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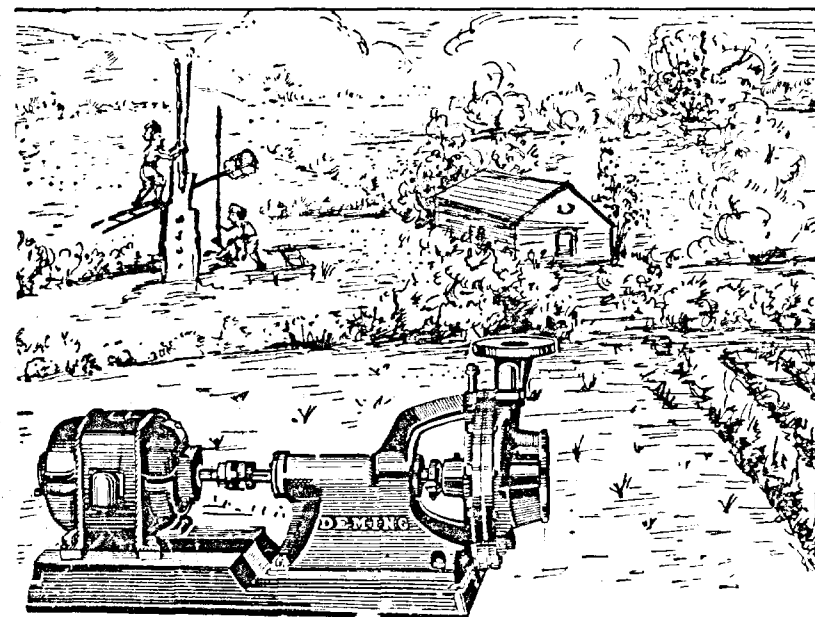
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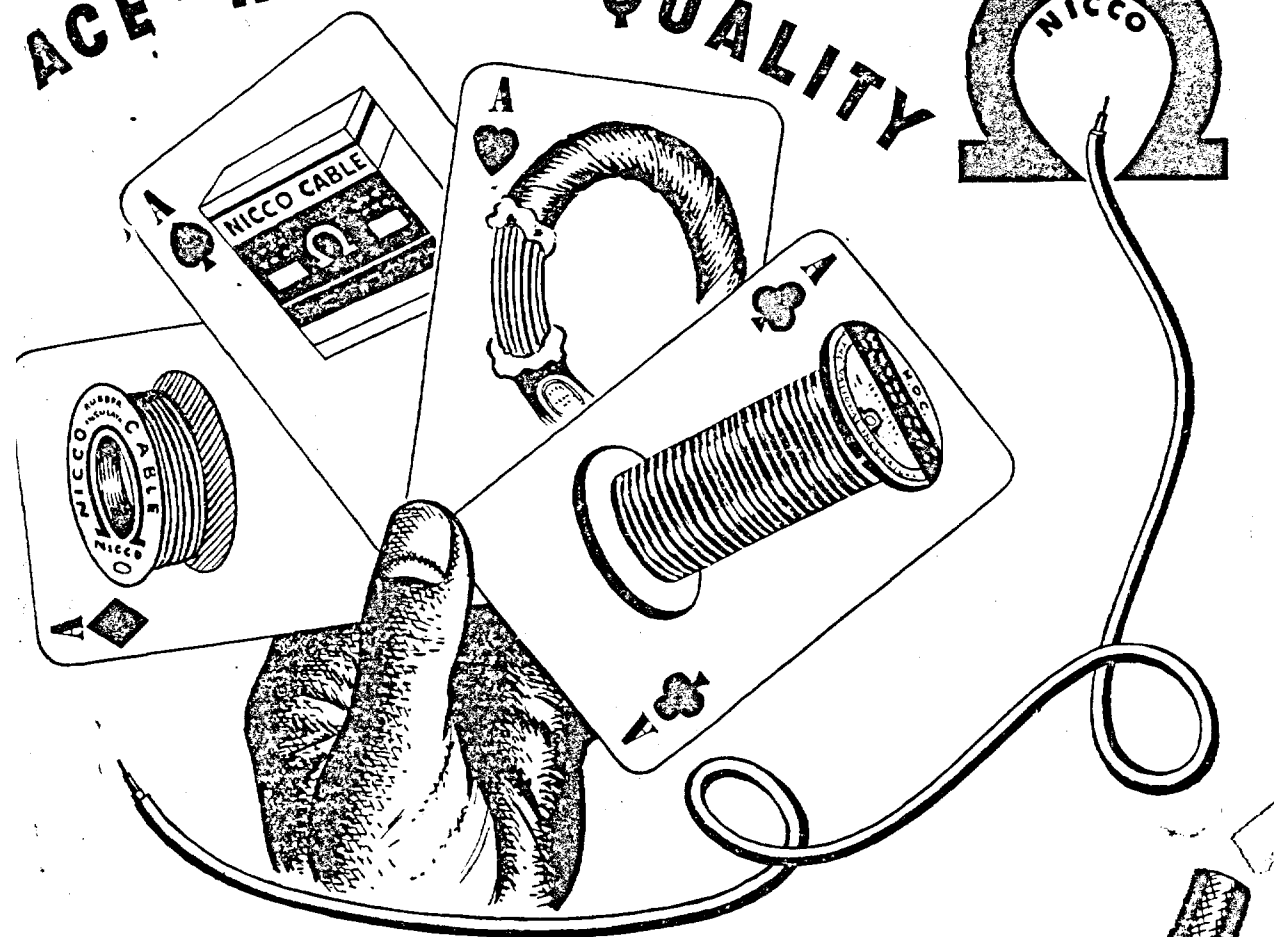
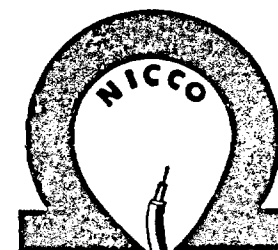
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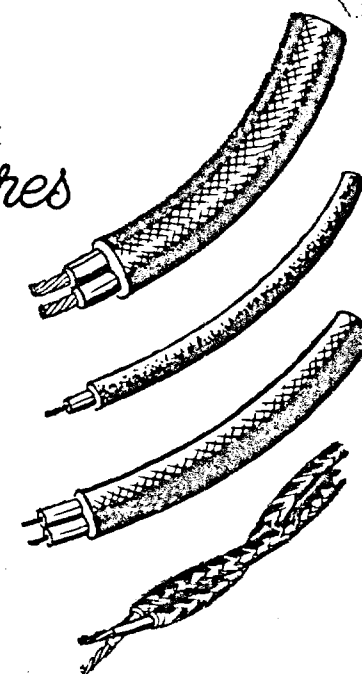
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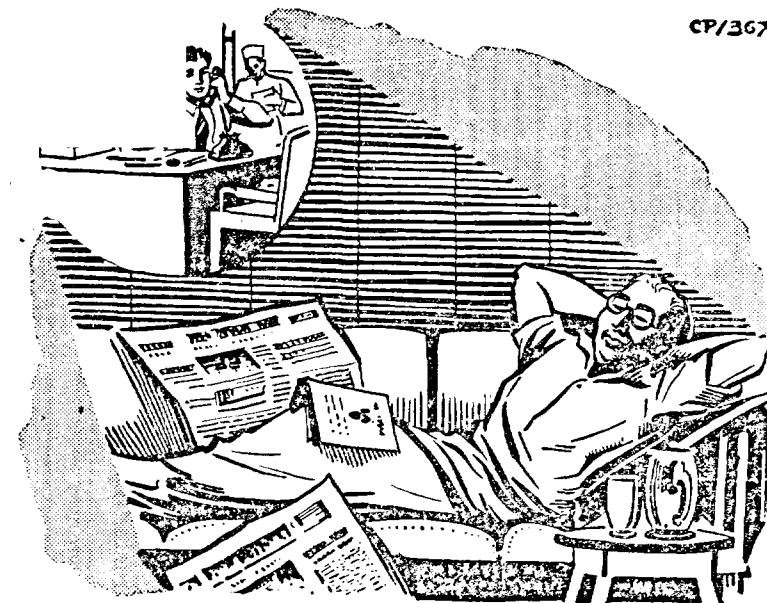
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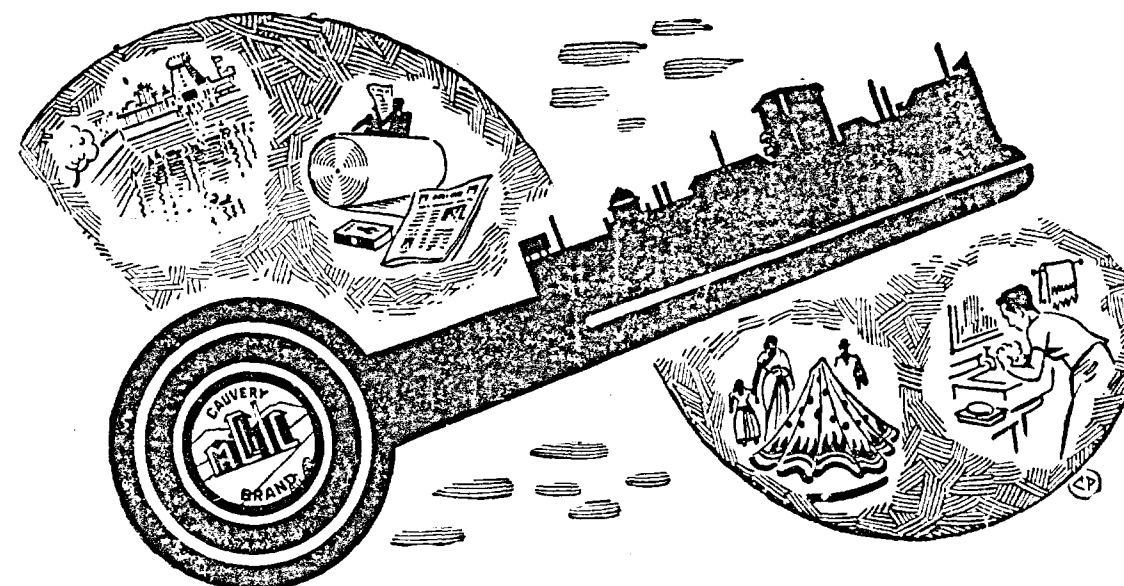
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ELECTOLITE

(Issued quarterly by the South Madras Electric Supply Corporation, Ltd.)

TIRUCHIRAPALLI.

Vol. 1
No. 4

OCT - DEC. 1949.

Annl. Subs. Re. 1
Single Copy Rs. 4



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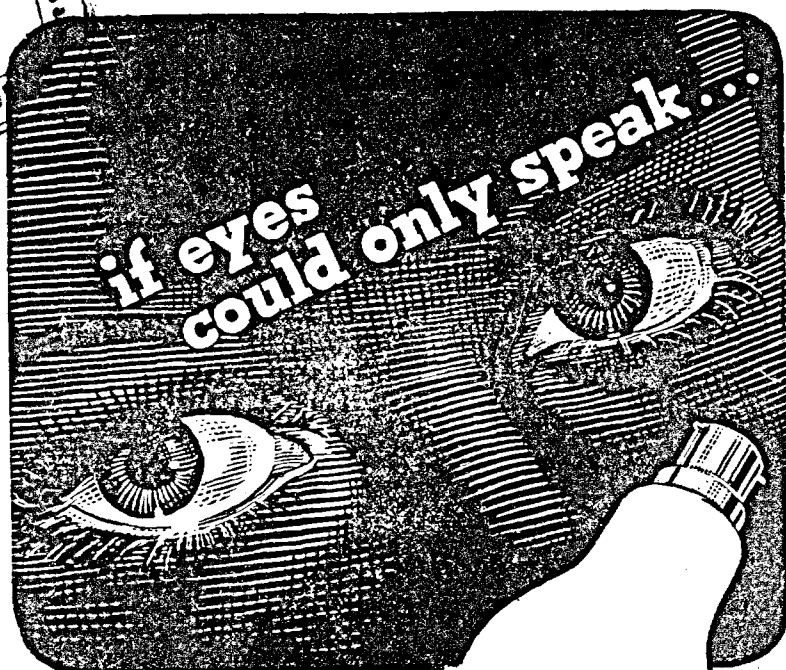
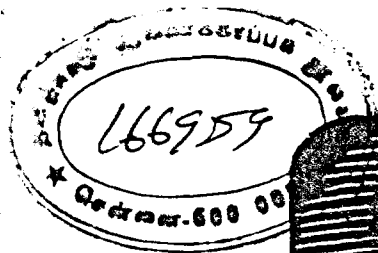


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VOL. I

OCT. — DEC. 1949

NO. 4

NATIONALISATION

THE Madras Government Bill for the acquisition of all Electricity Undertakings has at last been published, and has been before the public for some weeks now.

Talks of nationalisation and acquisition of all undertakings owned either by private or local authority licensees have long been in the air, and speculation, on the subject, has also been rife.

The reasons adduced by Government for nationalisation are : (1) the rationalisation of electricity development in the Province and (2) the promotion of rural electrification. It has been argued that private licensees are unable to raise the necessary capital for rural electrification, possibly because of its unremunerative character.

The bill does not, however, provide for the immediate taking over of all concerns. It proposes to arm Government with powers to take over concerns as and when they are in a position to do so. It also provides them with powers to cancel the notices already issued to some licensees under Section 7 of the Indian Electricity Act, entitling them to compensation at "fair market values," with solatia. Probably, the most important provision of the bill is the fixation of three modes of assessing the compensation payable to undertakings in substitution of the original "fair market values."

The Statement of Objects and Reasons of the Bill does not merely stop with advancing rural electrification as the principal reason behind nationalisation.

ELEVEN

At the very outset, it is stated that generating licensees have been faring very badly. It is further pointed out that the work of some of the distributing licensees has also been unsatisfactory, and that the public have suffered in such cases.

These statements are rather to be regretted. It seems to us that praise could have been given where it was due. After all, it is private licensees who have been chiefly responsible for the electrification of several mofussil towns and municipalities, at a time when there was hardly any demand for electricity. Much sales resistance had to be broken in the early days, and it was largely through the efforts of private undertakings that good base-loads were there, for the Hydro-Electric System, when it came into being.

Neither is it quite correct for Government to state that licensees have neglected rural electrification. Probably, the most classic examples of rural electrification in the Province are to be found in the Districts of Coimbatore, Tanjore, Truchirapalli and South Arcot. Both licensees and Government have operated in these areas and it is matter for gratification that there has been a healthy rivalry between the two, in spreading electricity to villages, in these districts. The reasons for this are to be found in the definite geographical

advantages that these districts possess, such as for instance, good agricultural prospects where sub-soil water is made available and rural industries like rice and oil-milling. In poorer districts like Ramnad in the south, and in Andhra, in the north, neither Government nor the licensees have been able to make much head-way. To blame licensees alone for what they have not been able to do on account of certain common unfavourable factors is not being very fair to them.

Now, without going into the ethics of nationalisation *vis-a-vis* private enterprise, we would urge that the bill provides for an easy and ordered switching-over from private to public hands, avoiding thereby hardship to the consumer whose interests are paramount, and who in popular American idiom is the "king". This hardship will be inevitable if nationalisation proceeds on a piece-meal basis. After all, if the object of the bill is the development of rural loads, uncertainties will have to be removed, first, from the minds of licensees.

We would also urge that all affected parties like share-holders, investors, staff and management — who in particular, have been meted out cavalier treatment by the present bill — should be given suitable compensation when nationalisation takes place.

TWELVE

KEEPING YOUR HOUSE IN ORDER!

by

H. K. RAMASWAMI *

ELECTRICITY is rapidly spreading to rural areas. Oh, yes, the Corporation has taken supplies to all sorts and kinds of villages, including those having only a dozen or so houses. Sometimes it has rendered supply to an isolated pumping station, here, or a rice-mill, there, "throwing in", for good measure, lighting facilities to the owner. Sometimes, it has also taken supply to temples hallowed by age, but located in really "God-forsaken" villages! Recommendation: nearness to our distributory mains.

CHECKING PROBLEMS

All this is very flattering, indeed, and is evidence of the growing popularity of electricity with a veritable cross-section of the community. But, popularity has its own price to pay and brings in its train, a few problems like checking and controlling the use of electricity, so as to ensure safety.

In an area comprising 12,000 sq. miles, the Corporation has to deal with roughly 35,000 consumers, distributed over 300

* Mr. Ramaswami is the Dy. Chief Engineer, of the South Madras Electric Supply Corporation, Ltd.

villages. Grouped together in units of five or six villages, supplies are maintained and inspected from about 60 stations, having the necessary supervisory staff and skilled labour.

Despite this, it is not, possible for staff to visit *daily* villages scattered far apart from one another. Inspections of such are, therefore, made only at certain fixed periods.

It becomes, therefore, the duty of the users of electricity in such places to see that their installations are not only made in a safe manner, but that these are maintained with a reasonable degree of efficiency.

Wiring contractors who undertake these jobs have also, a part to play in "advertising" electricity in the proper manner. Electricity will receive a good *chit*, only if installations are safe.

COMMON DEFECTS

Inspecting staff often come across a number of defects in wiring installations. Defects which are most common are:—

(1) *Scant attention to "earthing"*. Probably, too frequent a repetition of

THIRTEEN

this point by inspecting officers, makes electricity users suspect that this is rather a fad with some engineers. Really, this is not so. Every metallic covering of an electrical apparatus, or of the wires used for carrying electricity, is likely to be charged to dangerous voltages, unless the earthing is efficient so as to convey away the "leakages", without endangering the user, isolating at the same time the apparatus, making its safety appliances work—the circuit breakers to trip or the fuses to blow.

(2) *Non-standard wiring*:—Wiring inside the houses should conform to standard practices. In exposed places, like back-yards or for lights placed in lawns, the leading cables should be capable of withstanding weather, or should be enclosed in efficiently earthed metal conduits.

We have come across cases where ordinary V.I.R wires have been taken, without even the support of a steel bearer wire; such wires are sometimes used as clothes lines, also: It is surprising that accidents are few in spite of such use or abuse!

(3) *Lack of attention to equipment*:—Defective switches, plug outlets, lamp holders and lamp flexes should be replaced promptly by a competent electrician. Attempts to patch up and repair installations from your accumulated wisdom as a user of electricity might prove to be costly in more senses than one, and might lead you into serious trouble.

(4) *Un-authorised extensions to wiring*:—Please do not make any extensions to your wiring whether temporary or permanent, without having such extensions tested and o.k'd by the Supply Company. Always get such work done by a competent contractor.

(5) *Care in handling portable appliances*:—Great care is necessary in handling portable appliances like table fans, electric irons, kettles, etc. These are provided with flexible connections to enable them to be used at any of the plug outlets in the house. The flexible leads, again, require periodical renewal by a competent electrician and the appliances themselves should be checked so that the insulation is certified to be in order.

(6) *Care in bath rooms, etc.*:—In bath rooms and kitchens where appliances are used and are likely to be operated by persons standing on wet floors, extra care in earthing is necessary; switches for such locations should not be made accessible to children. In fact, children should be discouraged from becoming too familiar with the electrical gadgets at home.

Industrial and agricultural users of electricity, who invest a lot of money on their businesses and who, in turn, get handsome returns from the use of electricity have absolutely no excuse whatever, for having their installations done in a shabby or slipshod manner. The owners of such installations, even if

they were indifferent to their own personal safety, cannot afford to be so with regard to that of their staff and the public; they cannot expose people to unnecessary risk by trying to save on installation costs.

"BAD" EXAMPLES!

And now for a few examples of different types of bad work that have been noticed during inspections:—

(a) In rice mills and industrial establishments, seldom are motors provided with two "earths". Electricity rules and fundamental safety requirements require two efficient "earths" for all metal-clad power appliances and machinery.

Where two "earths" are provided, they are done so in an indifferent manner. Old rusted pipes are driven into the ground and connected to the motors by 14-or 18-gauge iron wires. This may be all right in the eyes of the law but it does not satisfy safety requirements. Efficient "earths" could be secured only by connecting them up with good copper wires of adequate sizes, to the apparatus to be protected.

(b) Covers from iron-clad switches, and brass tumbler-switches are often found to be missing. Still, installations are operated.

(c) If the overload or under voltage tripping arrangements of starters function constantly no attempt is made to find out why this is so. The tripping mechanism

is put out of action, and the apparatus continued to be operated without protection. The result often is burnt-out motors, with possibilities of injury to persons.

(d) In many installations bridge type fuse units in iron-clad switches are often found to be damaged, obviously due to over-heating; the porcelain bridges are very often cracked and even broken and the fuse contacts pitted and damaged. Still, the units are operated.

(e) Hand lamps, blowers and portable drills are not used with the care called for. Invariably, such appliances should be carefully examined before use; 3-core flexible leads should be used: one of these efficiently earths the equipment, by connection to the "Corporation Earth System".

Fatal accidents have occurred due to the careless handling of equipment. Recently, a hand lamp was used by an operator for inspection inside a boiler-shell. The leads connecting the lamp to the main were old V. I. R. wires. These caused a leakage, the boiler shell was electrified and the operator was electrocuted.

Many accidents have been noted in residential houses. Trying to put on bulbs into live sockets, handling "serial lamp" sets carelessly, trying to shift table fans from one place to another while such fans are running, are some of the instances which have led to accidents. It is earnestly hoped that this article will make users of electricity be a little

more careful. As long as fundamental principles are respected, electricity is extremely useful and does all that you want it to do.

Briefly, there are:—

(i) Leave electrical work to those who have been trained to do such.

(ii) Have your wiring periodically tested and checked by the Supply Company Engineer, and execute forthwith all repairs suggested by him.

(iii) Keep tidy portable appliances like fans, iron, etc. Have them constantly inspected and change wiring promptly when signs of wear are detected.

(iv) Earthing of metal-clad appliances and industrial equipment is one of

the fundamental requirements in the safe use of electricity and no efforts should be spared in getting this done properly. The electrical contractor, who is responsible for a large number of consumer installations has a very responsible job. With the growing electrical mindedness of people and the growing demand for electricity, in villages, his work assumes great importance. On his workmanship and vigilance largely depends the popularity of electricity. He should, therefore, take his job seriously and should never be satisfied with anything but the very best type of work. Compliance with rules governing the safe use of electricity should be an article of faith with him...and so with you.

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SIXTEEN

RURAL ELECTRIFICATION PROGRESS IN THE UNITED STATES

by
CLAUDE WICKARD

THE programme under which millions of American farms have received central-station electric power service during the past 14 years is, to my knowledge, unique in the world. It demonstrates how a government nationally and people locally, can work together to promote the economic welfare of farm people and farm communities within the framework of the private enterprise system.

FAVOURABLE LOAN TERMS

The programme is administered by the United States Rural Electrification Administration (REA), established in 1935 and incorporated in the United States Department of Agriculture in 1939. The REA's task is to provide loans which finance the construction of electric facilities in farm areas that do not have central-station service and either have to forgo electricity or rely on individual home generating plants. The Rural Electrification law provides that in making such loans preference be given to non-profit organizations. In practice, this means that the loans are made to

farmer co-operatives, owned by the farmers who, themselves, are to use the electricity. The loans are being made at the low interest rate of two per cent and are repayable in 35 years. These favourable terms make it possible to repay the loans from the normal rates the farmers pay for the electric current they use.

In the majority of cases, the farmers co-operatives buy current from private or public power plants and merely use the loans they obtain from REA to build power lines to the area in which members of the co-operatives live. However, the law permits co-operatives to build their own generating plants if current is not available at reasonable rates. Some 70 out of nearly 1,000 rural electrification co-operatives have built their own generating plants. Since the war, they have supplied about 10 per cent of all the electric current used by members of co-operatives. More than half the current consumed by co-operatives was purchased from commercial producers, and about 40 percent has been purchased from public power plants.

SEVENTEEN

The REA Act does not contemplate ownership or operation by the United States Government of the power plants or of the hundreds of thousands of miles of power lines which have been built with

Here's another article on Rural Electrification in the United States, by CLAUDE RAYMOND WICKARD, Rural Electrification Administrator. Readers will recall, in this connection, the article that we published in the April-June number of ELECTOLITE—which traced the progress of rural electrification in America up to end of 1947. This article shows how progress achieved during 1948 eclipsed that of earlier years, phenomenal as it was.

Claude Raymond Wickard was United States Secretary of Agriculture throughout the war. He has been described as a man "who believes in getting things done at the time they have to be done." He is a practical farmer rather than a theorist.

Wickard entered public life in 1932, when he was elected to the Indiana State Senate. A year later, he joined the United States Agriculture Department. In 1940, he was appointed Under Secretary and, in the same year Secretary of Agriculture. He left the post in 1945 to become Administrator of the Rural Electrification Administration.

REA loans. It simply extends loans from public funds so that local groups can own, operate and control the facilities that serve them. Instead of making for greater and more centralized ownership and control by the Government, or by private concerns operated for profit and possibly tending toward monopoly, the REA programme leads towards decentralization of ownership. It brings control of electric power systems to the people who use the services and pay the bills.

PEAK YEAR

To-day, more than 70 per cent of all American farms have central-station electric power service. Only 11 per cent had such service when REA was started, 14 years ago. Altogether, 2,500,000 consumers—farms, churches, schools, community centres, rural industries and commercial businesses—in farm areas to-day benefit from electric power systems financed under the REA programme.

The success of the REA systems has been growing steadily. The year 1948 was by all odds the greatest in REA history. In that year a total of 147,000 miles (235,206 kilometers) of power lines were added to electric power systems created with REA loans and 468,900 more consumers were served.

While these are impressive figures, they are not the sole or full measure of the progress that has been made. The most important thing that has come from the electrification of rural areas is the

tremendous increase in health, in economic well-being and in the happiness of the farm people.

Farm people are using electricity in ever more ways and in ever greater amounts to achieve a better life. My estimate is that members of co-operatives under the REA system who were getting service five years ago have about doubled their consumption of electric current since that time.

SUCCESS FORMULA

The REA formula is based on the belief that farm people are capable of working together effectively in their joint interest and that they assume obligations with an adequate sense of responsibility. It is based on the philosophy that, in a democracy, it is the function of government to encourage, instead of suppress, the initiative and desire of people to do things for themselves through voluntary organization and action.

While the vast scope of rural electrification in itself confirms this philosophy, proof of its soundness is also found in the REA ledger. Since the start of the programme 14 years ago, the REA has advanced a total of \$1,100,000,000 in loans. Approximately 60 per cent of this amount has been advanced in the last three years. This means that much

of the REA-financed construction is so new that it has not yet had a chance to contribute towards amortization of the indebtedness. Despite this fact, REA



EARL WALDEN: Manager of a Rural Electrification Conference using one of the 4 millions rural phones!

borrowers have paid back a substantial amount. They have paid on their total debt the sum of \$135,000,000. Of this, \$106,000,000 has been paid on principal that is, as direct repayment on the original loan amount. It augurs well for the effort, the ultimate goal of which is to make plenty of reliable, low-cost electric power available to every rural community in the United States.

—USIS

THE GOLD THREAD INDUSTRY OF SURAT*

GOLD THREAD is said to be one of the oldest industries of India and references to the use of gold cloth abound in ancient books. However, only pure gold was utilised in its manufacture in the palmy days of old, but, it must not be forgotten that the use of gold cloth was then practically confined to Royalty and the Nobility.

The art of producing gold plated silver thread was a latter-day innovation, and the industry became more or less well-established in India, under Moghul rule. And, Surat, which was the chief port in Western India, during the time of the Moghuls, became the most thriving centre for the manufacture of material of this kind. However, the industry, gradually declined, due to several reasons, amongst which the following should be mentioned :

- (1) The Sack of Surat by Shivaji,
- (2) Floods, fires and famines to which Surat was extremely susceptible,
- (3) The development of Bombay as a port, Surat itself dwindling into un-importance, and

* Written by an engineer of the Surat Electricity Co., this article comes to us through the courtesy of Mr. V. F. Noel Paton of M/s Killick Nixon and Co.

TWENTY

(4) The Industrial Revolution in the West, bringing in its wake, acute foreign competition.

REVOLUTIONARY "POWER!"

With their specialised machinery and up-to-date technical knowledge not only were Western competitors able to annex India's foreign trade, but they also managed to get a foothold in the country itself, almost totally ruining the Indian Industry. This ruination would have been complete, but for one thing. In the first decade of this century, certain far-sighted *entrepreneurs* made a gallant effort for the recovery of the industry, and luckily they met with a little success. Came a few years afterwards World War I, and with it also came the total rehabilitation of the Industry. Foreign imports stopped, and an increase in customs duty, imposed after the war gave much-needed relief. But what revolutionised the industry was the advent of cheap electricity in the year 1932, made possible by the SURAT ELECTRICITY CO., LTD, under the Agency of Messrs. Killick, Nixon & Co. Electricity admirably met the power requirements of the gold thread industry in Surat, and gave local craftsmen the

chance to develop their inherent skill. The small-scale character of the industry will be appreciated from the fact that only a few factories come under the Factories Act. The bulk of the industry is in the hands of artisans who are usually assisted by members of their own families. As a result, labour costs work out to next to nothing.

VICISSITUDES

A 25-per cent duty on the import of silver in the year 1924, however, greatly offset the effect of the favourable factors mentioned earlier. Later, as a result of recommendations of the Tariff Board set up in 1930, Government introduced a 50-per cent *ad valorem* protective duty on all gold thread imports, and this enormously assisted in the development of the industry.

There are two kinds of gold thread: Fine and Coarse. Both varieties are manufactured in Surat. Roughly speaking, one may say that the coarse variety goes to Northern and Western India for embroidery and similar other work, and that the fine variety, goes South for the manufacture of a more dazzling description of goods. Side by side, Surat also started manufacturing imitation gold thread. This was after the introduction of the protective duty. World War II gave a further impetus to both the types and as a result, the Industry is to-day even more firmly established, than ever before in the past.

PERSONNEL

At present, there are in Surat nearly 1500 gold thread establishments. Engaged in the production of real gold thread are 20,000 full-time and 1,500 part-time workers. Engaged in the production of imitation gold thread, are 10,000 full-time and 1,500 part-time workers. Establishments having complete wire-winding and flattening facilities number about 300 for real gold thread, and about 100 for imitation gold thread. Nearly 60 establishments manufacture fine wire, and about a little over 200 specialize in gold-plating.

Apart from the increase in production of gold thread, both real and imitation, considerable progress has, also, been made on the engineering side of the industry. Practically all the machinery and ancillary equipment including such high precision components as diamond and ruby dies are now manufactured in Surat. The SURAT ENGINEERING WORKS, one of the biggest and oldest manufacturers of machinery used in the production of gold thread, supply up-to-date machinery, covering all the stages required by the industry.

USES

Let us now see how this gold thread is used. It is used in the production of *kinkhabs*, caps, laces, embroidery, turbans *dhoties*, scarves, *saris* and blouse pieces, thus supporting other allied cottage industries. *Lametta* is used in the production of *tiki*, *chalak*, etc. The

TWENTY ONE

thicker variety of gold threads—that is, where the length is less than 1000 yds./oz. is wound on cotton, and is chiefly used for embroidery.

COSTS

It is difficult to say what precisely is the cost of a typical installation having all the facilities. Sizes and types of machines often vary according to quality and output.

Again, prices of machines frequently so fluctuate that the cost of a unit cannot

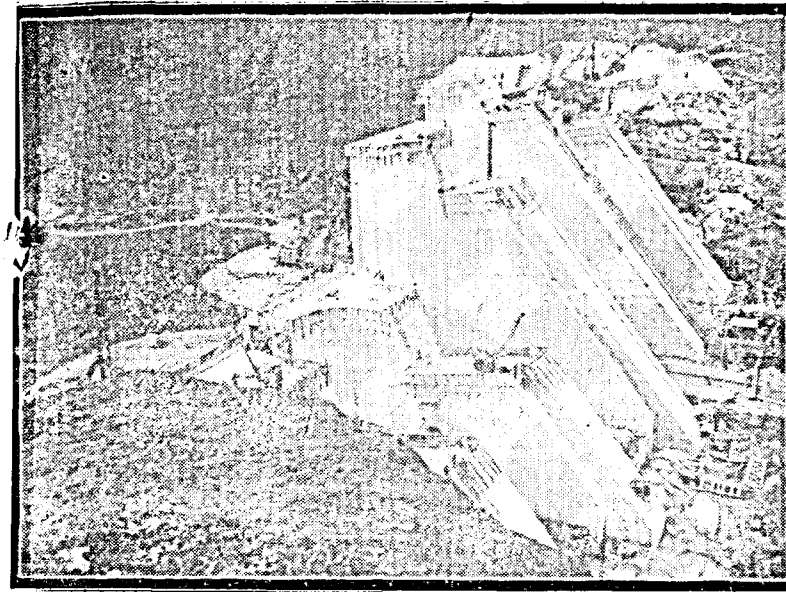
correctly be estimated. An estimate of operating costs, particularly those relating to labour, is even more difficult to establish, for the simple reason that workers usually belong to a single family.

Probably, it would not be far wrong to place the cost of a medium-size installation, complete with dies, at Rs 40,000.

In any case, what should not be overlooked is the salient fact that electric power has re-written the history of an important Indian industry.

“We were very pleased to receive a copy of your second issue of ELECTOLITE. It is re-assuring to note that the subject of Electricity Supply is being so ably dealt with in India”.

R. C. FOSTER,
Care: British Electricity Authority,
London.



THE GREAT NEW DAM AT LOCH SLOY: When completed, it will be 160ft. high and 1,160 ft. long. The reservoir formed will hold 1,200 million gallons of water.

ELECTRICITY FOR ALL

by

LANGSTON DAY
(British author and broadcaster)

A large programme of hydro-electric development is being carried out by the North of Scotland Hydro-Electric Board. The Board aims at developing 102 water-power projects in its area which would bring the benefits of electricity to tens of thousands of people, who so far have been cooking with coal or peat, and lighting their homes with paraffin lamps.

During 1948 about 45,000 people in the Board's area received a supply of electricity for the first time, and by midsummer, 1949, the Board was supplying over 800,000 people from its hydro-electric and thermal stations, including those taken over following the nationalisation of the industry in April, 1948.

The Board has already published 16 schemes covering the construction of 29

power stations. Two of the smaller projects are already complete, and 12 hydro-electric stations are under construction. Some 9,000 men are at work in the Highlands of Scotland digging tunnelling, and erecting hydro-electric works, transmission and distribution lines; and about the same number are busy in factories and workshops on the manufacture of plant, electrical equipment and basic materials for the scheme.

GRID SYSTEM CONNECTION

The major generating stations are to be connected on a grid system, and so with the industrial areas; but the rural areas are not being forgotten, and in some of these more remote spots 80 per cent of possible consumers have been connected.

It may seem strange to consider the point that even in the early war years, when a large part of the world thought

of Britain as good as conquered, Scotland was making large-scale plans for the peace-time development of her water power. The bill which brought the present Board into existence was passed in 1943. The first constructional scheme was published in 1944, and an Act of 1947 cleared the way for the present great schemes.

When he visited the Scottish Industries Exhibition that was recently held at Glasgow, India's High Commissioner in London, Mr. V. K. Krishna Menon, spent a long time examining hydro-electric plant and explained that his interest in this machinery was attributable to the fact that important schemes of hydro-electric development were to be worked out in India during the next few years.

In this article which is exclusive to ELECTOLITE, the author describes water-power schemes in the North of Scotland involving projects both in industrial and rural areas.

ECONOMIC SCHEMES

The Board's responsibilities also extend to such matters as co-operation in the economic development and social improvement of the Scottish Highlands, fisheries protection, and research into the use of electrical power in the area.

One of the biggest schemes recently approved is the Glascarnoch-Luichart-

Torr Utility project, which covers a catchment area of 345 square miles and develops the water power of six rivers. It involves building eight dams and four generating stations with a total capacity of 60,000 kilowatts. It is part of a group of schemes which will have an annual output of about 435 million units or kilowatt hours.

The centre of this project is Loch Luichart, into which all the various lochs and new reservoirs discharge their water. Loch Luichart will be raised 36 feet by a dam at one end, and this will submerge the present railway station so that the railway will have to be diverted. Steps will be taken to restrict the damage to agricultural land and protect the salmon—as in the case of several more of the projects. New waters will be opened for the fish to ascend, and improvements made in the fish-pass at the famous Falls of Rogie. Not only will the Board open up the River Bran for salmon for the first time, it will also provide screens to prevent the salmon reaching the turbines, and will set up a fish hatchery.

LOCH SLOY PROJECT

Some of the most interesting work now in progress is the Loch Sloy project which may be producing power this winter. There is to be a massive dam, 1,160 feet long and 100 feet high, across the lower end of the loch. A tunnel 1½ miles long has been driven through the 3,000-foot Ben Vorlich to conduct the water to the generating station.

The dam will contain 200,000 cubic yards of concrete, and to supply the aggregate a quarry was opened about a mile-and-a-half from the site. Crushed rock is brought to the building site by an electrically-driven conveyor belt which can handle about 1,500 tons a day. To assist the laying of the concrete, twin electrically-operated aerial cableways with a span of 1,350 feet and headmasts 120 feet high have been built above the dam site. Each of these can carry 10 tons at speeds of as much as 1,000 feet a minute, and they can raise their load to 190 feet above the bottom of the dam.

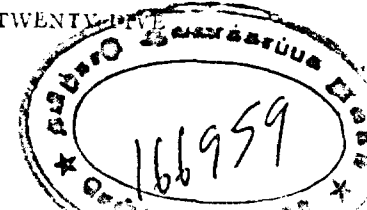
UNDERGROUND GENERATING STATION

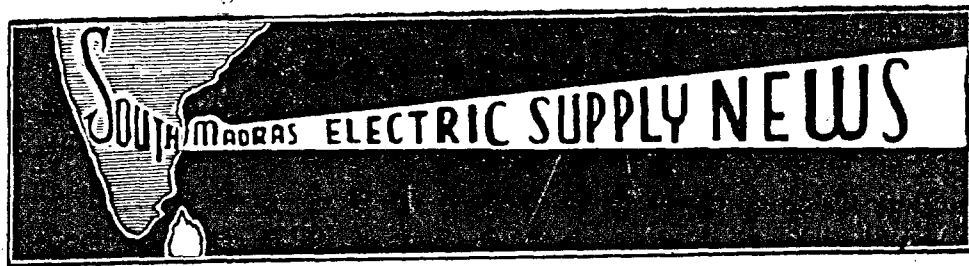
Another piece of work, Moorar project which was opened last December, is of special interest on account of its underground generating station which has

been built inside a cavern hewn out of the rock beside the river. It also has a floating drumgate, which automatically adjusts the flow of water from the loch and prevents flooding. This is controlled by a valve which admits water into a chamber beneath the weir, causing the gate to rise as the water-level in the loch falls, and vice versa.

The Board is surveying the question of developing Northern Scottish minerals with the help of electricity. A great many raw materials in the Highlands have never yet been worked, due to lack of power. Now it is hoped to install electrical plant which will carry out such processes as the kilning of limestone, the calcining of diatomite, the production of special kinds of bricks, the purification of water and the treatment of milk.

"An attractive feature of this new Journal is its earnest attempt to transform everything worth knowing about electricity from technical to light reading material and thereby help popularising both itself and electricity among the people. Villages in the Tamil districts are rapidly getting electrified, thanks to the South Madras Electric Supply Corporation Ltd. and similar concerns... A Tamil supplement is issued side by side having electricity as the running theme for a number of humorous skits and informative articles".—
THE HINDU.





SOUTH MADRAS ELECTRIC SUPPLY NEWS

It seems significant that just when the air seems to be thick with complaints that private licensees neglect rural development, we have a lot to report. Quite a bumper crop, that of this "season"!

On July 13, supply was given to the Tamil Nad Aluminium Industries, at Sathanur. About one mile of 22-kV. High Tension lines and a 25-kVA. transformer station were put up for supplying the load. The factory manufactures sundry household utensils.

On August 5, supply was given to Athikudi village, about four miles from Lalgudi. Supply has been extended from the existing sub-station at Natarajapuram, consisting of about 10 spans of single phase Low Tension mains. Besides a few street lights, eight houses have been connected up.

On the same date, the 50-kVA. pole-mounted transformer station at Ariyalur (Railway Station Road) was converted into a floor-mounted one with a 100-kVA. transformer to feed a ginning factory (30 H. P.) nearby.

TWENTY SIX

Supply was switched on to Chathurvedamangalam (Ramnad Dt.) on September 4. About this, and about another village to which supply was given on September 16, let the Engineer-in-charge speak. His interesting account, we reproduce below:—

"Expansion, or should I say extension? . . . It is an extension of our lines and an expansion of our sphere of useful activity. We, in the East-Ramnad Area, have started to extend—or expand—after years of hibernation.

A small village tucked away in the north-western corner of Ramnad district has, for the first time, electric supply. In the "bad" old days, they called it Mattiyur (Folliesburg!). The residents being really wise, rechristened it CHADURVEDAMANGALAM. And as though in confirmation of their wisdom, they have now electric supply! Our Director Sri S. M. AR. Narayanan Chettiar—only by whose Herculean efforts—this extension was made possible, was persuaded to switch on the supply. The function came off on September 4.

Only a fortnight later, yet another village received electric supply. Aramanai Siruvayal, a small village near Karaikudi, is one of the 96 villages of the Nattukottai Nagarathar Community. This extension ought to have been completed long ago, but the War intervened and put an effective stop to our plans in that direction. As one of the important members of the Nagarathar Community, our Director Sri S. M. AR. Narayanan Chettiar was rightly chosen by the residents of the place to inaugurate its electric supply on September 16. The pleasant little function which started with a welcome address and a tea party given by the Nagarathars, ended with a dinner given by Sri Sri AR. K. Subbiah Chettiar, a prominent local citizen.

We expect to give, shortly, supply to one more village, Alangudi near Karaikudi. Work has practically been completed; only the Electrical Inspector's sanction is awaited.

The preliminary work in respect of the extension of our lines on the western border of Ramnad District has also been completed. Manalur, a small village with about 500 inhabitants will have electric supply in the near future.

On the Eastern front also, all is not quiet! For, we propose extending our lines to Mandapam. Initial survey is in progress and we expect to take up the work very shortly.

I should say that, this resuscitation, after quite a period of masterly inactivity

in East-Ramnad area is EXPANSION in neon capital letters!"

Supply was given to the village of Koviladi, near Tirukattupalli, in Tanjore District, on September 7. For feeding the village, about half-a-mile of 22 kV. High Tension line with a river crossing over the Cauvery, a 25-kVA. transformer station and about half-a-mile of Low Tension lines were put up.

Mr. V. Seshasayee performed the switching-on ceremony for the houses and Mr. S Vaidyanatha Iyer, Director, South Madras Electric Supply Corporation, for the Sri Ranganathaswamy temple. In a brief address, Mr. Seshasayee appealed to the villagers to give serious thought to the question of food shortage in the country. Important, as electricity was to houses, it was even more important to agriculture; they should, therefore, harness power for the better cultivation of the land. Mr. Vaidyanatha Iyer dwelt on the antiquity of the temple, in his address.

Later, there was a grand dinner at the residence of Mr. Hari Rao.

Another Director of the Corporation Dr. T. K. Renganathan, switched on supply at Keelakalkandarkottai on September 21.

In the course of a brief speech, Dr. Renganathan said that it was matter for great satisfaction that supply was given to this village in the course of two weeks. Electricity was man's best servant, he

TWENTY SEVEN

said, but in the present context of the country's food shortage, it must largely be utilised for increasing agricultural production.

Mr. S. Sankaran, Superintending Engineer, observed in the course of his remarks, that Service was their business. The Corporation was always prepared to give top priority attention to supply to villages which made a determined effort to increase agricultural production, he said.

On September 21, Mr. V. N. Rajan, I. C. S., District Collector, switched on supply at Tirukkambuliur. About 25 houses were connected. Mr. S. Sankaran, Dr. R. Kalamegam and Mr. V. N. Rajan all spoke about the importance of producing more and what a significant contribution villagers could make to the agricultural economy of the country.

This function also included a small dinner for the guests.

Supply was switched on to Achalpuram on September 23, by Mr. H. K. Ramaswami, Deputy Chief Engineer of the Corporation, in the un-avoidable absence of Mr. K. K. Raman, who had previously consented to inaugurate the supply.

A small village with about 200 houses, Achalpuram has hallowed traditions. It was here Saint Sambandar, first of the great triumvirate of Shaivaite apostles attained *samadhi*.

Supply has been extended to the village by a High Tension Line (11 kV.) two-and-a half miles long, a step-down

transformer station (30 kVA.) and the necessary Low Tension distribution.

About thirty houses in the village have been connected up. A rice mill will shortly be connected. Also, about thirty street lights are expected to be put up.

Supply has been extended, mainly as a result of the efforts of Mr. T. Venkatesam Pillai, and through his good offices, by those of the Head of the Dharmapuram Mutt, and other leading mirasdars of the place.

The opening ceremony was an enjoyable function, and the guests were treated to quite a whacking dinner.

The entire work was done by Mr. K. Gopalan, Distribution Foreman, Shiyali, under the guidance of Mr. M. R. Subramanyam, Engineer-in-charge, Tiruvarur and Mr. P. V. Narayanaswami, Resident Engineer, Mayavaram. Their enthusiasm and interest were matter for special mention by the residents.

Electric lights were put up over the Cauvery Bridge at Tirukattupalli on October 14. Mr. D'Silva, S.E., P.W.D., Tanjore, switched on the supply.

On October 20, supply was given to Murungapet, a village near Tiruchi. Six services were connected.

Opening of a new sub-station at Arantangi:—

Recently, the sub-station at Arantangi was modified and enlarged into a bigger

one to cater to the increasing power demands there.

Originally a pole-mounted 100 kVA. sub-station, it has now been converted into a floor-mounted type with two units, each of 100 kVA, operating together.

A control kiosk on the L. T. side with a main oil immersed circuit breaker and fuse protection for the outgoing L.T. feeders have been provided.

Supply to Arantangi is by a 6.6 kV. transmission line from Pudukkottai, energy being purchased at that point, from the Kannadukathan Supply Corporation, Ltd.

The main industry is rice milling. Oil milling is also done to some extent.

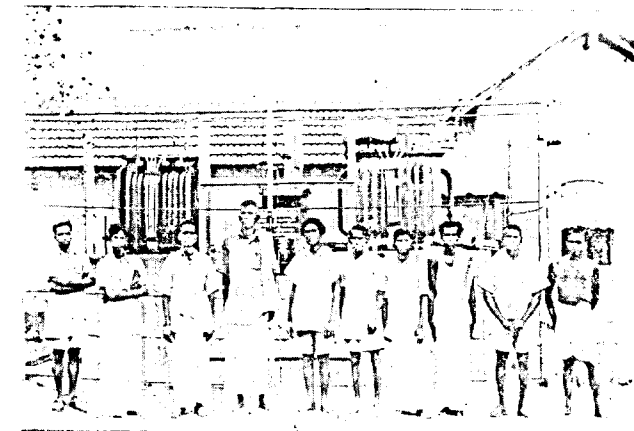
The town has been suffering badly for want of drinking water. A protected

through 6-in. C. I. mains to an overhead storage tank in the town and distribution to important locations in the town. The scheme is expected to be ready for operation in two or three months and with the advent of water it is expected that the amenities of the town will improve.

The erection of the sub-station was done by Mr. Karuppiah (our veteran cable-jointer) and his assistant Sebastian. The local Line Superintendent G. Kalyanam and his staff assisted.

ELECTRICITY DEVELOPMENT IN SOUTH ARCOT:—

Supply was switched on by Mr. H. S. Paul, I. C. S., District Collector, South Arcot, to eighteen pumps for the



Arantangi sub-station.

water supply scheme, the water being drawn through infiltration well from the bed of the river Vellar six miles away is now under progress. Water is pumped from these wells by two 7.5 H.P. pumps

cultivation of six hundred acres of land, in Vellapakkam village (S. Arcot) on September 25.

At a function arranged by the mirasdars of the village, the Chief Engineer of

the South Arcot Electricity Distribution Co. Ltd., gave a brief account of the development of electricity in the District.

South Arcot was peculiar, he said, in certain respects. Urban loads in this District were not attractive. For instance, while in other district headquarters, the number of lighting consumers exceeded the 5-thousand mark, in Cuddalore, (headquarters of South Arcot) there were only about 800 consumers. Rural loads were very good, as the bulk of cultivation in the District was through lift irrigation, with pumps. Ever since a sugar factory was started at Nellikuppam more and more had taken to the cultivation of sugar-cane in preference to the other crops.

There were two thousand pumps in service, with a total horse power of five thousand, the area under cultivation being eleven thousand acres, of which six thousand were sugar-cane, three thousand paddy, and two thousand and five hundred, groundnut crop.

Continuing, the speaker said, that the industrial load in the District was negligible. Following the oil boom in 1946, about twenty expeller factories were put up, but as those who entered the business mostly did so without the experience it

called for, more than half of them closed down, in the course of the year.

Referring to the South Arcot Electricity Distribution Company, he said, that the Sugar Factory utilised power from them to the extent of only about two hundred and fifty kilowatts, during the off-season. During the season, it generated its own power by utilizing the dry sugar-cane leaves and other residue for the furnace.

The rate for domestic supply being 5 as. 9 ps. per unit as against anna one per unit for agricultural, it would have been more profitable for his company, to have built the former, but still they did not do so. The cost of rural extensions was also about thrice that of urban loads; there were a host of shortages, notably the shortage of construction material. Steel poles were extremely difficult to obtain, and experience with wood poles, even pressure-treated ones, was not encouraging.

The speaker concluded by referring to the loan application his company had made to Government and hoping that it would receive the early attention and favourable consideration of Government.

—WANDERER.

Turning the LIGHT on your Subject



Question:

I understand that Supply Companies are paying a tax of 6 pies per unit on all energy sold above a rate of 2 annas per unit. This, in effect, means that only domestic consumption is taxed, as industrial rates are almost invariably 2 annas and less. Although the Companies are not recovering this tax from the consumers, the incidence of the tax must be really deemed to fall upon domestic consumers as the rates for energy must have been fixed by them, taking into account the tax payable.

There does not appear to be any corresponding tax on industrial consumers who can well afford to bear such taxation on account of the very heavy profits made by them during and since the War. Would it not be more equitable if the tax is passed on to those who can really afford to bear the burden so that there may be a proper and just distribution of the burden of taxation?

(—A Mangalore reader.)

Answer:

Yes. This tax was introduced in 1939 by the first Congress Ministry copying

a similar tax in Bengal and Bombay. In moving the Bill, the then Premier of Madras observed: "It is certainly more easy to copy a tax which had been levied elsewhere than to invent a new one and to which people have subjected themselves in another place already". Ten years have elapsed since then and the need for tapping new sources of revenue by Government is much more urgent today. Objection to the levy of this tax will not be of any avail. I agree there are certain undesirable features in the Act as it exists now and surely opinion must assert itself against it. Though the Premier said that it was a copy of the tax existing in Bombay and Bengal the Madras Act is not exactly on all fours with the Acts of other provinces, in that the consumption of a prescribed minimum is exempted from such taxation in Bombay and Bengal, whereas in Madras such exemption is not provided for. This is a very important omission.

As regards taxation on industrial consumption, this is rather a difficult question. Any proposal of taxation should be such as would not affect the extension of industries or adversely affect the existing

ones. I agree there are some industries which could well have borne the burden of this tax. It requires a very careful and expert study of the matter and there may be a *prima facie* case for your suggestion.

I cannot answer the hypothetical question whether but for the tax, consumers would have had the benefit of a lower rate than what is obtaining at present, but I am definite that the tax has affected the financial structure of some, if not, all Supply Companies.

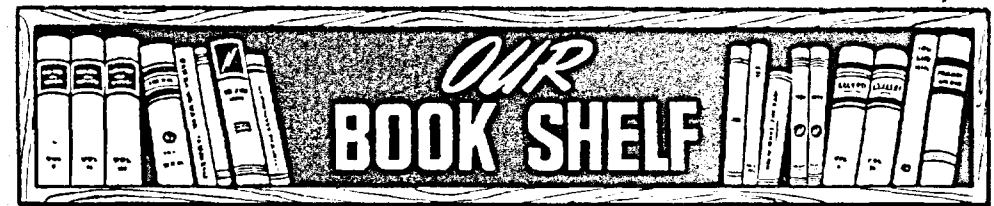
In any case, in view of the altered circumstances, there appear to be very strong grounds for a review and rationalisation of this tax. I have no doubt that the Electricity Supply Industry, if consulted by Government, would indeed be only too pleased to discuss it, in all its aspects and evolve a more equitable basis of taxation to the best advantage of Government, the consumer and the Companies. It is up to the public to build up sufficient public opinion and focus the attention of Government on a question like this.

—C. J. S.

ANDHRA CYCLONE RELIEF FUND

ANDHRA DESA has been hit hard by a cyclone, considered to be the worst within living memory. The damage done is estimated at 50 crores of rupees, and most harrowing tales of distress have been received. It is the duty of every patriotic citizen of this country to rush to the succour of suffering Andhra, and ELECTOLITE would like to do its humble mite. Will readers please help and send their donations to the Editor? All sums received will be gratefully acknowledged in the next issue of ELECTOLITE.

Please mark covers: "ANDHRA CYCLONE RELIEF FUND"



ADMINISTRATION REPORT OF THE ELECTRICITY DEPARTMENT FOR 1948-49:
(Printed by the Superintendent, Government Press, Madras. Price Rs. 2/8/-)

THE Twenty-second Administration Report of the Electricity Department of the Government of Madras for 1948-49 provides interesting reading. The salient features, during the year, were:—

1. Capital expenditure for the year on new projects, extensions and constructions amounted to 2.7. crores;
2. Power demands totalled 121,975 kW. and energy generated by the Department amounted to 569 million units.

The power generated was utilised in the following manner:—

Industrial use	56 per cent
Irrigation and agriculture	12 "
Domestic heat, power, lights and fans	11 "
Commercial heat, power, lights and fans	10 "
Public Lighting	3 "
Traction	4 "
Miscellaneous	4 "
Total	100 "

The gross revenue earned by Government undertakings during 1948-49 was 268 lakhs.

Thanks to a net-work of nearly 4,000 miles of H. T. transmission lines and 2,725 miles of L. T. distribution mains, a little under 1,500 villages, now enjoy the benefits of electricity. A total number of 11,225 agricultural pumps is in service, helping in the better irrigation of the land.

Quite a satisfactory record, this, but by no means an impressive one, compared with what has been done, elsewhere, in the world. Compared, however, with what has been done, elsewhere, in the country, Madras can well be proud of her achievement.

Parochial satisfaction apart, what is significant is that a general electrical mindedness, is now in evidence throughout the province. The report states that over 20,000 applications for supply of power to agricultural pump-sets are pending with Government.

Probably, this number represents only a fraction of the real demand, for several do not just apply; they fight shy of departmental dilatoriness.

Small blame, however, attaches to the Electricity Department for its tardy handling of correspondence asking for power. Their difficulties are far too many, and are not appreciated. For one thing, there is the shortage of generating capacity. The three existing hydro-electric stations—Mettur, Pykara and Papanasam—are loaded to capacity, and a distressing feature of recent years has been the staggering of loads, during summer. The power supply position in the thermal station areas of Madras city and in Andhra appears to be even more precarious. Extensions to existing stations, completion of new projects like Machkund and the Tungabhadra, and the purchase of power from neighbouring states like Mysore and Travancore-Cochin are some of the measures under active pursuit to overcome the present critical shortage of power.

The chief draw-back of a hydro-electric power system, particularly that of one like Mettur, where it is a combined irrigation power project, is a seasonal shortage of power, the position being specially bad, when monsoons fail. This disadvantage is now being sought to overcome by the installation of two super-thermal stations, one at Vridhachalam and possibly another at Cannanore, where, also, luckily lignite mines have been located. Prospecting of these resources is going on actively but so urgent indeed is the need that one wishes that the pace were even brisker. It is expected that these power stations will be put into commission, as soon as a

suitable method is devised for winning the lignite, economically. It should then be possible to make use of the seasonal surplus power of the hydro-electric stations, augmenting it with steam power, during summer. The smaller stations that are additionally proposed to be erected at Madura and Madras with outside coal should also assist in overcoming the present power shortage. In the meantime, distribution authorities have to be wary and ration out supplies to users, according to a carefully prepared priority list, based on essentiality of service to the community.

A notable lacuna in the Report is the absence of any mention in it of the work of private licensees who, it must not be forgotten, distribute over 60 per cent of the energy generated at the various power stations of Government. For aught it cares, private licensees might not be in the field at all!

The Report states that Government have decided on the nationalisation of all electrical undertakings, including those operated by local authorities and that necessary legislation to implement this decision is under the consideration of Government. It also states that many private licensees have found it very difficult to raise capital for extensions and have applied to Government for loans. Private licensees have been as zealous in the matter of rural electrification as Government and have quite a good record of work to their credit. The licensees have been responsible

for the electrification of 720 villages out of a total of 1449 villages. They have connected up 15,0068 consumers out of a total of 217,768. The number of agricultural pumps in licensees' area are 3203 as against a total of 11,225. Out of the total power generated by the department (569 million units) the licensees have purchased over 161 million units, for distribution in their areas.

It might be recalled here that several licensees were operating even before the advent of the Electricity Department and that they long ago undertook the electrification of urban areas, with oil engine power stations. It was the base loads set up by these licensees that gave a ready-made market to the hydro-electric power of Government. Of course, electrical development would not have been what it is to-day, but for hydro-electric development and the vast grid that had been built by eminent engineers like Sir Henry Howard, and the efficient band of engineers whom he had trained, like Mr. G. Sundaram. To Sir Henry's pioneering work, the Report pays a fitting tribute. His success lay not merely in planning and constructing huge power stations, but in carrying with him the licensees, whose willing co-operation and whole-hearted support he was able to enlist by a frank recognition of their useful role in the scheme of things electrical. Some of them have ambitious plans of development. But piece-meal nationalisation as envisaged in the Madras Government Bill upsets all the plans of licensees.

It is true that licensees have been handicapped for lack of finance, but if it might be pointed out, their present parlous plight is in part due to the pronouncements of Government spokesman, if, in part, it is also due to the trade recession that seems to have already overtaken the country. Private licensees could approach only Government for finance, as in the absence of an Electricity Board, the responsibility is squarely that of the provincial government.

Again, if supply pressures have been varying beyond limits in the areas of some licensees, it is because maintenance has had to be behind schedule, on account of difficulties in the procurement of equipment like transformers and voltage regulators. In all likelihood, a similar state of affairs obtains on Government's distribution also, but such areas happily being outside the scope of the Government Inspectorate, the Report does not mention what the position is there.

On the whole, the Report is an able review, and gives a good idea of the good work of the Department.

—H. K. R.

COTTAGE INDUSTRIES AND AGRICULTURE IN JAPAN: By Chamanlal (New Book Co., Ltd., Bombay. Price: 15/-)

THE origin, growth and progress made by various types of cottage and small-scale industries, in Japan, are adequately described by Mr. Chamanlal in the book under review. It

makes quite interesting reading, although, here and there, there is some repetition. The secrets underlying the success of small-scale industries in that country are well brought out, with a wealth of detail. Chief among these contributory factors, according to the author, are the efficiency and enthusiasm of the average Japanese worker. His diligence is his "capital" contribution to his nation, a nation which is sorely deficient in agricultural wealth on account of its mountainous nature. But for the skill, honesty, cheerfulness and general contentment of the vast labour force in Japan, of which the predominant number consists of women, Japan could not have attained her present pre-eminent position, in cottage industries.

Another salient feature is that organisation and management of cottage industries there are relatively inexpensive items. And, this above all, the patriotism of the people, bordering on jingoism, gives them a unity of purpose and outlook, in everything they do.

The author seriously considers that cottage industries could be developed in a similar manner in our country—which is neither lacking in raw materials nor in man-power. It must not, however, be forgotten that the other conditions so essential for the fostering of cottage industries are sadly absent in India. First, there is the efficiency of the Japanese worker, and secondly there is available in Japan, not only in the towns but in the villages, also, a great variety of skills.

Again, neither our roads are half so good nor our transport system quarter as cheap as it is in Japan. It is not quite so easy in this country to move raw materials from places where these are

available, and finished products to places where these are consumed.

Yet another important factor is that, in Japan, electric power is available at a very low rate, and this bears no comparison with rates in India.

Labour laws and inspection codes there contain liberal provisions, very helpful to the development of industries.

Unless, therefore, these fundamental facilities and factors are, there, cottage industries' products in India can never hope to compete with those of foreign countries; neither can they be placed at prices within the reach of the vast masses of India.

It is rather unfortunate that in not one of the chapters has the author dwelt at any length on the economics of any type of cottage industry. This is very vital information, as without it, it will be very difficult to have a picture of the cost of production of an article. In Japan, articles produced on a cottage-industry basis often closely compare in costs with those produced on a large-scale basis. It is necessary, therefore, to have a correct idea of the costs of production involved in cottage industries, as otherwise, in all probability a wasteful experiment may be the result.

This reviewer, who has had the benefit of a three-month tour in Japan finds much to endorse in Mr. Chamanlal's book—it is indeed a stimulating publication—but he would like to utter a word of caution to those desirous of making capital investment on cottage industries. Let them do so after a careful consideration of *all* the factors underlying Japanese success.

—K. K. RAMAN.

INDEPENDENCE DAY was celebrated with great *eclat* by Staff of the Corporation, this year. The premises had been tastefully decorated and the splendid arch put up across the road by our Workshops Department evoked—it may be mentioned "in passing"—much appreciative comment. The national flag fluttered proudly from the top of the main building. Altogether, it was a beautiful sight that greeted the eye on the morning of historic August 15.

A very interesting programme made up the events of the day, and Staff displayed unusual enthusiasm in the Celebration.

At 8 a. m., Mr. V. Seshasayee hoisted the tri-colour, at the Badminton Court, in the presence of a large gathering. Addressing Staff Mr. Seshasayee said that Freedom had come to the country after a long and arduous fight. Should this freedom be preserved, he continued, every one must do his utmost to strengthen the hands of Government.

Mr. Seshasayee further said that our leaders had laid their all for the sake of the country; they assumed the reigns of Government not out of any ignoble lust for power, but because they had dedicated their lives to service, in the cause of the Motherland.

Touching next on the food problem, the speaker appealed to Staff to avoid all waste. Waste of food, in particular, was criminal in the present critical days, he concluded.

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At the prize-distribution ceremony that took place at the Engineering Hall, later, Rao Sahib K. E. Chidambaram Iyer presided. Mrs. Akhila Raman gave away the prizes to the winners and runners-up of the various track and field events, and the two essay competitions that had previously been conducted as part of the Celebration. [See page 41 for complete list.]

In the course of an interesting address, Rao Sahib K. E. Chidambaram Iyer traced the history of the British rule in India and described how the transfer of power had been effected, without any violence or bloodshed.

Many difficult problems had been solved by our leaders in the brief space of two years, he said. He concluded by exhorting Staff to remain loyal to their institution, for that way lay true service to the community.

THIRTY EIGHT

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The high-light of the evening programme was the Variety Entertainment. With Corporation Staff, it is (nearly) always "Ladies First". The *nearly* comes in, because during the rush hour home, buses are so over-crowded and the primary law of *self-reservation* asserts itself! Well, top priority was, therefore, accorded to MUSICAL PRELUDE, an item contributed by the pupils of the *Savitri Vidya Sala*. The gay and colourful *saris* of the girls lent a distinctive touch to the "proceedings", and the music provided was absolutely "class."

This was followed by PHYSICAL FEATS by Mr. P. S. Vemban of the Revenue Department. Mr. Vemban did a few *Yoga Asanas*, a bit of weight lifting—and *some* bit it was—and broke a few wire nails with his bare hands. "It's good to have a giant's strength" . . .

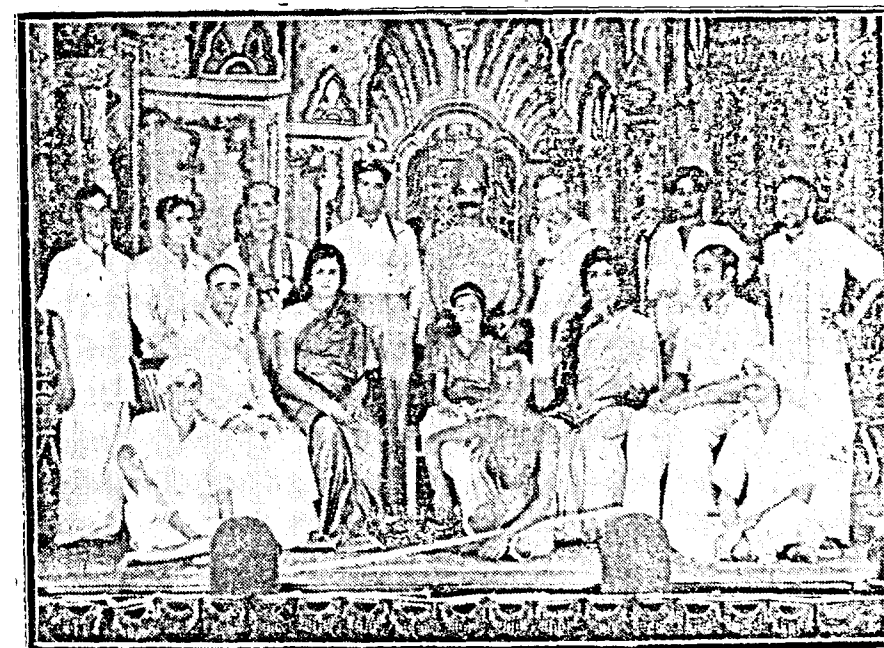
"Professor" K. R. Vijayan Pillai then showed up on the stage looking like a combination of the Pied Piper of

Hamelin, a Prince whose State had recently been integrated by Sardar Patel and your Tamil Pandit!

MAGIC, MEDICINE AND MYSTERY read the Programme Sheet announcing his arrival. The magic part of it, we understood, and so did we the medicine part; he spewed out from his mouth endless yards of coloured paper, and he kept up a continual "patter" about a nostrum which he claimed to be infallible for all the ills that the human flesh was heir to. Wherein lay the Mystery, it was difficult to say, unless it did in the doctor taking his own medicine, and still surviving to report it!

a "deaf mute" astrologer began his reading of palms. So faithful indeed was the impersonation that several of us were dumbfounded! . . . The "Victim" says he has only two children; the Pandit protests that the number is three and that the ancient science of astrology has never been known to palter with the truth. "There may be one round the corner . . . You never can tell!" explains he, in sign language. "Neither can you", retorts the other, which is literally a fact!

And now to the *pièce de resistance*, the play: THE ALL-PERVASIVE: (*Engum Nirandaaye*.) The story centred round an



THE HAND-PICKED CAST: The All-Pervasive

We had a hilarious ten minutes of it agnostic who sees light when his only when "Pandit" Subbaratnam (Stores), child falls ill, and the doctors give up

THIRTY NINE

hope. 'More things are wrought by prayer than this world dreams of' was the theme of the drama, a theme dear to the heart of the Father of the Nation, Mahatma Gandhi.

A hand-picked cast did their several offices so well that it was hard to imagine that these people were principally engaged in electricity distribution, and—only parenthetically—in play acting! It would, perhaps, be invidious to single out individual names for praise where every one acted superbly, but it must, still, be mentioned that, in the three chief roles that the play provides, Mr. R. Vaidyanathan, Mr. P. V. Rangaswamy and Master R. Pichai creditably sustained themselves.

Before the curtain came down, Mr. K. K. Raman made a brief speech complimenting the Staff on their remarkably good show.

With the singing of *Jana gana mana*, the Celebration came to a close at 10 p.m.

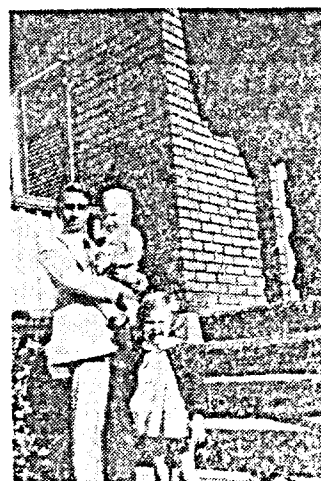
Late Mr. R. Srinivasa Iyer:—Yet another function, during the quarter, presided over by our esteemed Chairman, Rao Sahib K. E. Chidambaram Iyer took place on September 5, when the portrait of the late Mr. R. Srinivasa Iyer was un-veiled by Mr. P. T. Raman Nair, i. c. s., District and Sessions Judge. A large and distinguished gathering, consisting of members of the local bar, prominent officials, directors and staff was present.

Both Rao Sahib Chidambaram Iyer and Mr. Seshasayee spoke eulogising the great services that the late Mr. Srinivasa Iyer had rendered to the community in general, and to the Corporation in particular. Appositely enough it was a "press-button" ceremony, the portrait un-veiling itself, as Mr. Raman Nair touched a switch.

In the course of his remarks, Mr. Nair said that although he had known Mr. R. S. Iyer for only a brief period, he had been greatly impressed by his many-sided gifts.

With a vote of thanks proposed by your scribe, the meeting terminated.

Au Revoir:—Mention must, also, be made in these columns of the tea arranged by the Officers' Club on September 10 to say 'Good-bye and Good luck' to



Mr. R. RADHAKRISHNAN with his girl friend Sherry (age 3 yrs!) and her brother Jackie.

Mr. R. Radhakrishnan, son of Mr. K. K. Raman, on the eve of his departure to Canada, for further studies in Chemical Engineering. An alumnus of the McGill University, Mr. Radhakrishnan is at present, at Dawson College, Quebec. In the photograph, you see him with the children of Mr. J. W. Swift of Aluminum Laboratories.

Meet Mr. May:—The Officers' Club, also, held a small reception on October 20, to meet Mr. C. R. May, Deputy Chief Engineer of the Calcutta Electricity Supply Corporation. Mr. May spoke briefly of the work and activities of his Corporation and answered a number of questions about its general set-up. Incidentally, he remarked that he had found ELECTOLITE to be of *absorbing interest*.

Which is, *so to speak*, taking the words out of our mouths!

—R. PARTHASARATHY.

INDEPENDENCE DAY SPORTS: LIST OF PRIZE WINNERS

No.	ITEMS	NAMES	
		WINNERS	RUNNERS-UP
1	Shot put	Sri. P. S. Vemban	Sri. P. N. Raman
2	High Jump	„ S. Gopalakrishnan	„ K. R. Vijayan Pillai
3	Long Jump	„ S. Gopalakrishnan	„ K. R. Vijayan Pillai
4	One Mile Race	„ S. Subramanian	„ M. Ulaganathan
5	440 yards	„ A. N. Rangarajan	„ Ramachandran
6	Fancy Dress Competition	„ V. Ramaswamy	„ K. R. Vijayan Pillai
7	Badminton Doubles	„ J. Natesan „ R. Sivanadan	„ K. Appajee Rao „ Y. K. Rengachari
8	Tug of War	„ P. N. Raman's team	
9	Badminton Fives	„ G. A. Sivasamy „ T. S. Nagarajan „ T. K. Gopalakrishnan „ M. Ganapathy „ V. Rajaraman	„ K. V. Mahalingam „ K. Duraisami „ V. G. Ramaswamy „ M. A. Soundarajan „ K. Gopalan
1	Essay Competition (Engl.)	Sri. R. Srinivasan	
2	Essay Competition (Tamil)	„ S. Y. Ganapathy	
3	"Electolite" Contest	„ T. S. Krishnamurthy	Sri. S. Ramamurthi

Current Topics

IT is reported that the Fourth world Power Conference will be held in London in February, 1950.

At this conference, it is gathered, Professor H. S. Thacker, of the Indian Institute of Science, Bangalore, in conjunction with Mr. S. A. Gadkary of the Central Waterways, Irrigation, Navigation commission, will submit a paper on "Hydro-Electric Power Development in India," making a survey of the progress of hydro-electric power and development in the country and suggesting ways of making use of the potential power resources in India for the development of industries and irrigation in our country.

U. P. INSTRUMENT FACTORY

The United Provinces Government is setting up a precision factory at Lucknow, the first of its kind, in India. The factory which will manufacture instruments worth Rs. 65,00,000 annually, will turn out electro-cardiographs, binoculars, thermometers, electric and water meters and instruction apparatus for mechanics. The factory will serve as a training institute for technicians. About 60 students are to be admitted in the first instance.

M. Gunther, a Swiss Technician will be in charge of the factory, and will be assisted by a team of seven Swiss

FOURTYTWO

engineers, whose services have been engaged by the United Provinces Government.

HALDWANI POWER STATION

At a further stage of the construction of the Haldwani Power station, the United Provinces Minister for Local self-government performed during August the ceremony of laying the foundation stone. It is expected that the station will be in operation by the end of this year. Haldwani, which has a permanent population of 25,000 is one of the principal hill towns to which farmers migrate during the winter at which time the population rises to about 40,000.

RURALELECTRIFICATION IN THE U. S. S. R.

We often hear a great deal about rural electrification in the United States—there is one article; again elsewhere in this issue—but how such a programme is carried out in the U. S. S. R. is not widely known. In an article in a recent issue of the **Public Utilities Fortnightly**, Professor Dimitri R. Stein of the North Dakota Agricultural college has interpreted available statistics to draw a factual picture of development in the way of power on the farms of the U. S. S. R.

Prof. Dimtri's article is particularly interesting in view of the fact that the Electric Power Industry in the U. S. S. R. is wrapped in almost total secrecy.

The war in 1944 brought a serious set-back to the Russian power industry, and rural electrification came to a stand-still. The war ended with an almost complete devastation of the Western parts of the Soviet Unions; the destroyed rural power stations in the western parts of the Soviet Union exceeded 75,000 kW, more than 27 per cent of the total rural generating capacity in 1940.

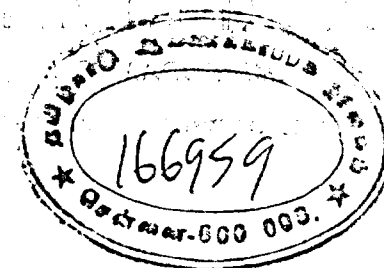
The critical situation in which the Soviet Union found itself after the end of the War, and particularly with respect to the extreme shortage of agriculture products, once again, focused attention on the development of rural areas. In 1945, a government decree was issued calling for an unprecedented increase of electrification and mechanisation of farms. This drive seems to have produced the desired results, as it has been stated that the growth of rural generating facilities in the year 1945 greatly surpassed the pre-war figures.

Plans for further rural electrification have been greatly hampered due to the critical shortage of building material and electric equipment. The Ministry of

Electric Industry is able to supply only 20 per cent of the needed equipment. The new installations are often of very poor quality and consequently breakdowns occur very frequently. From the statistics furnished in this article (not given here) it is obvious that the bulk of Russian farms do not have electricity.

EXHIBITION PLANS AT INTERNATIONAL CONFERENCES.

The Executive Committees of the International Commission on Large Dams and the World Power Conference held recently at Brussels have welcomed the proposal of the Indian authorities for holding an Engineering Exhibition at New Delhi along with meetings of these International bodies scheduled to be held in India, in the beginning of 1951. The exhibition will last for a month and the representatives of the various countries decided that the exhibition should have public appeal. Exhibits will include working models of major river valley projects, both existing and proposed, fixed models of engineering devices, hydraulic models relating to power generation and utilization, land reclamation, soil conservation and cement factories. There will also be sections devoted to equipment, maps and technical publications.



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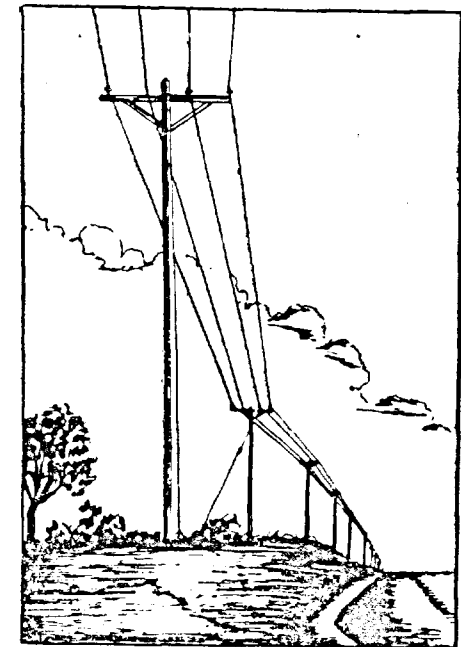
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FOR KEEPS

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 mean every word of it. You can, therefore, rely
 on us, and we promise to do you our honest
 best . . . And that's saying a lot—as one of our
 satisfied patrons put it, the other day.

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 maintain them trouble-free, to-day, tomorrow,
 and for keeps.

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FREEDOM From Want . . .

"India is free, but freedom does not mean that India has got what Freedom means," observed Sardar Patel, in the course of his address, a few months ago, in Madras.

This India will have when she establishes freedom from want. Towards the establishment of this freedom, we wish to place at your disposal, our services.

WE HAVE A REPRESENTATIVE SELECTION
OF AGRICULTURAL PUMPSETS FOR YOU TO
CHOOSE FROM. WITH ONE OF THESE YOU
CAN BOOST YOUR CROP YIELDS . . . AND
ESTABLISH THIS CARDINAL FREEDOM.

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