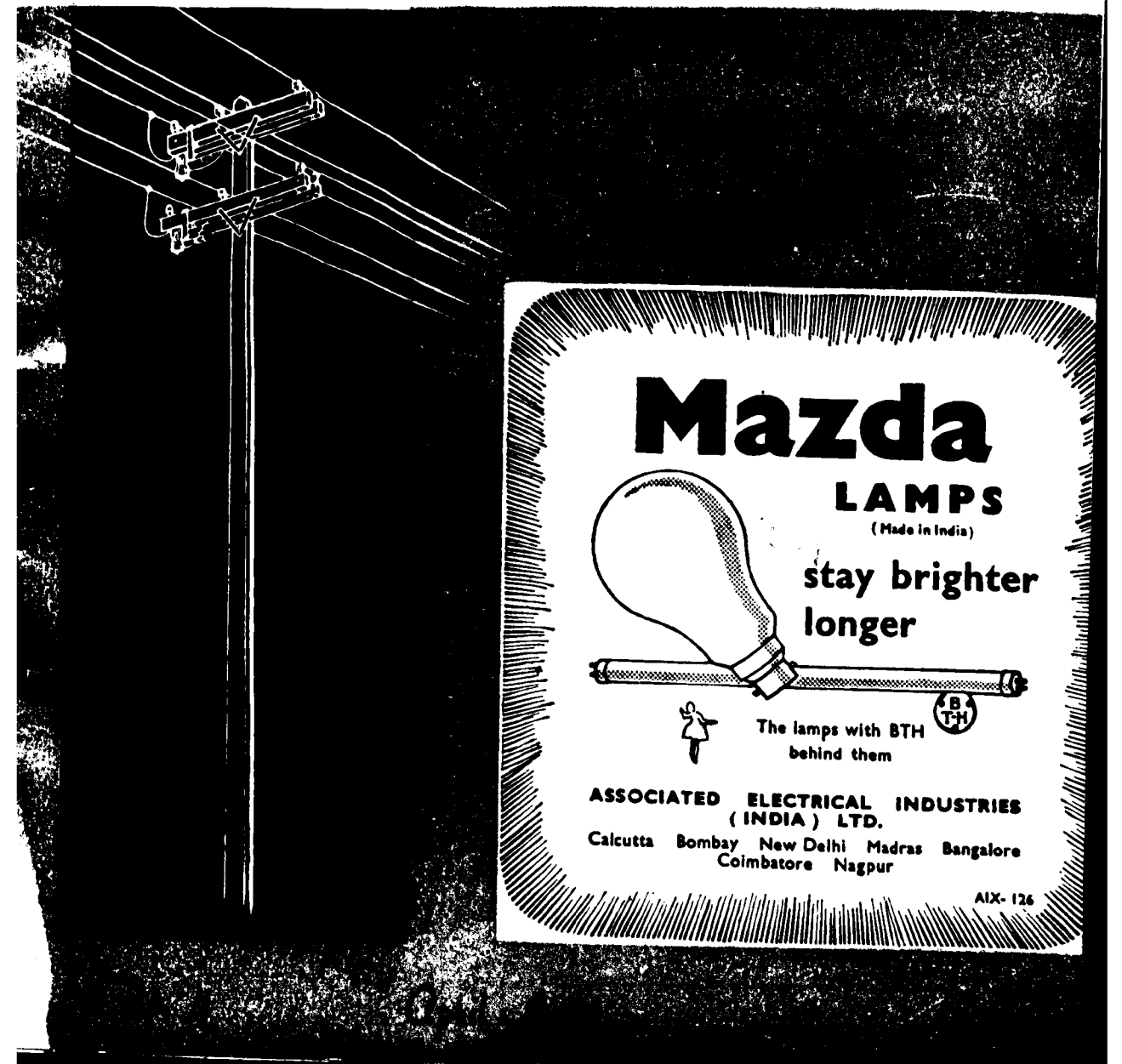


ELECTROLITE

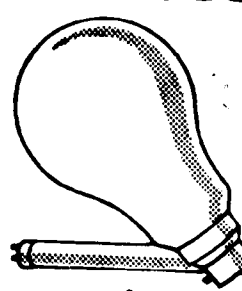
... A JOURNAL OF ELECTRICITY SUPPLY & UTILIZATION



The advertisement is set against a dark, textured background. On the left, a utility pole with cross-arms and insulators is visible. To the right, a rectangular box with a decorative border contains the following text and graphics:

Mazda
LAMPS
 (Made in India)

stay brighter
 longer

The lamps with BTH
 behind them

ASSOCIATED ELECTRICAL INDUSTRIES
 (INDIA) LTD.

Calcutta Bombay New Delhi Madras Bangalore
 Coimbatore Nagpur

AIX-126



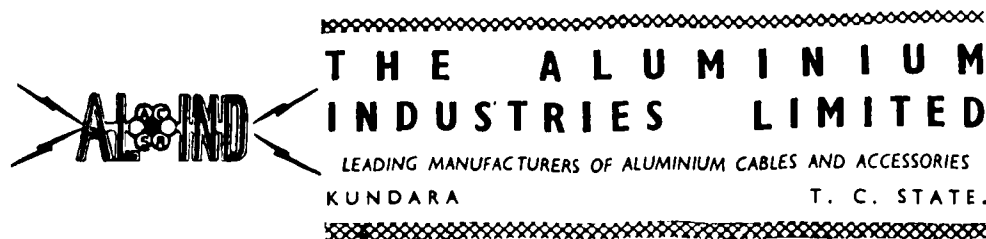
distribution problem

(Or the short, short story of an engineer who outwitted his wife!)

THIS ENGINEER is up against a domestic, distribution problem—two apples and three kids. The two apples would normally have sufficed, if only the two apples of his own eyes were to be present, but a neighbour's child was also there. And because he loved a neighbour as him-

self, he quickly cut the apples into four equal halves, gave each child one half and swallowed one himself... before his better half could nab it from him!

Experience with ALIND ALL-ALUMINIUM CONDUCTORS had taught him one priceless lesson... how to get *more* out of *less* and at *less* cost!



Managing Agents: SESHASAYEE BROTHERS (TRAV.) PRIVATE LTD.

ELECTOLITE

... A JOURNAL OF ELECTRICITY SUPPLY & UTILIZATION

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TO THE ENDS of serving the best interests of consumers, share-holders and staff, ELECTOLITE is dedicated.

Industrial Policy Statement

THE INDUSTRIAL POLICY STATEMENT conforms, in the main, to the draft of the Second Five-Year Plan. It is, also, linked to the relevant directive principles of State policy laid down in the constitution:

- (1) The ownership and control of the material resources of the community are so distributed as to subserve the common good; and,
- (2) The operation of the economic system does not result in concentration of wealth and means of production to the common detriment.

Do these principles imply that the State, and only the State, will own all the means of production? No, we should think not. True, the Policy Statement lists at least 17 industries whose future development will be the sole concern of the State. But that the approach is not wholly that of the

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doctrinaire socialist is obvious, as witness, for example, these two modifications :

"All new units in these industries (that is, those listed in Schedule A—both the generation and distribution of electricity come in here) save where their establishment in the private sector has already been approved will be set up only by the State. It does not preclude the expansion of the existing privately-owned units or the possibility of the State securing the co-operation of private enterprise in the establishment of new units when the national interests so require."

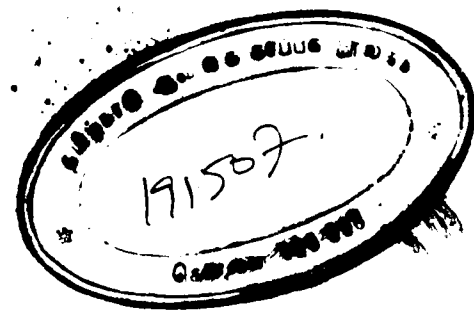
... "There will ordinarily be no bar to small privately-owned units undertaking

production such as generation of power for local needs."

An element of ideology is certainly there in the Policy Statement—it has to be—otherwise as Prime Minister Jawaharlal Nehru indicated at the Sixteenth Annual Conference of the All-India Manufacturers' Organisation "a process of self-growth cannot be started in an under-developed country."

But although the State will initiate and direct development, what the policy statement envisages is a pattern of mixed economy. Which is, as it should be, and is most welcome.

"The work that we are doing in India to-day," as Mr. Nehru emphasized at the AIMO conference, "is difficult, but it is extraordinarily interesting."

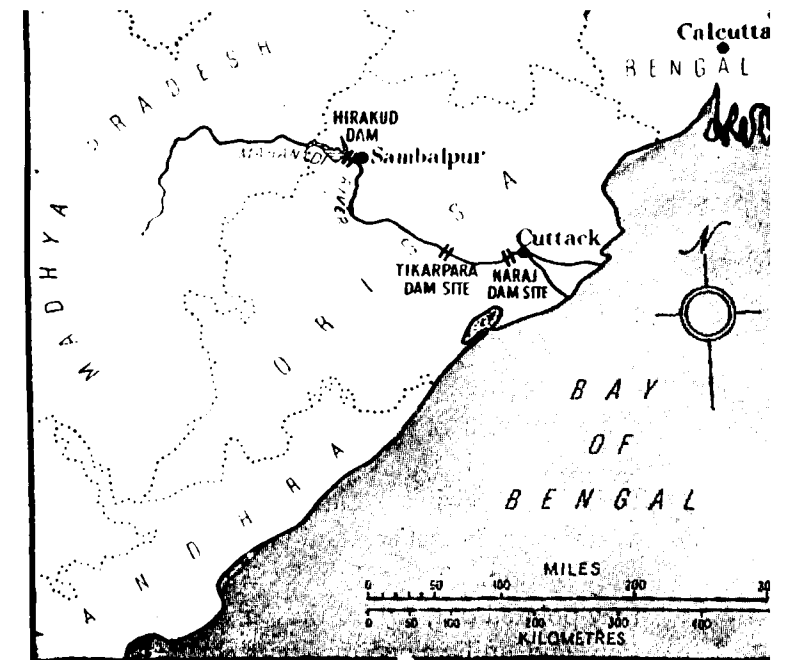


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GREAT HIRAKUD

Orissa will soon benefit from one of India's great multi-purpose schemes



The Mahanadi River showing the position of Hirakud and the sites of two other dams.

"One dreary alteration of unmitigated drought and flood without a single indication of any improvement in any respect."

That's Orissa as an irrigation engineer saw it. Year of observation—1858.

This Journal carried an article about the Hirakud Project in its spring 1953 issue. In this issue, again, we briefly consider the Project for the reason that by August of this year, a great dam that has been taking shape will be producing results.

The first controlled flow of irrigation waters from the Hirakud reservoir will start the growing of additional

crops; and the first flow of electricity along new transmission lines will help in the building of new industries.

ANCIENT KALINGA

By June 1957, the first big stage of the Project will be completed—according to programme.

Orissa once formed the northern part of the ancient kingdom of Kalinga, and was settled by the Aryans long before the time of Asoka, who annexed the territory about 360 B.C. Monuments near Puri bear witness to such ancient glory. Originally a part of Bengal, Orissa was included in 1915 in the Province of Bihar and Orissa, and later became a separate State. It has a population of over fourteen and

a half million, an area of 60,000 square miles with vast tracts of forest and agricultural land. It is rich in minerals, has large deposits of coal, iron, graphite, manganese, bauxite, limestone, mica, and the water power is of great potential wealth.

In 1945, the problem of mitigating the worst evils of either scanty rainfall or destructive floods, was referred to the then newly-constituted Central Waterways, Irrigation and Navigation Commission. The only effective cure, they pointed out, lay in the conservation and utilisation of the State's water resources. The Commission proposed the building of three dams, at Hirakud, Tikarpara and Naraj, each with its own canal system and hydro-electric power works.

THE PROJECT

Priority was given to the Hirakud Project, sanctioned in 1948. The dam was built across the Mahanadi River, about nine miles west of Sambalpur,

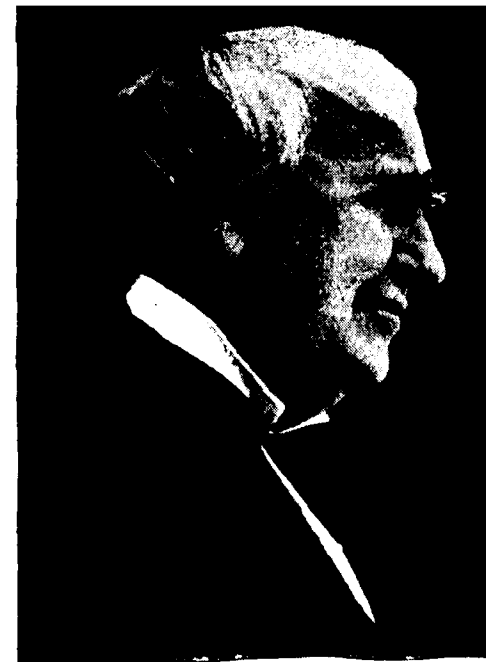
and there will be a series of gravity and lift canals for irrigation on either side, and two hydro-electric installations. The main dam, of concrete, earth and masonry, is three miles long and 195 feet high from the deepest foundations. The dykes, a four-unit power house, 400 miles of transmission lines, and irrigation canals are now nearly finished. Nearby is an up-to-date research laboratory, where investigations and tests are made in the hydraulic, hydrological and soil mechanics sections.

The Projects, estimated to cost Rs. 478 million, will irrigate 1,785,000 acres of land, provide 123,000 kilowatts of power to start with, and will also permit navigation up the river from the sea to Sambalpur. About 250 villages will be affected; 108 of these will be submerged. The villagers affected so far are being looked after in State Resettlement Camps and will be paid compensation for the loss of their property.

Domestic Single-Phase Motor - Pumpsets

The single-phase motors of domestic pumpsets are generally fitted with spring-loaded switch contracts. The mechanism is mounted on the revolving shaft of the motor. When the shaft gets corroded on its surface, the easy movement of the mechanism is arrested. Consequently, the circuit fuse will get blown out when the motor is switched on, thus giving a caution.

The warning notice of the motor should be heeded, and a report immediately made to an electrician. Mere renewals of circuit fuse will not prevent the motor from being burnt out, sooner or later, often sooner!



Thomas Alva Edison.

*Let us spare a thought for
THOMAS A. EDISON*

*THE MAN WHO GAVE US A 1100
INVENTIONS INCLUDING
THE PHONOGRAPH, ELECTRIC
FILAMENT AND TALKING
PICTURES!*

invented a machine for making inventions—the modern technical research laboratory!

WHAT'S GENIUS?

PERHAPS, no other scientist's work has had a greater impact on the world than that of Thomas Alva Edison, the American inventor, whose 109th birth anniversary was observed in February of this year.

Edison's inventions, which number more than 1,100 include the phonograph—the one that he loved best; the electric filament—for which he is best remembered; silent and talking motion-pictures; the carbon telephone transmitter; and the electric railway.

These alone would have sufficed to put him in the front rank of inventors. But he also devised the duplicating machine, the first practical loud speaker, the megaphone, magnetic concentration of iron ore, the electro-magnetic brake, the nickel-iron storage battery and innumerable other mechanisms that touch upon many aspects of everyday life. And above all he

The astonishing number of inventions led to many legends about Edison. But a more prosaic and orderly manner by which he achieved his inventions would be hard to find. Edison himself had no regard for the genius who works by inspiration, as is evident from his oft-quoted observation: "Genius is two per cent inspiration and 98 per cent perspiration." Failures spurred him on to further attempts till he achieved success.

Edison made his first invention when he was hardly 19. It was a device for recording votes in Congress. Congress was not interested. A candid representative told him: "Young man, the last thing a Congressman wants is to have his every vote recorded!"

Edison learned his lesson well. From then on, he knew exactly what he wanted to accomplish, and he made sure that there was a market for everything that he turned his hand to. This absolute certainty of purpose and method helped him from wasting his time away in worthless experiments.

SOLD NEWSPAPERS

Born at Milan, Ohio, 1847, he had barely three months of schooling, and the rest of his education was taken care of by his mother. Though not necessary, yet the young Edison sold newspapers and candy in trains to help him buy books and equipment for his laboratory.

An interesting incident on one of the trains gives an insight into his flair for grasping opportunities that came his way. A well-dressed, elderly gentleman asked him to throw away the papers he was carrying and paid for all of them so that he could get a nap undisturbed.

Grasping this unexpected opportunity, Edison hurried back to the car where he had kept his stock of papers and came out with a bunch of magazines. Once again the man asked him to throw out the magazines and paid for them. This continued till Edison had exhausted his stock and then the open-handed gentlemen asked him, "You got any more stuff out there?" Edison confessed, "All I've got left is an empty suitcase." "Well", the man commanded, "bring that and throw it out, too". According to Edison, the money he made through that stroke of luck helped him to buy the books that launched him on a serious study of electrical science.

THE EDISON EFFECT

Popular imagination remembers Edison mainly for his incandescent light, the phonograph, and the cinematograph. But in his experiments on

the electric light bulb, he made another discovery that was also to have revolutionary social consequences — the "Edison Effect," on which the radio tube has been developed. The Edison Effect, a flow of current in only one direction through the vacuum between filament and plate, lay dormant for a couple of decades till it was picked up by other scientists, and then it gave rise to the modern electronic tube, which forms the basis of radio broadcasting, long distance telephones, the X-ray, high-frequency surgery, electronic musical instruments, and a multitude of other devices.

HONOURS GALORE

Recognition of his inventive genius came to him in the form of a special model from the U.S. Congress in 1928. Besides honorary degrees from many universities and membership of the U. S. National Academy of sciences, Edison was made a Commander of the French Legion of Honour.

Before his death on October 18, 1931, Edison had patented more than 1,100 patents, the greatest number ever issued to an individual by the U. S. Patent Office.

A conservative estimate in 1947 of the value of the industries that Edison gave rise to amounts to \$20,000,000,000 and the number of persons employed to 4,000,000. If estimates are to include industries, which—though not directly descended from Edison's inventions—would have been impossible without his preceding contributions to science and knowledge, the figures would reach astronomical proportions.

Telephone Types

by C. FITZSIMONS

OVER the past few weeks, I have made a study of the behaviour of people whilst engaged in telephone conversations.

The results were quite rewarding, for they expose, I think, a facet of people's characters not normally visible in ordinary behaviour. I have even found it possible to classify the various habits I have come across.

THE DOODLER

The first type is the doodler. Usually the person at the other end gives him a number to note down, so he writes it on a convenient piece of paper or wall—and for the rest of the conversation methodically decorates it. He usually encloses it in various patterns, until by the end of the conversation, he finds himself with a large-scale surrealist design which would do credit to Matisse in one of his more inspired moods. The number he has noted frequently becomes obliterated in the process.

THE HUMMER

One of the most interesting types is the person who dials a number and, while waiting for a reply, hums. You won't find him humming at any other time, but once he gets that phone in his hand he becomes musically inspired. Then we hear something like this:

Mm, Mm, De de da, mm — oh, hello, is Charles?—thanks—da, da de dum, do—oh, hello, Charlie?. Bill



The Doodler.



The hummer

here—about that Brown job—yes, if you'd just get the file—dadee da dum, dum—, and so on.

THE PENCIL-TWIRLER

Of course, this is probably merely a habit like that of the pencil-twirler. The pencil-twirler is the type who, when called to the phone, snatches up a piece of paper and a pencil on his way and uses neither. He'll twirl that pencil round his fingers like mad and attempt various ingenious tricks, such as balancing it on his thumbnail.

You sometimes find this pencil-twirler is also one of the doodler class. Although he has brought a piece of paper for the express purpose of writing on, the blank walls around him

usually prove too great a temptation. He simply can't resist those bare expanses of cream paint just crying out for decoration by a lead pencil.

—AND THE PENCIL-SEARCHER!

On the other hand there is the person who invariably forgets to take a pencil to the phone with him. Whenever he is given a number to write down, it is fascinating to watch him searching for a pencil. He still manages to keep talking whilst he dives through each of his pockets in turn searching frantically for something to write with. He usually ends up with the receiver ingeniously clenched between his jaw and collar-bone, whilst he turns out his pockets with both hands.

I have seen a person in such a desperate plight eventually write the number with his finger in the dust on some convenient ledge. Of course, to sit back and watch this performance without lifting a finger to help adds immeasurably to one's own enjoyment!

OTHER TYPES

Then there is the person who is frightened of the telephone. He is rarely called, but whenever he is, he advances to the phone and picks it up gingerly, ready to drop the brute at the first sign of its biting.

The types I always enjoy are those who hold mystic conversation with

somebody, usually called Sam, about a subject which doesn't quite become clear to anyone hearing only one end of the conversation. It is an intriguing pastime trying to guess what Sam at the other end is saying when you hear a conversation like this:

"Hello, Sam . . . Fine thanks; and you? . . . Good; and the family? . . . Has he? I wouldn't get one for mine: he was badgering me for weeks about it, but I said to him, 'If your Dad could manage without it when he was your age, so can you!' That shut him up. Anyway what I rang up about was this Aintree job . . . Oh you did, did you? Well, in that case . . . Yes, seventeen, last Tuesday . . . Haven't you? That so-and-so Boggs . . . forget his head if it wasn't screwed on, Well I'll see what I can do, but I can't promise . . . green ones; in a box . . . Eh? Oh, about 6 yards, I'd say . . . That makes it four days now; give me a ring as soon as anything turns up . . . Yes, I saw 'em; waste of ruddy money; they want to get rid of that outside right to start with. Call it football, do

they? Why I've seen"...and so on, *ad infinitum*. And Sam's conversation heard by itself is probably just as fascinating.

"HELLO"

After this intense course of study of telephone manners, I have one final recommendation to make—the word "Hello" should be done away with as far as the telephone conversation is concerned. There is nothing more irritating than dialling a number and being greeted with that word which obviously isn't meant as a greeting at all, but is just a way informing you that there is somebody at the other end. What a pleasant change it would make if, when one dialled a number, a voice answered: "This is so-and-so here" followed, possibly, by some friendly remark about the weather".

Well, you must excuse me, I'll have to finish now, as the phone is ringing.

"Hello . . . er, I mean . . . It's an uncommonly fine morning, don't you think?"

(With acknowledgments to CONTACT, the Staff magazine of the Merseyside and North Wales Electricity Board, United Kingdom.)

POWER RESTRICTIONS

BY P. N. RAMAN, Assoc., I. E. E. *

RESTRICTIONS on the use of hydel power in the Madras State date back to 1946, in which year, there was a partial failure of the monsoon. Water level in the hydel reservoirs deteriorated progressively with the result that the generating capacity of the "Grid" power stations was not adequate to meet the full demand. The only answer to the problem was "restrictions" on supply to all but essential users of electricity.

The cut imposed in 1946 was not, however, very severe, and the restrictions lasted for a period of roughly six months. There were threats in subsequent years, but until 1949, however, it was not found necessary to enforce any cuts.

We hoped that the monsoons would never again fail us, but we lived to be false weather prophets! Year after year, for four years in succession, the monsoon went on cheating us. The upshot of it all was that cuts from 25 to 75 per cent had to be imposed. At one time, it looked as though a cent-per-cent cut (what a phrase!) would have to be enforced, but the heavenly powers-that-be saw to it that we were spared this calamity.

* Personal Assistant the Dy. Chief Engineer.

RE-ENTER—"POWER CUTS"

We heaved a sigh of thankful relief in July 1953 when the "rains came", and with the additional generating plants brought into commission in the hydro-electric system, we thought that the days of power shortage were for ever over.

But this year again it was the same old story. Failure of monsoon, fall in water level and — power cuts. Demand has been forging much ahead of the firm power capacity of the grid and the slightest "natural" disturbance upsets the balance of power supply.

April 1, 1956 saw the re-emergence of the almost forgotten power cut, with what appeared to be "a making-up-for-lost-cuts" vigour. But still it cannot be said that Nature was as unkind to us this year as in the past, for the south-west monsoon has already set in, and the cut is, at the moment of going to press, at its original 25 per cent. (It started off with a mild 25 per cent, rose to 50 per cent and climaxed in 66⅔ per cent.) An "appreciable improvement in the situation" has now been reported.

TWO-FOLD OBJECTIVES

Two objectives are sought to be achieved by the imposition of power cuts—one, a reduction in the system demand, and two, a reduced energy consumption. The former is achieved by the grouping and the staggering of rural L. T. industrial loads such as rice, oil and flour mills and agricultural pump-loads and by staggering the holidays and recess hours of high tension industrial consumers such as textile mills, etc. The L. T. consumers who are grouped into two are given supply for ten hours a day (for each group) or on alternate days as they choose. During the current restrictions period L. T. power loads in towns as well as *panchayats* have been exempted from being grouped.

The reduction in the system consumption is achieved by enforcing a percentage of cuts on all save "essential" users. A ration card is issued to each consumer fixing his weekly or monthly ration in units which in turn is based on the average of his consumption during a previous period of three months—in the present period, December 1955, January 1956 and February 1956.

As a minimum, monthly consumption of 20 units—without any cuts—was permitted, about 50 per cent of our domestic lighting consumers were not very badly affected.

Seasonal industrial loads such as rice and oil mills received the benefit of the higher consumption made by them during the corresponding months of the previous year, as against the normal, basic average.

Weekly quotas of consumption were fixed for industrial consumers and their supplies disconnected at the end of the week, if they had exceeded their quotas for a proportionate number of days in the next week and the excess also asked to be adjusted. Domestic and lighting consumers were allowed a monthly quota and were threatened with a penal charge if consumption should exceed the ration fixed.

These measures which were adopted on instructions from the System Superintending Engineer were considered adequate for effectively enforcing the restrictions.

CEMENT INDUSTRY EXEMPTED

A feature of this year's restrictions was that in view of the present acute shortage of cement, the cement factories in the system were "let off" with only a 25 per cent cut, (even when the general cut was 66⅔ per cent) but they were asked to pay a 20-per cent surcharge on the excess consumption allowed.

The following categories of loads which were considered 'essential' had no restrictions placed on their consumption :

Agriculture; Railways; Hospitals; Water supply and Sanitary arrangements; Post and Telegraph offices; All-India Radio and Rural Broadcasting services; Recognised educational institutions and hostels; Public Offices; Defence Service establishments; Petrol pumps; Electrical sirens; Telephone Exchanges; Public parks; Harbour and Port installations; Aerodromes; Observatory; Printing establishments of daily and weekly newspapers; Fire Service Stations; and large refrigerating plant for cold storage purposes or for the production of ice for supply to hospitals and the public.

Supply for street lighting was also considered essential, but when the position deteriorated to such an extent as to warrant a 66⅔-per cent cut, a 50-per cent cut on street lighting was also ordered.

The restrictions have been quite a nightmare to many of us in this organisation. They affected all routine work to such an extent that several members of staff had to put in overtime. At the first signal of power shortage from the Superintending Engineer, Mettur Electricity System, we had to put our man-power on a "war" footing. An army of men—clerks, technicians, and executives—were on the job of working out figures, issuing instructions and appeals to consumers, distributing ration cards,

inspecting and checking weekly consumption, effecting disconnections and re-connections. On top of all these, consumers had to be kept in good humour! We are now fairly out of the woods, and can hope for complete restoration of the cut by the end of June or early July.

CO-OPERATION FROM ALL

The unstinted and enthusiastic co-operation of all categories of staff made it possible for us to discharge our obligations satisfactorily. No praise will be too high for our consumers, too, who took these cuts in the proper spirit. First, they were presented with ration cards, then with messages of further cuts—not certainly messages of cheer and hope!

Yes, the restrictions do affect our revenues, and "balancing the budget" becomes a special problem for the accounts department. Although some relief by way of rebate on maximum demand charges is given in the bills payable to Government, this is certainly not commensurate with the loss of revenue sustained. It is true that everyone including the hydro-electric department suffers a loss, but it is no consolation to us—we spend *more* to earn *less*!

Let us hope that we have seen the last of these restrictions once and for ever. At least in the Second-Plan Period let us be spared the anguish that was our lot for the most part in the First-Plan-Period.



The Upper Anicut.

ON May 12, a party of friends of this organisation proceeded to Upper Anicut—a delightful, picnic spot some 12 miles to the west of Trichy. At Upper Anicut the main river Cauvery (called *Akanda Cauvery* here) splits itself into two—namely, the Coleroon and the Cauvery. The Anicut is intended to divert the waters of the Cauvery when in spate to the Coleroon. It was designed and constructed by one Mr. Henry Cotton in the old, British days.

Near the Anicut, there is a well-furnished "Inspection Bungalow" set amid a mango grove. The bungal-

Excursion to Upper Anicut

by R. SANTHANAM, *Accounts Dept.*

low adds to the joys of a visit to the Anicut.

Upper Anicut can be reached either by road (Trichy-Salem road) or by rail (Trichy-Erode line). Those who take the rail route have to alight at Elamanoor station and cross the river in a ferry. If the trip is made by road, Vatalai is the place to get down. From here, the distance of about six furlongs to the bungalow has to be covered by foot. The party of excursionists made use of both routes and reached the bungalow at 9 a. m. After *chota hazri* some of us had a leisurely bath in the waters of the Cauvery. Bath over, the party sat in groups for cards to the accompaniment of recorded music.



Before we sat down for our lunch at 1 p. m., we went to Gunaseelam, a well-known pilgrim centre near by (popularly called South Tirupathi) to offer worship to Lord Srinivasa, the presiding deity of the shrine there. A sumptuous affair the luncheon consisted of several delectable dishes.

From 3-30 p. m. to 5-30 p. m. we were treated to a delightful music concert by Miss R. Kamala and Miss R. Vimala (Mambalam Sisters) accompanied on the violin by Tirumayam Krishnamurthy and on the *mridangam* by our own S. Radhakrishnan, Maintenance.

Like the river Cauvery itself which ends up finally in the sea, our wonderful day also came to a close at 6 p. m., —but not before we had had another cup of coffee, a sweet and a savoury!

To A. Krishnamachari, Distribution, and other friends who took an active part in making this a trip the great success that it was, I offer my thanks.

- Top: *Crossing the river in a ferry.*
- Centre: *The concert artistes.*
- Bottom: *Some of the excursionists.*

Some of the things they say!

The Editor's Lament:

Getting out a new issue is no picnic,
 If we print jokes, people say we are silly,
 If we don't, they say we are too serious,
 If we publish original matter they say we lack variety,
 If we don't print contributions, we don't show our appreciation,
 If we do, the fellows who didn't write them set up as critics,
 If we introduce a light touch and use inoffensive-looking initials,
 They tell us our leg-pulls have gone too far,
 And they will haul us up before a court of law for defamation!
 What in thunder is a poor Editor to do, anyhow?
 Like as not, someone will say we pinched this from another
 Magazine;
 So we did — but they had cribbed it from someone else!

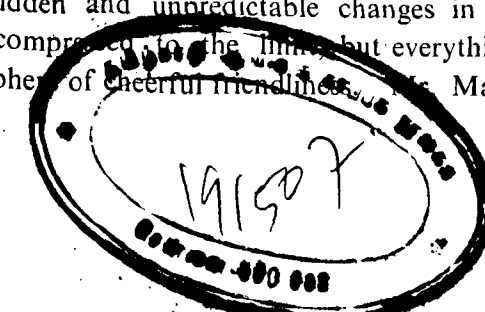
—*Martin Burn House Magazine*

* * * *

So, Mr. Malenkov talked, eh?

The recent visit to Great Britain of a team of Soviet Electrical Engineers led by Mr. Malenkov, Minister of Power Stations, was hectic, interesting and, in many ways, quite illuminating.

It was made hectic by sudden and unpredictable changes in a programme which was already compressed to the limit, but everything was carried off in a general atmosphere of cheerful friendliness. Malenkov



himself set the pace with his broad grin and his indefatigable pursuit of new experiences and off-the-programme adventures.

It was made interesting by the similarity of our interests in the technical field.

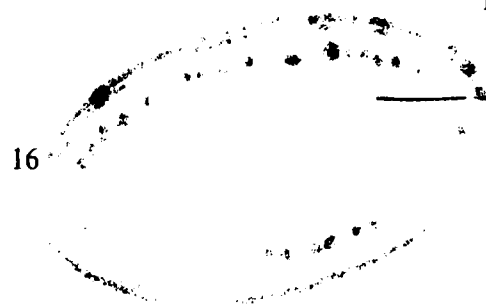
It was illuminating to many of us for we were able to learn at first hand about the Russian attitude to Western civilisation.

What did we talk about? Everything from funny stories to politics, from steam pressures and temperatures to the number of sets and boilers per driver. The Russians could win on size. They listened patiently to a description of the Galloway Hydro Scheme (100 mW) and then made a casual reference to one of their own (3,000 mW) and one projected (5,000 mW). If it was speed, they could, it seemed, build turbines and boilers in about one-third of the time required in Britain.

Mr. Malenkov's friendliness with everybody from children to hotel staffs, police, station personnel and officials, his tireless signing of autographs and his colossal patience with cameramen, pressmen and strangers who just pushed their way in, may have been part of some Machiavellian scheme for peaceful infiltration, or it may have been the natural behaviour of a good-natured, chubby little man who was thoroughly enjoying a new experience. I don't know—but he certainly made himself popular wherever he went.

What did Mr. Malenkov talk about most? He talked most about the fact that he had a grandchild aged 10!

(A. R. COOPER, Divisional Controller, North West, Merseyside and North Wales Division of the Central Electricity Authority, in *Northern Lights*.)



Current TOPICS

POWER GENERATION

THE *per capita* generation of electricity in India registered an increase of more than hundred per cent between the years 1938 and 1953. The average monthly generation of 283 million kWh of power in 1938 rose to 536 million kWh in January 1953. During the same period the *per capita* generation in the United State and the United Kingdom increased by 150 per cent. According to recent surveys completed by the Central Water and Power Commission, India has an approximate hydro-electric power potential of 10.5 million kW at 60 per cent load factor.

The consumption of coal in steam power stations in India during 1953 was of the order of three million tons. Recently two large steam power stations designed to use low grade coal, have been completed at Sindri and Bokaro in the coal fields area of Bihar.

With the construction of several new thermal power stations having comparatively high thermal efficiencies, the average fuel consumption in the coal-fired electric supply undertakings in India during 1953 was of the order of 1.93 lbs/kWh generated, which is 0.16 lbs/kWh less than the rate in 1947.

WORLD'S FIRST NUCLEAR POWER STATION

The world's first nuclear power station designed to produce electricity on a national scale has started working, said a U. K. Atomic Energy authority.

He described the operation as the first step in starting up the station as an electricity supplier for Britain's power grid.

Enough uranium was loaded into the pile to start a chain-reaction and enable it to become self-sustaining.

A replica of this first nuclear power station is also being built on the same site. Another with four reactors is being put up at Anan, Dumfriesshire.

These stations will have a dual role producing electricity and making plutonium to military requirements.

Another atomic power station at Doureay, Cathness, will be equipped with an experimental fast breeder capable of creating more fissile material than it burns.

INDIANS TO STUDY ACCIDENT PREVENTION ABROAD

Company executives and operatives from many parts of the world, includ-

ing India, are making visits to Birmingham to learn the latest British methods of preventing accidents in factories.

At this industrial city, they attend courses at the Birmingham Industrial Safety Training Centre—the first permanent centre of its kind in Britain, and probably in the world.

The new permanent centre replaces a temporary training centre which had been in existence for five years. The centre is the result of voluntary co-operation between industrialists who are members of the Birmingham and District Industrial Safety Group, an organization founded in 1930 by a handful of enlightened men which now has 250 full and 400 associate member firms.

TURBINE MANUFACTURE

The Indian Government have now nominated the English Electric Co. Ltd. as specialist consultants on the design and manufacture of water turbines. The firm are to work in conjunction with Associated Electrical Industries Ltd., who were earlier appointed as consultants for India's project for the establishment of a factory to manufacture heavy electrical plant.

CALCUTTA RAILWAYS

Electric trains will run on almost all suburban sections of the Sealdah

and Howrah divisions of the Calcutta suburban railway before the end of the Second Five-Year Plan. Work on electrification of the 60-mile Howrah—Burdwan section and of the Sealdah suburban sections will be taken up soon and is scheduled for completion by 1959–60.

SECOND FIVE-YEAR PLAN

The programmes of the various States for incorporation in India's Second Five-Year Plan, details of which have now been finalised, provide for an increase in installed capacity by 2.7 million kW of which 2 million kW will be through hydro-electric schemes. But out of the total capacity some 1.5 million kW will be due to schemes, the initial work of which was begun during the first Five-Year Plan. Under the Second Plan 23 hydro-electric projects and 19 thermal schemes in addition to a number of small diesel generating plants and power schemes concerned mainly with transmission and distribution lines. A further 200 mW will be added during the period by companies in the electricity supply industry such as Calcutta Electric Supply Corporation, Tata and Ahmedabad Electric Supply Co. and a further 300 mW of plant will be installed by various industries for their own power needs. Thus it is expected that the country will add some 3.2 million kW during the period, raising the total installed capacity in 1961 to 6.8 million kW.

Strictly Personnel

ON April 22, we beat our annual retreat to Grand Anicut—according to plan! A little over 150 members comprised the excursion party. As in last year, this year, too, we chartered a special, big-size bus for taking the excursionists to the Anicut. Some members of the party, of course, arrived on their own steam, using their bi-cycles, and some came by train, but whatever was the mode of the “pilgrim's progress”, every one was there at the spot by 11 a.m. After *puja* was offered to the *Hanuman* deity at the temple, which lasted for a good two hours-and-a-half, we sat down to a sumptuous lunch. Rest, good-humoured ragging, and cards constituted the programme for whiling the best—and hottest part of—an afternoon. And in batches, we returned home. That the excursion was a grand success was largely due to the untiring efforts of K. Natarajan and

S. Ramasubramanian and a devoted band of other workers.

Marriages:

Here's matrimonial intelligence of special interest to employee readers of this journal.

R. Krishnaswamy, Time Clerk, with Miss Rajalakshmi.

Miss Kamala, daughter of T. V. S. Narayanaswamy, Revenue Department, with M. Narayanaswamy.

Miss Ananthalakshmi, sister of K. B. Gopalakrishnan, Revenue, with V. Venkataraman, formerly of South Madras Agencies Ltd., Madras, and now Manager, The Allied Industrial Distributors, Ltd., Madras.

J. Ramamurthi, Revenue, with Miss Rajalakshmi.

P. Dorairaj, Lineman, Maintenance, son of V. Ponnuswamy, Lift operator, with Miss Saroja.

Miss Jayalakshmi, daughter of M. Krishnamurthy, Junior Engineer, Pattukottai with M. R. Swaminathan.

K. Kaliaperumal, Transformer section, son of Sri S. Kuppusasari, Carpenter Maistry with Miss Hamsavalli.

B. M. Jayaraman, son of Mr. S. Mahadevan, Chief Accountant, Seshasayee Bros., Private Ltd., Managing Agents, with Miss Kalyani.

Our congratulations and good wishes are extended to all these newly-weds.

Upanayanams :

Our best wishes for a bright future go also to the boys whose upanayanams were recently celebrated :

Natarajan, son of K. N. Viswanathan, Stores Costing.

Gopalan, alias Venkataraman, son of V. Krishnamurthy, Head Lineman, Srirangam.

Santanam, son of C. R. Sundararajan, Senior Line Supervisor, Thiruppalathurai.

Venkataramani, son of M. Krishnamurthy, Junior Engineer, Pattukottai.

Resignations :—

- (1) V. Srinivasan, Clerk, Revenue (15 Years and 11 Months.)
- (2) N. Sanjeevi Raman, Bill Collector, Revenue (7 Years.)
- (3) S. Sivasubramanian, Bill Collector, Revenue (2 Years)

- (1) Saroja and Dorairaj.
- (2) Rajalakshmi and Ramamurthi.
- (3) Hamsavalli and K. Kaliaperumal.
- (4) Ananthalakshmi and Venkataraman.



(1)



(2)



(3)



Obituary :

We regret to report the death of S. Venkataraman, Attender, Tiruthuraipundi, on June 10. To the members of his bereaved family, sympathy is extended.

Musical Discourse :

On May 31, Mr. Sunda of All-India Radio, New Delhi, regaled us to two delightful pieces of musical discourse.

The pieces that he chose were *Delhi Kuravanji* and "Miss Valli's Wedding—New Style."

It is a pity that there was not as large an audience as we had hoped for—unfortunately there was a disastrous fire outbreak in the city on that day—but the few who could come thoroughly enjoyed the performance.

Pictures :

Pictures screened in recent months included : *Dawn of Social Security*, *The River of Hope*, *Six Years of Freedom*, *Our Territorial Army*, *Beat T. B.*, and *Welfare for Workers*.

Tail-piece :

"Did you say I'll have to hire four electricians to help me rebuild this house," asked the amazed owner.

"Yes," warned the boss carpenter. "Union rules, you know. One man to put in the outlets upstairs, another man to put them downstairs."

"But that's only two."

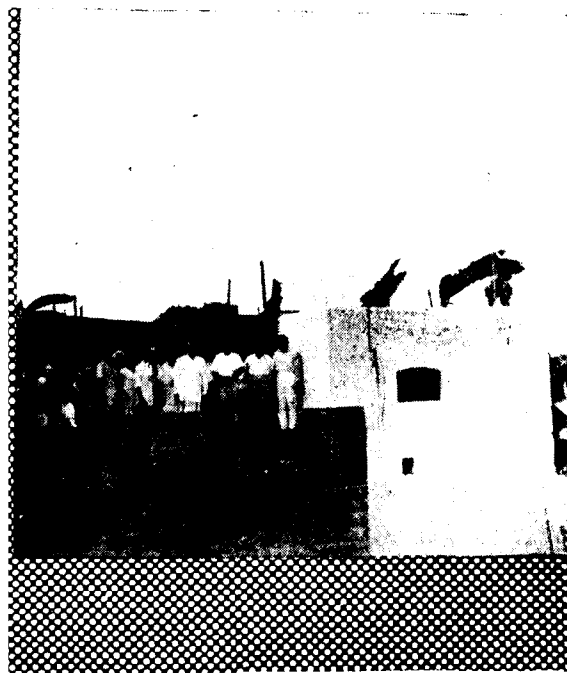
"Yes, I know, but the third man sees that the downstairs man doesn't put them upstairs, and the fourth man sees that the upstairs man doesn't put them downstairs."



SME SUPPLY NEWS

Two villages in Tiruchi district and five villages in Tanjore District received supply during the months of April and May 1956. Gudalur and Pirakambi in Tiruchi District and Kottur, Rajakalippur, Harichandrapuram, Vadagal and Thirukkarugavoor in Tanjore District.

Gudalur was given supply on April 2. A short span of 11-kV O.H. line for 125 feet was drawn, tapped off pole No. 38(A) Rural West feeder. A 10-kVA pole-mounted transformer substation was erected in the village, and L.T. O.H. lines were drawn for one mile. Forty-five pound rails with ACSR "Squirrel" conductor were used. Eleven house services and twelve street lights were connected



up. The cost of the extension is Rs. 9,500.

Pirakambi, Lalgudi Taluq, received supply on April 27, Mr. H. K. Ramaswami, Dy. Chief Engineer, performing the formal switch-on.

Mr. S. Sankaran, Superintending Engineer, spoke on the useful role of electricity in agricultural operations.

An H. T. line, tapped off pole no. 63 Edumalai 22-kV feeder, was drawn for about five miles. Two transformer substations of 75 and 50 kVA were erected and L. T. O. H. lines for about six miles were drawn. One rice mill and fifty-one agricultural pumpsets would be taking supply, some lighting services and street lights have already come off. On the day of formal supply, nine agricultural pumpsets were connected.

Forty-five pound rails were used both for H. T. and L. T. along with 5 in. by 3 in. girders for L. T. ACSR "Weasel" was used for the H. T. line, "Squirrel" and 7/1093 all-aluminium conductors were used for the L. T. lines.

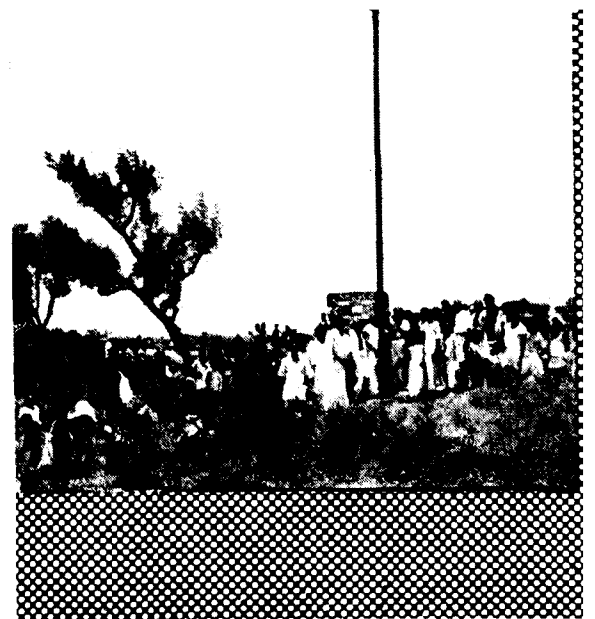
The cost of the Pirakambi extension is Rs. 1,14,900. This is one of the villages coming under the State Government loan scheme of Rs. 11.12 lakhs for rural extensions.

Inauguration function at Pirakambi village. Mr. H. K. Ramaswami performed the "switch-on."

Thenur extension.

Kottur and Rajakalippur, in Nannilam Taluq, Tanjore District, were given supply on March 21. (As a matter of fact, the news of the extension to these two villages should have appeared in the last issue of ELECTOLITE, but due to late receipt of the report we could not use it.—Ed.) An H. T. spur line tapped off pole No. 47 on the Vishnupuram-Kuthanur 11-kV H. T. line was drawn to the village Kottur. A pole-mounted transformer substation of 1.5 kVA capacity was erected, and supply given to the lighting services. Fifty-pound rails with ACSR "Squirrel" conductors were used for the H. T. line. The cost of the extension was Rs. 1,800. An L. T. O. H. line, tapped off pole no. 59 on the Mappilaikuppam L. T. lines, was drawn for 1,600 feet. Nine lighting services were given supply. Forty-five pound rails with 7/1093 all-aluminium conductors were used. The cost of the extension is Rs. 2,500.

Vadgal and Tirukkarugavoor, in Sirkali Taluq, Tanjore District, received supply on April 9, 1956. These two villages are on the main H. T. line route from Keeranallur to Thirumullaivasal. A short H. T. spur line of 200 feet was drawn, and a 5-kVA pole-mounted transformer substation was erected at Thirukarugavoor. L. T. O. H. lines for about



one mile were drawn from the substation serving Thirukarugavoor and Vadagal. Twenty-four lighting services and twenty street lights were connected.

Harischandrapuram, Nagapattinam Taluq, Tanjore District, received supply on April 12, 1956. L. T. O. H. lines for one mile were drawn from the L. T. lines at Vadapathimangalam. Fifty-pound rails with 7/1093 and 7/0772 all-aluminium conductors were used. One flour mill, nine lighting services and ten street lights made up the load on the day of supply. The cost of the extension is around Rs. 10,000.

Public water supply to the village of Thoppalampuliyur, three miles from Tiruvarur under the Rural Water

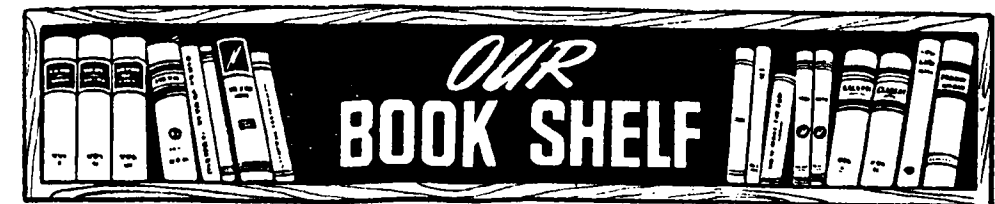


Public water supply taps
at Thoppalampuliyur.

Supply Scheme of the Government was opened by the Personal Assistant to the Collector of Tanjore on February 2.

An automatic pumpset (1½ inch by 1½ inch) operated by a 1 h. p. motor was installed by Sri A. Subramanian, our Junior Engineer on behalf of the South Madras Agencies, Private, Limited at Thoppalampuliyur. Similar units are, also, being installed in other places in the taluqs of Mayavaram and Mannargudi.

Area	Industrial	Agricultural
Tiruchirapalli-Srirangam area	(Because of the restrictions imposed due to low water level conditions in the hydel reservoirs, no new industrial loads were connected.)	95.5 h. p.
East-Tanjore area		Nil



THE RENAISSANCE OF HINDUISM—By V. Ramaiya, B. E., M. I. E. (Ind.), Chief Engineer, South Indian Rly. (Retd.)

THE propriety of a journal like ELECTROLITE attempting an assessment of the merits of a book like *The Renaissance of Hinduism* would, at first blush, appear to be open to question. But, then, this book is by an engineer. And its hero is no less than the 'divine engineer and architect—the blessed Bhagavan Sri Krishna', to quote from the admirable foreword to the book by Mr. K. S. Ramaswamy Sastri.

Although primarily a Hindu book of scripture, the *Bhagavad Gita* has always commanded a universal appeal. The teachings that it inculcates transcend narrow, national frontiers.

As an example of the growing interest of western savants in the *Gita* might be mentioned the translation that Christopher Isherwood brought out two years ago (with a gem of a foreword by Aldous Huxley).

The glory of the volume under review is that the author talks to the reader, not as a superior teacher handling a particularly backward pupil, but as one intelligent man to another. Having

been an eminent engineer, he can speak in the idiom of this modern, machine age of ours. Here are some sample quotes: "Even the law of gravitational attraction loses its normal significance while considering the forces that prevail inside the atom". ... "In many parts of the world and in our actual experience, in India, too, the problem of 'Lebensraum' is becoming more and more intense. Despite the aids of science, a stage of saturation in which the country cannot support any further increase of population is fast overtaking us even if it has not already been reached."

Mr. Ramaiya is to be congratulated on his outstanding contribution to *Gita* literature. A book eminently readable, full of ancient saws and modern instances, it is a "must" for the engineer as well as the layman.

—R. P.

POWER ENGINEER — Special Number on Planning. Published by the Society of Power Engineers, Simla. Editor S. Swayambu.

To mark the occasion of its completion of five years, POWER ENGINEER has come out with a sumptuous, special

The opening article on "Electricity Schemes in the Second Five-Year Plan" (originally a radio talk) by Mr. V. T. Krishnamachari is a little masterpiece in itself. What is proposed to be done by way of power development in the Second Plan period is well and clearly told. The provision of Rs. 75 crores in the Second Plan for rural electrification schemes as against Rs. 20 crores in the First Plan is significant; it is proof of the Union Government's desire to bring the benefits of electricity to as many villages as possible. The piece of advice that Mr. Krishnamachari tenders—namely,

— S. SANKARAN.

மணி தன் மனம்போலேயே அப்போது
தான் கண்ணியம் தந்த தாயை உறுதிப்படுத்தி,
உயிர் தன்னிடம் கொண்டு வந்த தன் மகன்

பந்திகளிடம் பேசும்போது அன்பு ஒழுகும்! வேலையே செய்யாத முழுச் சேபம் பேரிலையும்தன் இனிய வார்த்தைகளால் உழைப்பாளியாக மாற்ற வல்லவர் மணி யென்றால்கூட அது மிகையாகாது.

சி. எஸ். மணி இளகிய மனதும், இனிய சுபாவமும் உள்ளவர். யாருடனும் திறந்த மனதுடனேயே பேசுவார். கலையார்வமும் இறைவனிடம் பற்றும் மிகுந்தவர். அண்மையில் புயலினால் துன்பமுற்ற வேதாரணியம் மக்களுக்குப் பல புதிய ஆடைகளை அன்பளிப்பாக வழங்கினார் என்றால் அவருடைய தாராளத் தன்மையைப் பார்த்துக் கொள்ளுங்கள். சிறு வயதிலிருந்தே நாடகம், இசையென்றால் மணிக்கு உயிர். மாணவனாக இருந்தபோது சில நாடகங்களிலும் கடித்திருக்கின்றார். ஓய்வு நேரங்களில் காமிராவும் கையுமாகக் கிளம்பி பல காட்சிகளையும் ‘கிளிக்’ செய்து தனது ஆல்பத்தை நிரப்பி விடுகிறார். அத்துடன் தனது வீட்டில் ஒரு சிறு வாசகசாலைபோல் அறிஞர்கள் பலர் எழுதிய புத்தகங்களையும் சேகரித்து வைத்திருக்கிறார்.

கார்ப்பொரேஷனின் நிர்வாகத்தைத் தமிழில் நடத்தவேண்டுமென்று திட்டமிட்டபோது மணி அதற்குத் தனது முழு ஆதரவையும் ஒத்துரைப்பனையும் அளித்தார்.

“கலங்காது கண்ட விளைக்கண் துளங்காது தூக்கங் கடிந்து செயல்”

என்று திருக்குறள் ஆசிரியர் குறிப்பிடுவது போல் தான் மேற்கொண்ட பணியைத் துன்பம் எது வந்தாலும் கலங்காமல் உறுதியான உள்ளத்துடன் செய்து முடிக்க வேண்டும் என்பதே மணியின் இலட்சியம்.

“பேசி நின்ற பெரும் பிரதிக்களை மாசிலாது நிறைவுறும் வண்ணம் ஆசியருளுக” என்று அவருக்காக நாமம் இறைவனைப் பிரார்த்திக்கிறோம்.

— வே. ரங்கராஜன்

கன்குமர் — கம்பெனியார் நல்லுறவு

பொது கலனைப் பேணும் ஸ்தாபனங்கள் தங்கள் கடைமையைச் செய்தால் மட்டும் போதாது. அதைச் சிரத்தையாகவும் பிறர் இன்புறும் வண்ணமும் செய்யவேண்டும். அதிலும் மின்சாரத்தின் சூலம் பணி செய்யும் ஸ்தாபனத்திற்கு இப்பொழுது அடிகம்.

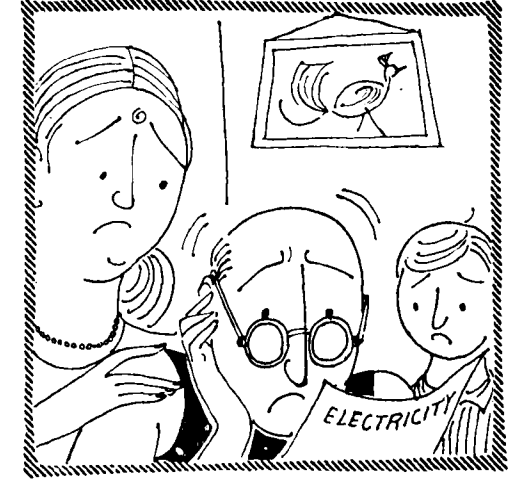
கவற்றிலுள்ள ஒரு பொத்தானை அழத்தியதும் ஜகஜ்ஜேபியாக மின்சார விளக்கு எரிந்தது. அல்லது ஒரு இயந்திரம் ஓடுகிறது. இதனால் மக்கள் கண்டிப்பாய் பயன் அடைகிறார்கள். அதற்காக விளக்கு எரியும் ஒவ்வொரு சமயமும், “ஆகா! இந்த அற்புதத்தைச் சொ்கிறவர்களின் நிறைமதான் என்னோ!” என்று மின்சாரக் கம்பெனியை வாழ்த்துகிறார்களா? அல்லது “உங்கள் பணிக்கு எங்கள் வந்தனம்” என்று அடிக்கடி பாராட்டுக் கடிதம் தான் எழுதுகிறார்களா? இரண்டும் இல்லை. ஆனால் பொத்தானை அழத்தியதும் விளக்கு எரியவில்லையோ, போங்க! அவர்களுக்குப் பிரமாதமாகக் கோபம்தான் வந்துவிடுகிறது. உபயோகபுக்கடிதங்களைக் குவிக்கத்தொடங்கி விடுகின்றனர். டெலிபோன் சூலம் காரணம் விசாரிக்க ஆரம்பிக்கின்றனர். இப்படிப்பட்ட சந்தர்ப்பத்தில் தான் மின்சாரக் கம்பெனி நிலைமை தெரிந்து இங்கிதமாக நடந்துகொள்ள வேண்டியிருக்கிறது. மின்சாரக் கம்பெனியின் சிப்பந்திகளுக்கும் கன்குமர்களுக்கும் தினந்தோறும் கேடுக்கு கேராகவோ, டெலிபோனிலோ அல்லது கடிதப் போக்கு வரத்து சூலமாகவோ தொடர்பு ஏற்பட்டுக் கொண்டிருக்கிறது.

முதலில் கேடுக்கு கேரான தொடர் வாய்ப்பற்றிக் கவனிப்போம். கம்பெனியிலேயே வந்து மின் பணம் காட்டுவோருடன் மரியாதையாகப் பேசி, அவர் பில் தொகையை விரைவாக வாங்கிக் கொண்டு அவரை அனுப்பித்தல் வேண்டும். கன்குமர்கள் சிலர் பலவிதமான கோரிக்கைகளை அனுப்புவார்கள். சில சமயங்களில் அவர்களுடைய கோரிக்கைகளை நிலையம் ஏற்க முடியாமலிருக்கும். அப்போதுங்கூட அவரிடம் ‘சிடு சிடு’ என்று விழக்கூடாது. “இன்னொரு காரணங்களால் தான் உங்கள் வேண்டுகோளை எங்களால் ஏற்க முடியவில்லை” என்பதை அழந்தமாக—ஆனால் மரியாதையாகத் தெரிவிக்கவேண்டும். கோரிக்கை நிராகரிக்கப்பட்டபோதிலும் கன்குமர் மனதில் ஒருவிதமான அகிருப்தியும் இருக்கக் கூடாது.

இன்னொரு விஷயம்: கம்முடையதைப் போன்ற ஒரு மின்சார ஸ்தாபனத்தில் துரித நடவடிக்கை உணர்ச்சி மிகுந்திருக்க வேண்டும். பொதுவாக மக்களுக்கு சில சர்க்கார் காரியாலயங்களைப் பற்றி ஒரு மட்டமான எண்ணம் உண்டு. காரணம்—இங்கு காரியாலயங்களின் ‘சிவப்பு நாடாத்தனம்’ தான்! அங்கு காத்திருக்கிற ஊரும், கக்கும்—



“சிவப்பு நாடாத்தனம்.”



“புரியாத கடிதத்திற்கு அளிக்கப்படும் வரவேற்பு.”

பறக்கவே செய்யாது! கம்மைப்போன்ற மின்சார ஸ்தாபனங்கள் தாமதக் கொள்கையை ஒருபோதும் கையாளலாகாது.

கம்முடைய ஸ்தாபனத்திற்குக் கன்குமர்கள் வருகிறார்கள். அதைப் போலவே நம் சிப்பந்திகளும் கன்குமர்களின் விட்டிற்குப் போக கேரிடும். உதாரணமாக ‘பியூஸ்’ போய்விடும். உடனே நமக்குக் கன்குமரிடமிருந்து தகவல் கிடைக்கும். அப்படிப்பட்ட சமயத்தில் தேவையான கருவிகளுடன் சிப்பந்தியை சம்பந்தப்பட்ட அதிகாரி அனுப்பவேண்டும். வேலை செய்யப் போகும் சிப்பந்தியும் தன் பணியைச் செவ்வனே செய்து, கன்குமர் மகிழும் படிச் செய்யவேண்டும். இப்பேற்பட்ட சிப்பந்திகளுக்கு முக்கியமாகப் பொது ஜனத் தொடர்பு உணர்ச்சி இருக்க வேண்டும். ஏற்கனவே அவதிப்பட்டுக் கொண்டிருக்கும் கன்குமருக்குத் தலை வேதனையை அதிகரிக்கும் வண்ணம் சிப்பந்திகள் நடந்துகொள்ளக்கூடாது. சம்பந்தப்பட்ட அதிகாரியின் கவனக்குறைவினால், தக்க கருவிகளுடன் ஒரு சிப்பந்தி பழுதுபார்க்கவேண்டிய இடத்

திற்கு அனுப்பப்படவில்லையென்பதில் அங்கு விறை கொடுக்கும், கன் துமருக்குக் கால் தாமதமும் தான் ஏற்படும். அப்போது சந்தர்ப்பத்தில் பணியாளர் ஒரு தராள சித்தையுடையவராக இருந்தாலன்றி, காரியாலயத்தினரை கிச்சாய் தூற்றுவார். கன் துமருள் அவருடன் சேர்த்துகொள்வார்! கல்லுறவு பாதிக்கப்படும்.

இதுவுமன்றி மில் கலெக்டர்களும் அடிக்கடி கன் துமருகளை சத்திக்க வேண்டியிருக்கும். மில் கலெக்டர்கள் கன் துமருகளிடம் சமயா சந்தர்ப்பம் அறிந்து, சாதுரியமாகவும் பரியாதையாகவும் பழகவேண்டும்.

பொது ஜனங்களுடன் தொடர்பு வைத்துக்கொள்ள உதவும் மற்றொரு முக்கிய சாதனம் டெலிபோன். காரியாலயத்தில் வேலைபார்க்கிறவர்களுக்கு டெலிபோன் ஒருவிதத்தில் அவசியம்! ஆனால் அதைப்போலத்தான் அது கன் துமருக்கும்! டெலிபோனில் பேசும் அதிகாரி சாத்தமாவும் கிதானமாகவும் பேசவேண்டும். அவர் பரபரமாகப் பேசினால் அவரைப் பின்பற்றி அவசியம் வேலை செய்வோரும் சற்று மிடுக்கமாகவே பேசுவளிப்பார்கள். டெலிபோன் சம்பவத்தைப் பொறுமையைச் சோதிக்கத்தான் செய்யும். ஆகிறும், “பொறுத்தார் பூமியான்வார்” என்பதை ஞாபகப்படுத்திக் கொண்டு ஒரு தேவகபாவத்தை வகுவித்துக்கொள்ள வேண்டும்!

கடைசியாக, கன் துமருடன் வைத்துக் கொள்ளும் கடிதப் போக்கு வரத்தில் முக்கிய கவனம் செலுத்தவேண்டும்.

கேள்வியைச் சோ, டெலிபோன் சம்பவத்தை யோ கிலக்கக்கடியவை அல்ல. ஆனால் கடிதத்தையோடுவெனில் ஒரு வாகக் கொண்டுவரலாம். கடிதம் எழுதுதலே ஒரு கலை. கன் துமருக்கு எழுதும் போது பல விஷயங்களைக் கவனிக்க வேண்டியதாயும், கன் துமருள் எல்லா நேரமே பட்ட தாரிவாய்— அல்லது



“புரிந்த கடிதத்திற்கு அளிக்கப்படும் வரவேற்பு”

விந்தாய் அறிவுடையவராக— இருக்க முடியாது. ஆதலால் அவருக்கும் புரியும்படியான எளிய கலையில் எழுத வேண்டும். அதற்காக கன் துமருக்கு ஒரு குறையைத் தர சொல்வது போல எழுதக் கூடாது. எழுதப்படும் கடிதத்தில், (1) உண்மை தெரிவிக்க வேண்டும், (2) கன் துமரின் பிரச்சனை அனுபவித்துடன் கவனிக்கப்பட்டதாகத் தெரிவிக்கப்பட வேண்டும்.

கிலையில் வேலை செய்யும் ஒன் கொஞ்சம் கவனம் பொது ஜனத்தோடு தொடர்பு உணர்ச்சி மிகுந்திருக்க வேண்டும்.

இன்போல லன்றி இருதி வியாஸம் வன் சொலல் என்றும் படிபடாது!

— பி. வி. லலிதா.

[இங்கிலாந்து, லண்டனில், லெலாந்த் ஸ்டான்ட் அலெக்சிஸ்டி. போர்டின் காரியதரிசி திரு. ஏ. எல். பர்னஸ் ஆங்கிலத்தில் எழுதியுள்ள “Office Relations with Consumers” என்ற நூலைத் தழுவி, அவர் அனுபவிப்பெற்று இக்கட்டுரை பிரசுரிக்கப்பட்டிருக்கிறது.

— ஆர்.பி.யி.

எங்கள் உல்லாசப் பிரயாணம்

கே. மங்களநாதன்
Workshop, SMESC Ltd.

இயற்கையின் வழில் எங்கும் பரவி யிருக்கிறது. அதை அனுபவித்து ஆனந்தமடையவை மக்கள் பல்வேறு இடங்களுக்கும் உல்லாசப் பிரயாணம் செய்கின்றனர். துற்றாலம் நீர்வீழ்ச்சிக் குழி போன்றும், மகாபலிபுரம் செல்லிதோம், எதற்காக? அங்குள்ள காட்சிகளைக் காணவேண்டும், மனதுக்கு சம்மியமாகச் சற்று பொழுதைத் தரிக்கவேண்டும் என்பதற்காகத்தான். இதனால் நம் அறிவும் விசாலமடைகிறது. வாழ்க்கை அனுபவமும் உற்சவமும் தோன்றின்றன, கட்டுறவு உணர்ச்சியும் இதய வளர்ச்சியும் ஏற்படுகின்றன.

ஆண்டுதோறும் காப்பிபேரேஷன் சிப்பந்திகள் குறைந்த பட்சம் ஒரு உல்லாசப் பிரயாணமாகுது போவது வழக்கம், அதிலும் திருவாளர்கள் கே. கடபாஜன், சாமகப்பு ஆரியோரின் அரிய முயற்சியினால் ஒவ்வொரு வருடமும் ஏப்ரல் மாதத்தில் கல்லணைக்குச் சென்று அங்குள்ள ஆஞ்சகேயரை வழிபட்டு வருகிறோம்.

கல்லணை திருச்சிராப்பள்ளிக்குப் பத்து மைலுக்கு அப்பால் உள்ளது. இவ்வூரைச் சுற்றிக் கண்கொள்ளா

இயற்கைக் காட்சிகள் கிரம்பியுள்ளன. கல்லணையில் மின் பிடிப்பு ஒரு முக்கியமான தொழிலாக இருக்கிறது. இங்கு பிடிக்கப்படும் மீன்கள் பல ஊர்களுக்கும் அனுப்பப்படுகின்றன. கல்லணை பாய்பற்றிச் சொல்லும்போது காவிரி கதியைப்பற்றி விவரித்தேயாகவேண்டும்.

காவிரி நதி குடகு காட்டில் பிரமகிரி என்னும் குன்றில் உற்பத்தியாகிறது. இந்த நதி இதன் துணையாறுகளான பவானி, தெய்யல், அமராவதி ஆகியவற்றுடன் சேலம், திருச்சி வழியே ஓடுகிறது. கல்லணையில் காவிரி நதி ஐந்து பிரிவுகளாக ஆகிறது. அவையாவன : காவிரி, கொள்ளிடம், குடமுருட்டி, புது ஆறு, வெண்ணாறு ஆகியவை. கல்லணைக்கு அருகிலுள்ள திருக்காட்டுப் பள்ளியில் மேலும் பல பிரிவுகளாகப் பிரிந்து கடைசியில் வங்கக் கடலில் சங்கமமாகிறது. கல்லணைக்கு அருகே அரசங்குடி, கிளியூர், தோகூர் ஆகிய கிராமங்கள் உள்ளன.

ஏப்ரல் 22ம் தேதி ரூயிற்றுக்கிறமை காலே 8 மணிக்கு காங்கள் சுமார் 200 பேர் கல்லணைக்குப் புறப்பட்டோம். ஊரை அடையும்போது சுமார் 9-15 மணி.

புண்ணியத்தியபம் காவிரியில் ஸ்ரீ
வம் செய்தபேபது,

“ ஆற்றினிலே கலைபூற்றினிலே—

தென்றல்
காற்றினிலே மலைப்பேற்றினிலே
ஏற்றினிலே பயன் சுத்திடுங்கலை
இனத்தினிலே உயர் காடு.....”

என்று பாரதியார் கம் காட்டின் பெரு
மையை விளக்கி முழக்கியபாடலை என்
வாய் முணுமுணுத்தது! உடலைத் தத்
தம் செய்தபின், உள்ளத்தை சுத்த
மாக்க முனைந்தோம். ஆம்! கொள்
விடக் கரையில் கம்பீரமாக நின்ற

அனுமலை அன்பு பெய்தும் மனத்
து வப்பணித்தோம். புலங்குயரின்
தீவிமையான விதத்து... மின்? சுத்
தும், கொம்பாவையுந்தான்! பெழுது
பெயராத தெரியவில்லை! சுதிரவன்
மலைமையிலே இறங்கிய அத்திப் பெழு
திலே அவ்வுரை விட்டு நிறைந்த உள்
வத்துடன் புறப்பட்டு இரவு அவரவர்
இல்லம் சேர்ந்தோம்.

காடிகளில்க—ஒற்றுமையின் உயர்
வை உரை—உல்லாசப் பெழுதின்
பாலை நுகர இத்தகைய பியாணம்
மிகவும் அவசியம்.

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**செய்திக்
கதிர்**

பாரத நாட்டில் அனுமலை ஏற்
படுத்துவதற்கான ஒப்பந்த மொன்று
இந்தியா—கனடா இடையே சரிபத்
தில் கையொழுத்தாகியது. கோடிப்பு
உதவித் திட்டத்தின்கீழ் ரூ. 7 கோடி
செலவில் பம்பாய்க்கு அருகிலுள்ள
பிரபம்பேயில் இவ்வுலை அமைக்கப்
படும். இதற்காக 135 அடி உயரமும்,
120 அடி விட்டமும் உள்ள கட்டிடம்
ஒன்று கட்டப்பட்டும்.

இத் திட்டத்திற்கான செலவை
இந்தியாவும், கனடாவும் கூட்டாக
ஏற்கின்றன. எனினும் திட்டம் நிறை
வேறியதும் அனுமலை இந்தியாவுக்கே
உரியதாகும். 1958-ம் ஆண்டின்
தேர்தல்களில் இயங்கவிருக்கும் இவ்
வாறு உலை தென்கிழக்கு ஆசிய நாடு
களின் ஆராய்ச்சிக்கு உதவும்.

10,000 கிராமங்களுக்கு மின்சார வசதி

வேலை வாய்ப்புகளை அதிகரிப்பதற்
காக மின்சார வசதிகளைப் பெருக்கும்
திட்டத்தின் கீழ், இரண்டாவது ஐத்

தாண்டுத் திட்டத்தின் போது 10,000க்
கும் அதிகமான கிராமங்களுக்கும்
சுமார் 500 கிலோ நகரங்களுக்கும் மின்
சார வசதி செய்து கொடுக்கப்படும்.
பல ராஜ்யங்களின் திட்டங்களுக்காக
ரூ. 90 கோடி செலவிடப்படும்.

**புதுச்சேரி ராஜ்யத்தில் மின்சார
விஸ்தரிப்பு**

இரண்டாவது ஐந்தாண்டுத் திட்டத்
தின் கீழ் புதுவை ராஜ்யத்தில் கிராம
மின்சார விஸ்தரிப்புக்கு ரூ. 60 லட்சம்
செலவிடப் போகின்றனர். திட்டக்
காலத்தில் 60 கிராமங்களுக்கு மின்சார
வசதி ஏற்படுத்துவதுடன் சுமார் 1000
விவசாய பாம்பு செட்டுகளுக்கும் மின்
விசை கொடுக்கப்படும். திட்டத்தின்
ஒரு பகுதியாக விழுப்புறத்திலிருந்து
ஒரு 66 கிலோவாட் லைன் சென்னை
சங்கம் போட்டு வருகிறார்கள். புது
வையில் பிரஞ்சுக்காரர்களின் ஆட்சி
ஒழித்தபின் மின்சாரக் கட்டமைப்பதி
யாகக் குறைக்கப்பட்டிருப்பது குறிப்
பிடத்தக்கது.

**பாக்ராதங்கல் இரண்டாவது மின்சார
நிலையம் திறப்பு**

பாக்ராதங்கல் திட்டத்தின் இரண்
டாவது மின்சார நிலையமான
கோட்டா மின்சார நிலையத்தை யூனிய
யன் உள்நாட்டு அமைச்சர் கோஷிந்த
வல்லப பந்த் ஜூன் மாதம் 9ம் தேதி
திறந்து வைத்தார். இம்மின்சார நிலை
யம் நங்கல் அணையிலிருந்து 18 மைல்
தூரத்திற்கு அப்பால் நிறுவப்பட்டிருக்
கிறது.

கோட்லா மின்சார நிலையத்தில் மூன்று உற்பத்தி சாதனங்களை அமைக்கப் போகிறார்கள். இவை ஒவ்வொன்றும் 24000 கிலோவாட் மின்சாரம் உற்பத்தி செய்யும்.

கோட்லா மின்சார நிலையத்தில் மிக நவீனமான மின்சார சாதனங்களையே பொருத்தி யிருக்கிறார்கள். கோட்லா மின்சார நிலையத்திற்கு ஆறு மைல் அப்பாலுள்ள கங்குவால் மின்சார நிலையத்திலிருந்து விசேஷ சாதனங்கள், கேபிள் கம்பிகள்மூலம் இதை இயக்குவார்கள். பல்வேறு முக்கிய 'கிரிட்' (Grid) நிலையங்களைப் பிரதான மின்சார நிலையத்துடன் இணைப்பதற்காக இதில் விசேஷமான 'கேரியர்' போக்குவரத்து முறை வைக்கப்பட்டுள்ளது. கட்டுப்பாடு வேலை நடவடிக்கைகளுக்கும், பல்வேறு விநியோக நிலையங்களுக்குத் தொடர்ந்து மின்சார சப்ளை செய்யவும் இது அவசியம்.

‘குந்தா’ மின்சாரத் திட்டத் தொடக்க விழா

உதகமண்டலத்திற்கு அருகேயுள்ள குந்தா நீர் மின்சாரத் திட்டத்திற்கு யூனியன் நிதி அமைச்சர் திரு. சிந்தாமண் தேஷ்முக அஸ்திவாரக்கல் நாட்டினார். இவ்விழா ஜூன் 29ம் தேதியன்று நிகழ்ந்தது.

குந்தா நீர் மின்சாரத் திட்டம் இரண்டாவது ஐந்தாண்டுத் திட்டத்தின்கீழ் நிறைவேற்றப்படும். 1961ம் ஆண்டில் இத்திட்டம் முடிவடையும் என்று எதிர்பார்க்கப்படுகிறது. சுமார் 35 கோடியே 44 லட்சம் ரூபாய் செலவிடப்படும்.

நான்கு கட்டங்களில் பூர்த்தியாக விருக்கும் குந்தா நீர் மின்சாரத் திட்டத்தினால் மொத்தம் சுமார் 1,80,000 கிலோவாட் மின்சார சக்தி உற்பத்தியாகும்.

இத்திட்டத்தினால் சென்னை ராஜ்யத்தில் வேலை வாய்ப்புக்கள் அதிகரிக்கும் என்றும், பொருளாதார நிலை அபிவிருத்தி அடையுமென்றும் நம்பப்படுகிறது.

கன்ஸ்யூமர்களுக்கு நம் நன்றி

மேட்டூர் அணையில் நீர் மட்டம் குறைந்ததால் ஏப்ரல் மாதம் முதல் மின்சாரப் பங்கீடு முறையை அமுலாக்கும் நிர்ப்பந்தம் ஏற்பட்டது. குறைந்த பட்சம் 25 சத வீதத்திலிருந்து அதிக பட்சம் 66% சத வீதம் வரை மின்சார வெட்டு நீடித்தது. இந்நெருக்கடியான காலத்தில் கன்குமர்கள் எல்லோரும் எங்களுடன் இதய பூர்வமாக ஒத்துழைத்தனர். இதற்காக அவர்களுக்கு எமது மனமுவந்த நன்றியைத் தெரிவித்துக்கொள்கிறோம்.

நவ மின்சார யுகம்!

அமெரிக்கக் கம்பெனியொன்று கண்ணாடி நாள்களினாலான மின்சாரக் கம்பங்களைத் தயாரிக்கத் தொடங்கியிருக்கிறது. இக்கண்ணாடி நாள்க் கம்பங்களை இருவர் சுலபமாகத் தூக்கிச் செல்லலாம். தவிரவும் மரக் கம்பங்களைப் பாழ்படுத்தும் கரையான் போன்ற பூச்சிகள் இக்கம்பங்களைப் பாதிக்கா.

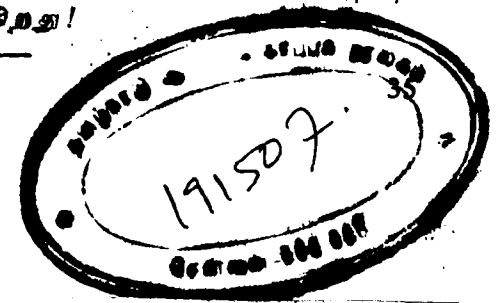
பக்கத்துப் படுக்கையிலுள்ளவருக்கு எவ்வித இடைஞ்சலும் ஏற்படுத்தாமல் ஒவ்வொரு நோயாளியும் தனக்கு விருப்பமான நிகழ்ச்சிகளைக் கேட்பதற்குத் “தலையணை ரேடியோ”க்களைக் கண்டுபிடித்துள்ளனர். இவை ஆஸ்திரியாவிலுள்ள வியன்னா ஆஸ்பத்திரி யொன்றில் பொருத்தப்பட்டுள்ளன!

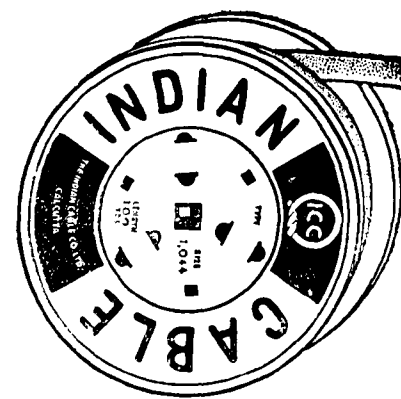
வர்ணவாரியாகப் பழங்களைப் பிரிக்கும் “எலக்ட்ரானிக்ஸ்” என்னும் மின்சாரக் கருவியைக் கலிபோர்னியாவில் செய்திருக்கிறார்கள். அந்நகரத்தொழிற்சாலையொன்றில் “எலக்ட்ரானிக்ஸ்” சுமார் 11,28,000 பழங்களை ஆழ்ந்த பச்சையிலிருந்து பிரகாசமான மஞ்சள்

வரை ஐந்து வர்ணங்களாகப் பிரித்தெடுக்கிறது!

மின்சாரப் பல்புகளிலுள்ள ‘டங்ஸ்டன்’ கம்பிகளை அபிவிருத்தி செய்து அவற்றை நீளவாக்கில் பொருத்தினால் அதே செலவில் 1 சதவீதம் அதிக ஒளி பெறலாம். அங்ஙனம் 300 வாட்டும் அதற்கு மேற்பட்ட சக்தியையும் உடைய பல்புகளில் இரட்டைச் சுருள் கம்பிகளைப் பயன்படுத்தினால் 15 சதவீதம் அதிக ஒளி பெறலாம். இதை ஜெனரல் எலக்ட்ரிக் கம்பெனி கண்டுபிடித்துள்ளது.

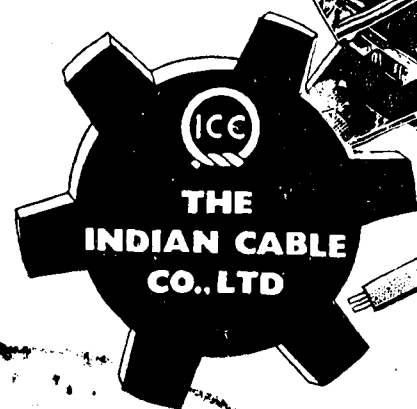
10 ஸ்தான இலக்கங்களைக்கொண்ட கணக்குகளை வினாடிக்கு 3000 வீதம் போடும் “எம்-2” என்ற மின்சாரக் கணிதக் கருவியை ரஷிய விஞ்ஞானக் கழகம் செய்திருக்கிறது. இதில் 1500 “எலக்ட்ரான் வால்வு”கள் இணைக்கப்பட்டுள்ளன. இதேபோல் அமெரிக்காவிலும் ஒரு கருவியைக் கண்டுபிடித்திருக்கிறார்கள். “எர்மா” என்று சொல்லப்படும் இக்கருவி நாள்தோறும் சுமார் 50,000 பேர்களுடைய கொடுக்கல்-வாங்கல் விவரங்களைப் பதிவு செய்கிறது!





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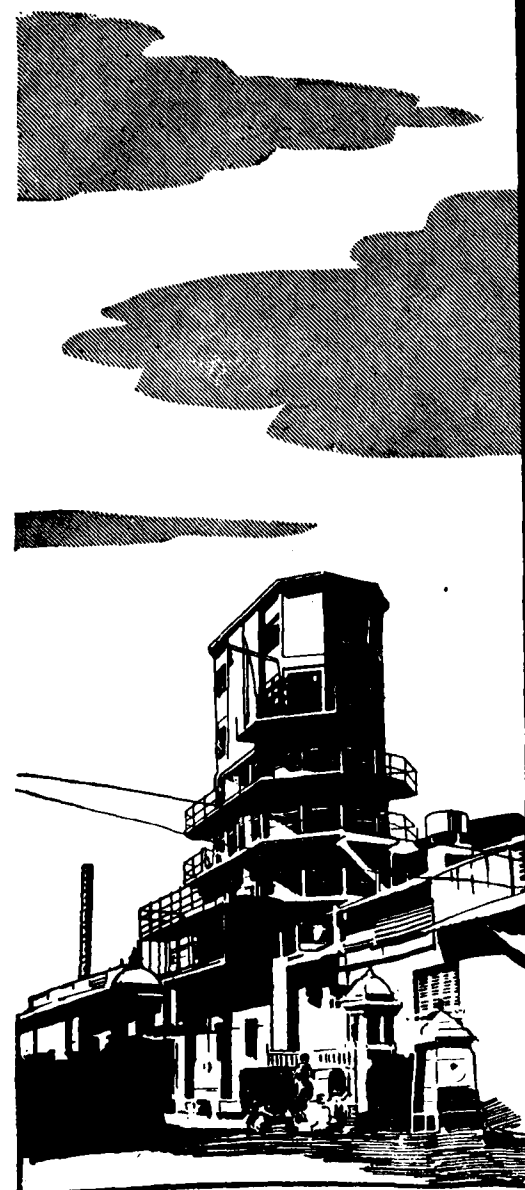
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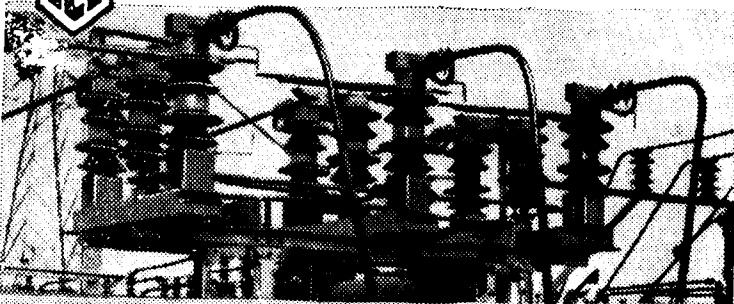


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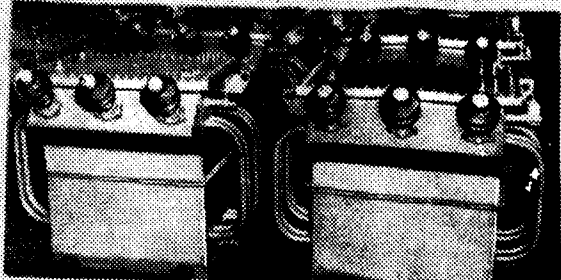
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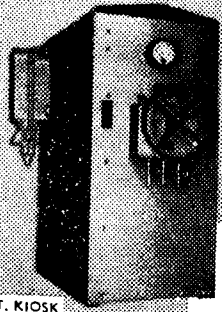
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A view of ECE 33 KV AIRBREAK SWITCHES installed in Chord Road Substation of Government of West Bengal



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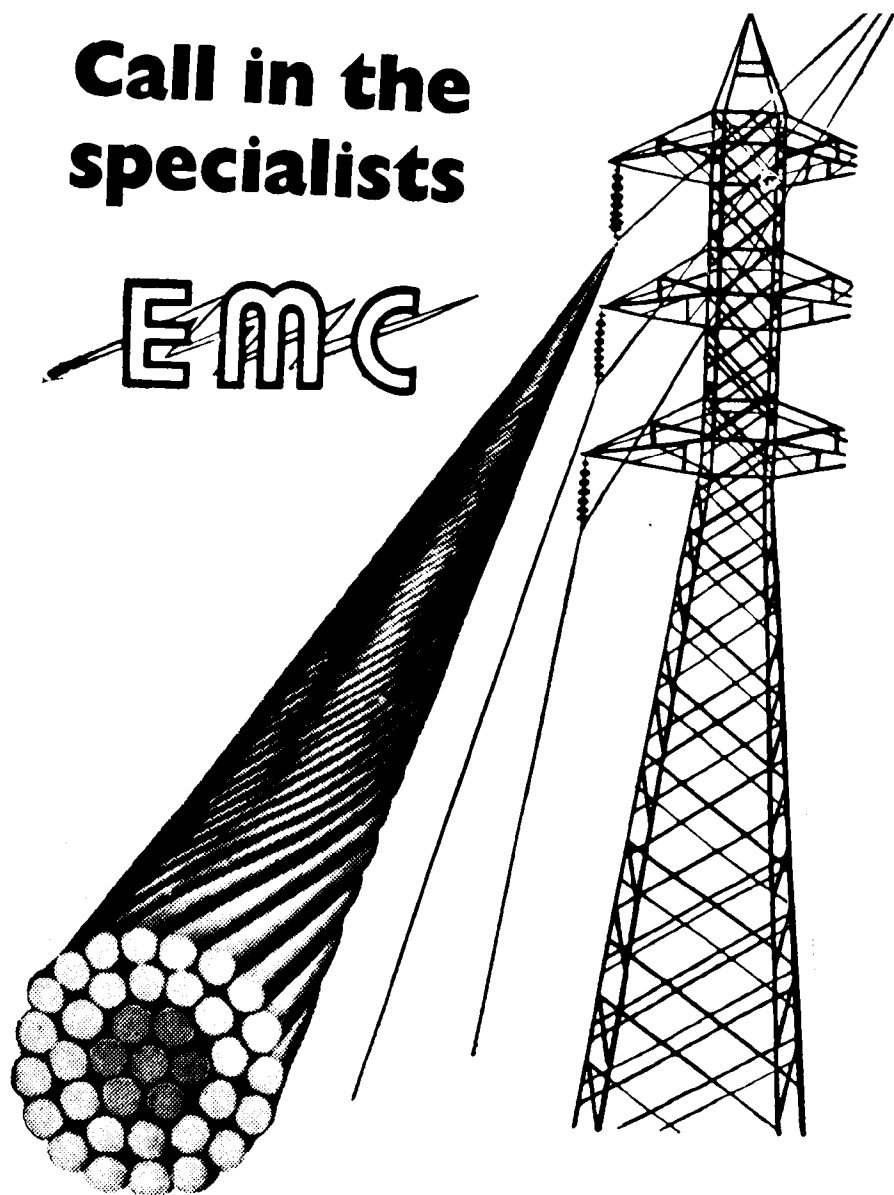
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