish Fire Prevention Association works, and some of the methods it employs in its extensive propaganda and instructional activities.

Finally, a subsidiary stand was devoted to the Fire-Technique laboratory of the Government

ALPHA

plug for 6 or 10 Amp., 250 Volts.

Black or brown bakelite



Delivered in boxes of 10

The Alpha-plug is an Alpha product.

The same precision in mass-production, the same beautiful highly polished bakelite, as is found in other Alpha bakelite products for Wireless, Telephony industry etc., is used in the manufacture of this connection plug.

The regulations at present in force have been applied to its design, some advantages of which are:

No loose parts—the connection pins, screws and cable cramp cannot be lost.

Effective cable anchoring—enabling the fastening of cables of various sizes.

Exchangeable contact pins
for 6 Amps.: split pins
for 10 Amps.: solid pins for wall contact with spring contact holes.

Strong bakelite goods—greatest possible resistance against shocks.

In every respect a first class product.

For export write to

A.-B. ALPHA

SUNDBYBERG

THE PUSH-BUTTON SWITCH

PELLO

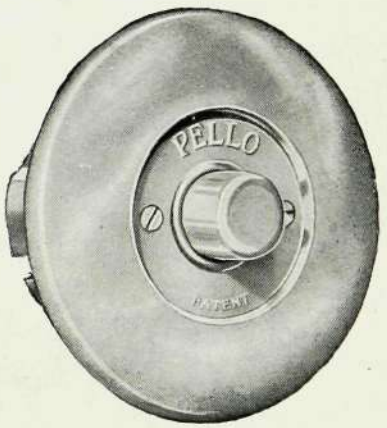
unsurpassed for durability
and elegance.

Black

Mahogany

Made in Sweden

New sunk
types with bakelite
tops in various colours.

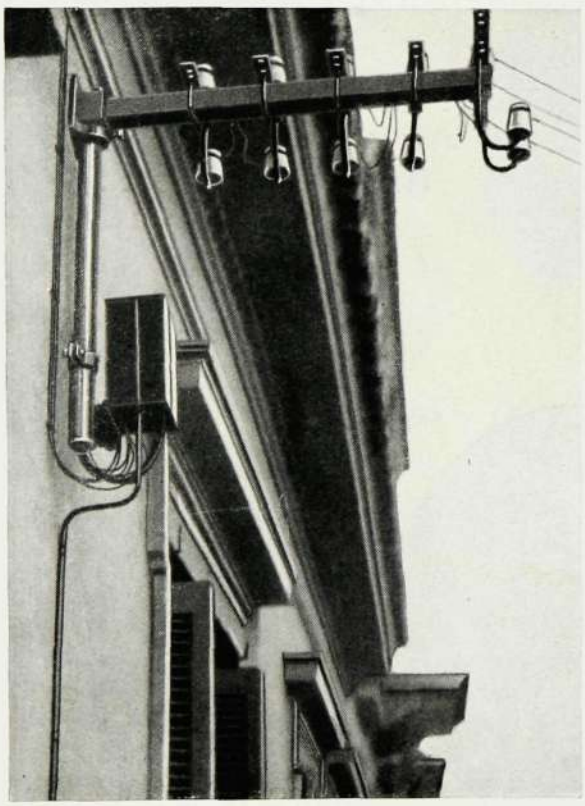


White

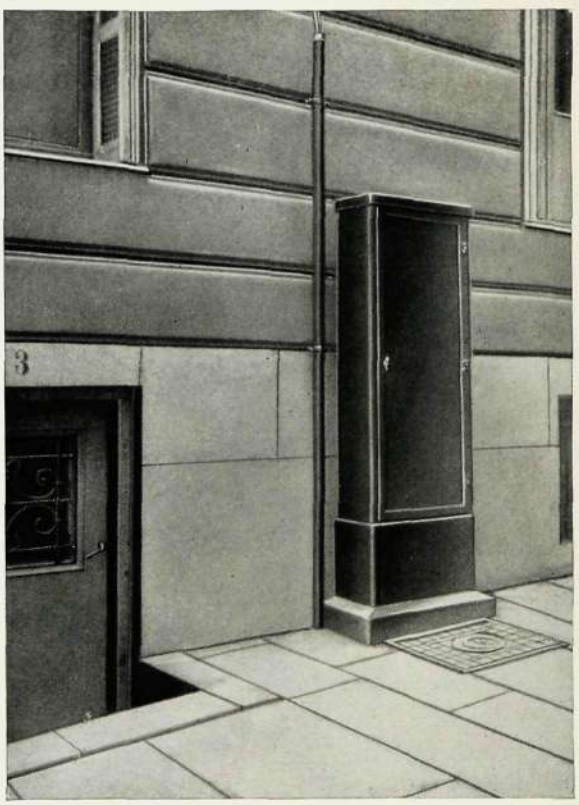
A.-B. ALPHA
SUNDBYBERG, SWEDEN

Testing Institute, whose pioneer work in examining and classifying building materials and constructions with regard to security and protection against fire has attracted great interest in both Europe and U. S. A.

— **Ericsson Activities in Greece.** In Ericsson News No. 5—6, 1930, p. 2, we announced that the Ericsson Concern, in conjunction with Siemens & Halske and some interested Greek firms, had taken over the erection and operation of the telephones in Greece, the former firm to be responsible for the building of the lines with materials of their own designs and manufacture, which have been accepted as standard for the lines of the Greek Telephone Company. The Editor is now in a position to reproduce here some of the materials fitted.



R 4086 Lead-in from overhead wires.



R 4088 Cable Distribution.

— **Publications by the Editor during 1931.**

Excerpts:

SR30E Electric Locking Frame with All-Electric Interlocking Gear. (F S T)

SR36E The Swedish Voice Frequency Signalling System. (F S T)

SR37E A Review of certain new Designs of long Distance Telephony Equipment and Measuring Instruments. (F S T)

SR38E On Transmission Levels and Level Measurements in Long Distance Telephone Lines. (F S T)

SR39E Constant Current instead of Constant Voltage at the Track Transformer in an A. C. Track Circuit. (F S T)

SR40E A Method of computing the Attenuation in a Band Pass Filter arbitrarily composed of Resistances, Inductances, Capacities, and Transformers. (F S T)

SR41E Modern Industrial and Agricultural Installations. (F S T)

SR42E Practical Experiences of the Fire Offices' Electrical Committee. (F S T)

SR43E Investigations regarding Mutual Induction in parallel Conductors earthed at the Ends. (F S T)

SR44E The Ericsson 2-Wire Repeater. (F S T)

SR45E Electrical Points-Driving Machine, Incorporating Tongue-locking Device. (F S T)

SR46E The Attenuation at a Double Point in a Band-pass Filter. (F S T)

Pamphlets:

B27E The Ericsson Concern. List of affiliated Firms, Nov. 1931. Replacing B23E. (F S T)

B28E Electrical Soil Heating. (F S T)

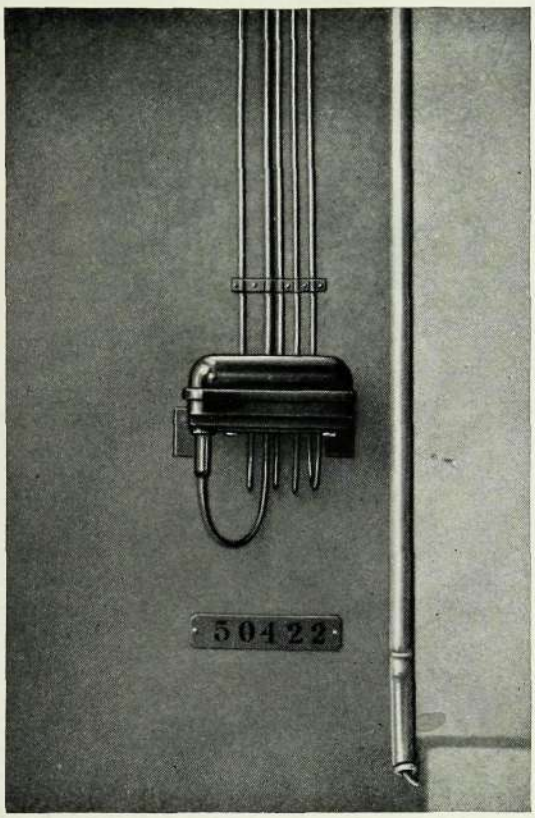
B29E Ericsson Automatic Exchanges in Use and Building on Feb. 1st 1932. Replacing B24E. (F S T)

B30E List of Contents of the L. M. Ericsson Review, 1924—32. Replacing B25E. (F S T)

B31E Automatic Telephone System with 500-line Selectors.

This is to supplement the List of excerpts and pamphlets published in Ericsson News Nos. 10—12, 1930 and distributed as a supplement to the L. M. Ericsson Review No. 1—3, 1931.

— **Literature.** In No. 10—12 of "Elektroposten", published by A/S Elektrisk Bureau, Oslo, there is an interesting article (p. 8) by M. L. Kristiansen on "Earthing of a Telephone Exchange".



R 4087 Wall box.

See the notice p. 12 on the work in Greece.

— In the same issue of *"Elektroposten"* is found an article by Mr. *U. A. Trebler* describing in detail the *new Sandefjord Fire Alarm Plant.* This plant has been installed by A/S Elektrisk Bureau on the L. M. Ericsson *control current system,* the principle of which is described in a pamphlet, "The L. M. Ericsson Fire Alarm System" (B 12), published by the Editor of the L. M. Ericsson Review. In this case, the normal equipment has been supplemented with an automatic code alarm device for the reserve fire-men, and with a lamp panel on which the number of the alarm-box giving the warning appears in illuminated figures.

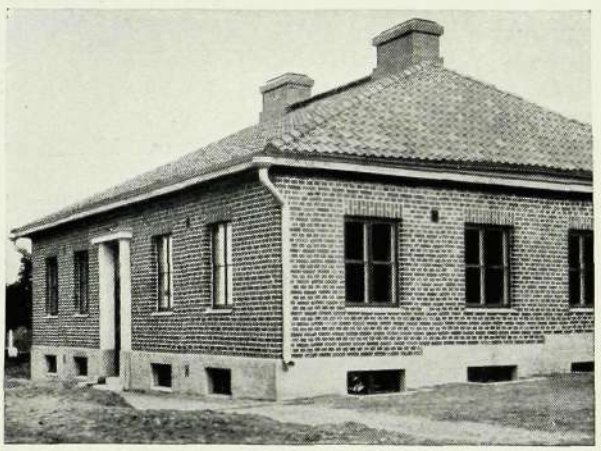
The automatic code-alarm device records the code signal arriving from a fire-alarm box as it comes in; when this is finished the alarm-box loops with their alarm bells are connected to a motor magneto-ringer, which then starts automatically. The alarm now sent out consists of a long preliminary signal followed by the code number of the fire-alarm box, each repeated twice.

— We have read with interest and satisfaction an article in *The Electrician* for Jan. 15th 1932 dealing with the opening of the new automatic telephone exchange in *Acorn,* the first Automatic Exchange in England with "Standard Open type" Racks. This metod of mounting consists of erecting all the ironwork, fixing to walls and ceilings, running in the cables, completing all the heavy and dirty work and removing scaffolding befor any of the delicate pieces of apparatus, assembled in the factory, were introduced into the building, set up and connected in, a method, which has been used already for about ten years in the installation of Ericsson automatic telephone systems. The author points out that this method is of considerable advantages from the fitters' point of view.

Automatic Telephone Exchanges in Finland.

Interesting experiments with automatic service between exchanges of different automatic systems.

— **Ekenäs.** On Feb. 14th 1932 there was a special demonstration of the newly erected automatic telephone exchange at Ekenäs, Finland, which was opened for traffic on Jan. 30th, about 50 people being invited to attend. Among those present were the Town Director and Chairman of the Ekenäs Town Council, members of the



R 4091 Fig. 1.

Council, and some prominent business-men of the town. The Board of Posts and Telegraphs was represented by Messrs. E. Risberg, H. Juselius and Haverinen. Messrs. K. R. Salovius and I. E. Selin represented the Ministry of Communications, Mr. J. Stenberg, Director of Södra Finlands Interurbana Telefon A.-B., Mr. K. Strömberg, Chairman of the same firm, and Mr. S. Weber,

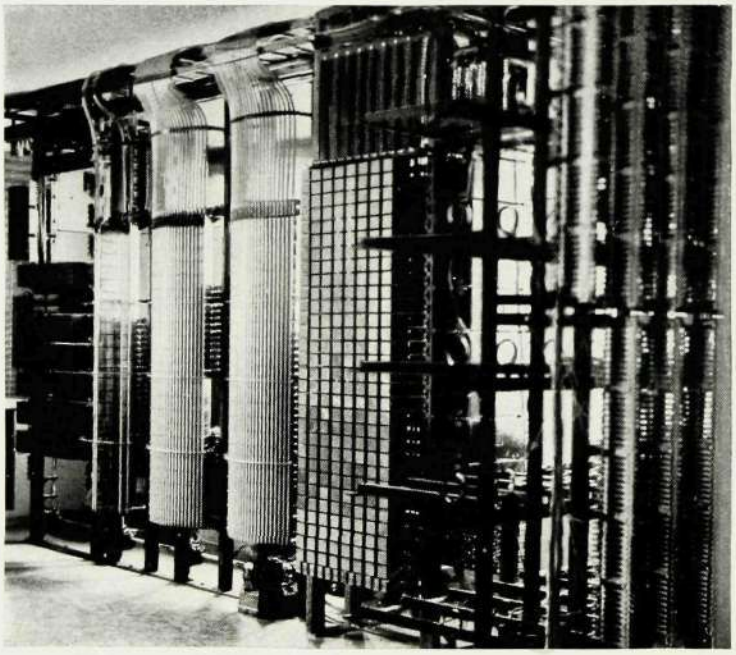
Traffic Manager, also attended. Mr. E. Silander, Director of the Tavastehus Telephone Association, Mr. G. Palmgren, Manager of Masaby Telefon A.-B., and Mr. L. Gröndahl, Manager of Riihimäki Telefon A.-B., as well as representatives of the large Helsingfors newspapers, had also come to witness the demonstration.

This began with a speech by Mr. Georg Bergh, Director of A.-B. L. M. Ericsson in Finland, followed by a description of the new plant by Mr. H. Blomberg. The principal feature of the demonstration was a series of experiments with automatic telephone traffic between two places using different automatic systems, in this case the Ericsson and Siemens systems. Mr. Blomberg's account was roughly as follows:

The Ekenäs automatic telephone exchange is the first erected in Finland on the L. M. Ericsson system in a special central building designed for the purpose (fig. 1), and is connected to a new telephone network, the greater part of which consists of cables. In the construction of this building every effort was made to combine minimum size with maximum convenience for its purpose and sufficient room for future expansion. It therefore contains an entrance hall with public telephone boxes, a small office, a room for the automatic exchange, large enough to permit of expansion to three times its present capacity — sufficient for the next 20 years at least; a room for a manual trunk- and district-call switchboard; a recreation room for the operators, and living rooms for the Chief Mechanic; and in the basement a battery room, a room for the linemen, stores, etc.

The fitting of the exchange has been done by the staff of A.-B. L. M. Ericsson in Finland; it is on the Ericsson motor-driven automatic system, and its present capacity is 500 numbers (fig. 2).

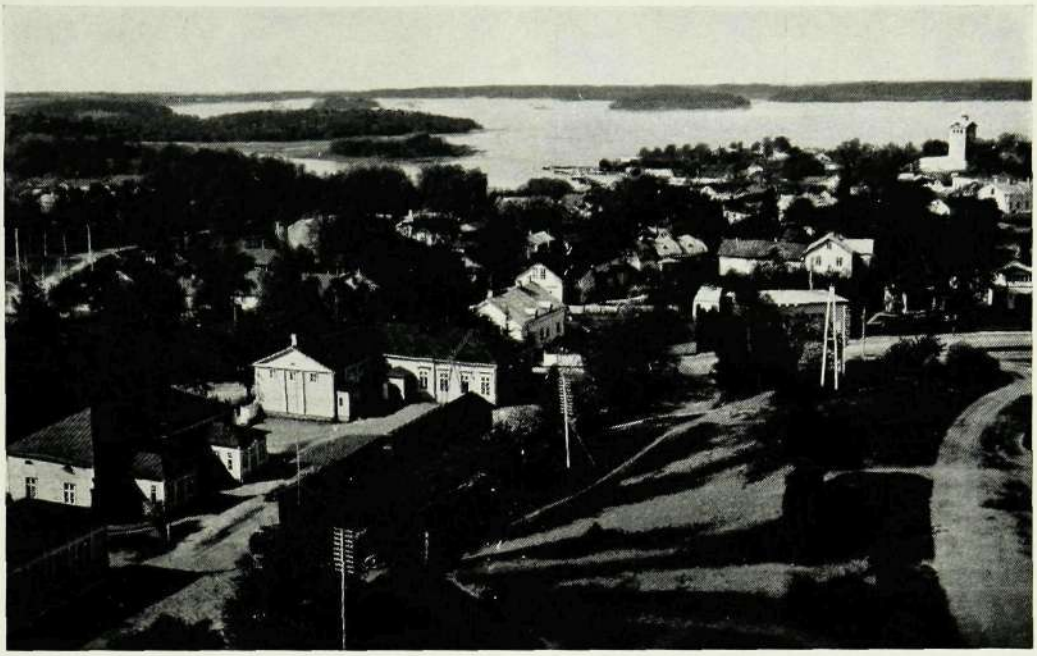
Starting with the ordinary procedure on a manual switch-board, the demonstration showed how two subscribers are connected automatically. The automatic selector allowing for connexion to 500 subscribers was demonstrated, and it was pointed out that all the parts used in connecting could easily be put into and taken out of the frame, thus making it easy to accomodate it to differences in the traffic. The next exhibit was the motor which drives the selector; it stops when there is no call on. This was followed by the control lamps, which indicate the fault immediately if anything goes wrong in the exchange, the traffic control box, from which the dialling of the subscribers can be supervised and subscribers informed if they do anything wrong, the call meters, which add up the calls, etc.



R 4092 Fig. 2.

It was then stated that traffic to certain district exchanges connected with the automatic exchange was put through without an operator at Ekenäs, as the service positions of the district exchanges had been equipped with dials. Trunk traffic at night between Ekenäs on the one hand and Helsingfors, Hangö and Åbo on the other is served in an analogous way in order to allow trunk calls to go through without employing an operator at Ekenäs at night.

The speaker then passed on to a demonstration of automatically regulated traffic between subscribers connected to the Ekenäs exchange and subscribers connected to the Helsingfors and



R 4093 General view of Ekenäs.

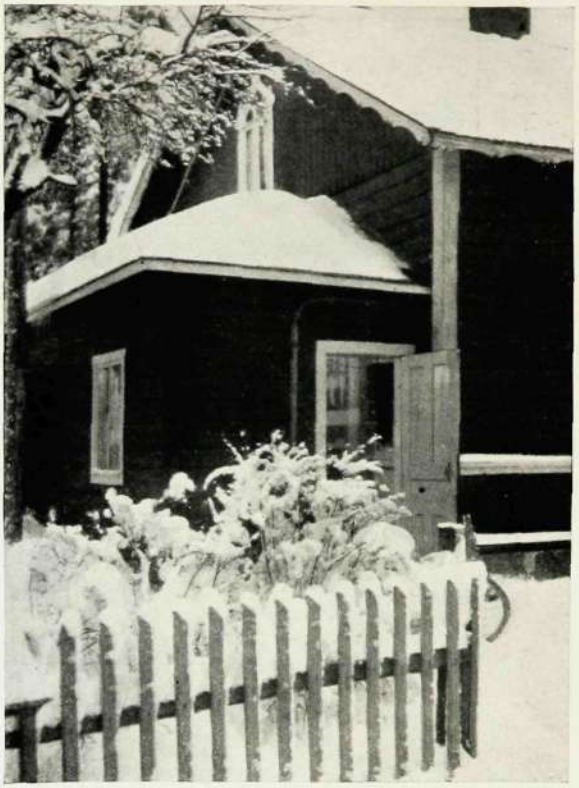
Riihimäki automatic exchanges, connected to Ekenäs by interurban overhead lines 71 and 129 miles long respectively. It was thanks to the courtesy of Södra Finlands Interurbana Telefonaktiebolag, the Helsingfors Telefonförening, and Riihimäki Telefonaktiebolag that L. M. Ericsson were enabled to arrange these experiments. Such experiments with automatic selection from a subscriber in one local network to a subscriber in another, quite separate and connected with the former by an interurban line, have as a matter of fact never before been publicly demonstrated in Finland. From this point of view they are of great interest. They are also of great importance, as it had been asserted before, both in the press and elsewhere in Finland, that it was im possible, or only possible with very great difficulty, to establish cooperation between Ericsson and Siemens automatic exchanges, (the latter is the system used in Helsingfors, Riihimäki and a couple of other places in the country) and that for this reason it would be unsuitable to erect automatic exchanges on the Ericsson system in Finland. These assertions are, however, quite erroneous, and L. M. Ericsson's aim with these experiments has been to show conclusively to a representative public capable of considered judgment that this is the case. The Ericsson system offers the same possibilities as any other system.

At the same time, however, it was pointed out that if automatic intercommunication between different local telephone networks was to be arranged in the future, there would be several traffic questions — quite apart from the question of system — which would probably require extensive changes in every local exchange. But the extent of these will depend entirely on what demands are made on, for example, the special fees charged for such automatic trunk calls, and these demands in their turn will depend on the places between which the traffic is arranged and the lines used for it. But with regard to these arrangements, it makes no difference if the automatic exchanges at the ends of the trunk line are on the same system or not; they will be on the whole just as complicated if both exchanges are built on, say, the Siemens system as if one were built on the Siemens and the other on the Ericsson system. What the experiments do show, however, is that the essential factor — which does depend on the question of system — in the arrangement of automatic traffic between different local telephone networks, i. e. the automatic selection from a subscriber in one to a subscriber in the other, is made possible on the Ericsson system.

In the course of the demonstration calls from Ekenäs to a subscriber in Riihimäki were demonstrated first, and then in the opposite direction, from Riihimäki to Ekenäs. This included a demonstration of the method of arranging for an incoming call from Riihimäki to break automatically a local call between two instruments in Ekenäs if such interruption is considered desirable.

A number of calls having been put through in either direction, similar experiments were made from Ekenäs exchange to the automatic Siemens exchanges in Helsingfors, after which those present were able to ring up subscribers

R 4095 Fig. 3.



R 4094 The telephone exchange building in Köpbacka village.

in Helsingfors by dialling. To do this the figures 02 were dialled first, which gave connexion to the direct interurban lines to Helsingfors. When the dialling tone was heard from the exchange, the number wanted in Helsingfors was dialled.

— **Lovisa.** The first automatic telephone exchange in Finland on the Ericsson 500-line system was opened for use on Dec. 6th 1931, when the Lovisa automatic exchange was opened; it is built for 500 lines. Connected to it is an automatic sub-exchange in the village of *Köpbacka*, 2½ miles away (fig. 3 p. 14). This is built on the Ericsson automatic system with 40-line selectors of multiple relay design, and has a capacity of 80 lines. Traffic between the motor-driven Lovisa exchange and the step-by-step driven Köpbacka exchange is wholly automatic. All subscribers' numbers have four figures, in Lovisa from 1,000 to 1,499 and at Köpbacka from 3,100 to 3,179. The connecting lines between the exchanges are 2-wired.

The Köpbacka exchange works without supervision. The battery is continuously loaded through copper rectifiers and the voltage can be read directly in the main exchange. If anything goes wrong an alarm signal is given in the main exchange.

Trunk calls for both the Lovisa and Köpbacka subscribers are dealt with from a manual trunk and district switch-board in Lovisa, whence trunk connexions to Köpbacka subscribers are made automatically with the assistance of a dial on the switch board. At night, trunk calls to both Lovisa and Köpbacka are put through direct, automatically, without the use of an operator in Lovisa, by the trunk operators at the other end of the line (Helsingfors etc.). For this purpose trunk breaks can be made by sending out an extra break impulse.

Contents:

Kurt Lindberg, Boktryckeriaktiebolag. Stockholm 1932.

36434