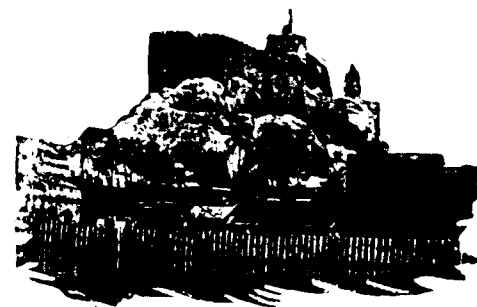
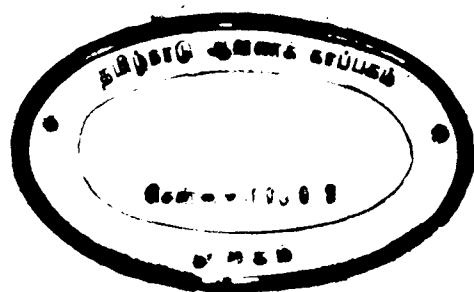




(Rock Fort, Tiruchi)

IN THIS ISSUE:

He turns a new leaf!
Business Triangle
Large Excavator
&
Other Usual Features.

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3

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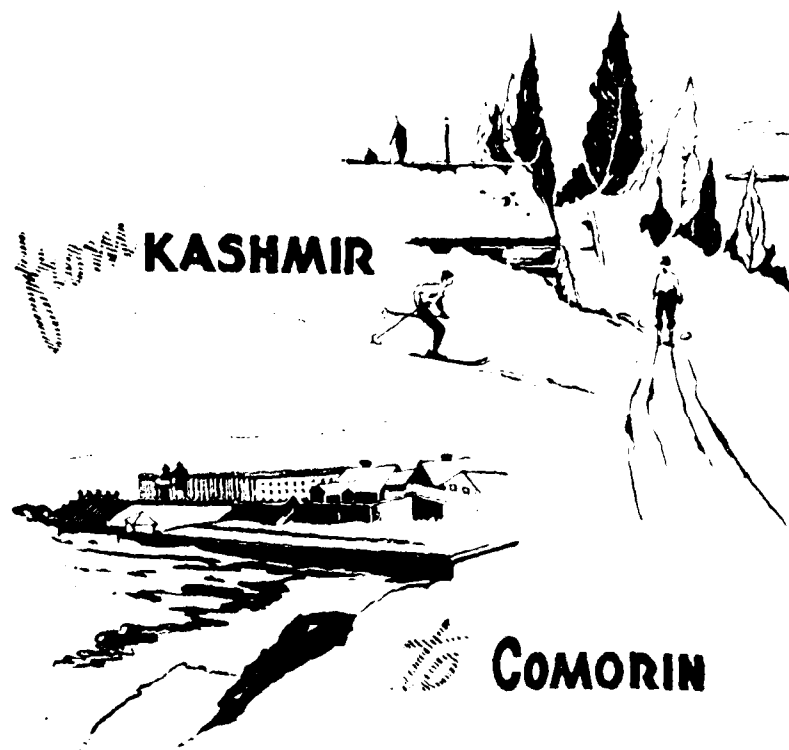
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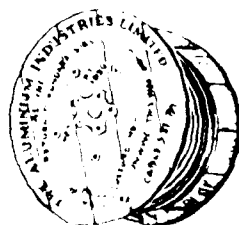
AIX 20 A

Oct.—Dec. 1951



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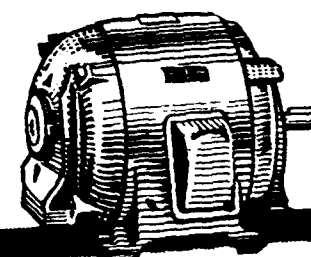


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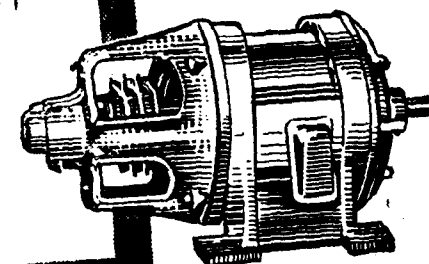
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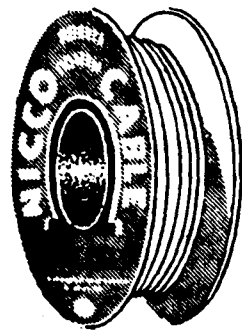
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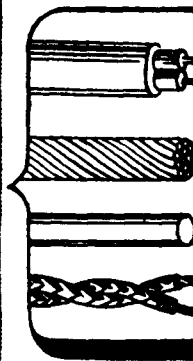
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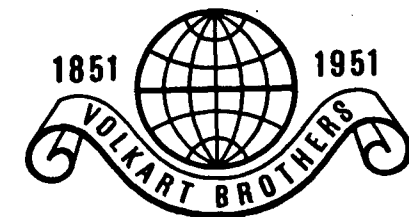
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ELECTRICITY and THE CHEMICAL INDUSTRY



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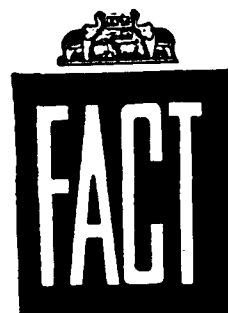


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Electrolite

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VOL. III

OCT - DEC. 1951

No. 3

ELECTRICITY (SUPPLY) (AMENDMENT) BILL

IN recent years, the private sector of the Electricity Supply Industry has had to face a number of problems.

In Madras, while generation is entirely owned by the State, there are a number of privately-owned undertakings, distributing power. These undertakings are proposed to be taken over and nationalised over a period of years, according to a programme drawn up by Government, and depending upon the amount that it could set apart for this purpose.

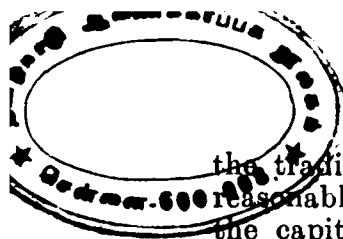
In certain other States, notably in Bengal and Bombay, private undertakings own some of the biggest hydro-electric and steam power plants, in addition, of course, to owning distribution networks. These undertakings have largely been responsible for the electrical development of the States concerned.

All other States, where development is more or less a recent

phenomenon, are as yet undecided as to whether development should take place under the auspices of State-ownership or part-private ownership with State control.

World War II brought to the fore the problem of lack of power availability in the country, and Government promptly appointed an Electrical Commission for evolving a rational plan of electrical development on a nation-wide basis. One result of the setting up of the Commission was the passing of the Electricity (Supply) Act, 1948. One of the main objects of the Act was the promotion of a sense of security in the Electricity Supply Industry, the lack of which had impeded the flow of capital to it.

The Sixth and Seventh Schedules to the Act prescribed the financial principles and the rates of depreciation that should govern



the trading of the licensees. A reasonable return of 5 per cent on the capital base was considered adequate at the time the Act was framed, as, then, conditions in the money market were rather free and easy. But, by the time the Act became law, conditions changed very much for the worse. The upshot of it all was that the industry found itself in a quandary, trying to raise capital on the tenuous rate of 5 per cent. And loose talks about nationalisation were certainly not calculated to lash the investing public into a lather of enthusiasm for the Supply Industry.

Bar one or two, several States have not been able to make much headway in development. Indeed, the problem that States had to face was combating their power shortage, rather than promoting development.

Bombay, in particular, furnishes a classic example. The picture should have been far different if only a quasi-autonomous Board were to be functioning in that State. As it is, it seems to us, that the Public Works Department is not being fully to the gravity of the situation.

Government recently circulated the revised draft of the Electricity (Supply) (Amendment) Bill. On the several changes proposed, the Federation of Electricity Undertakings, Bombay, has made a comprehensive representation.

In this connection, we would like to draw the attention of our readers, in particular, to the addition of a new sub-paragraph (iii) to Clause XVII of the Sixth Schedule which seeks to deduct from the Capital Base the amount of consumers' security deposits lodged with the licensee. Consumers' security deposits are both in cash and in Government Securities. While deduction of consumers' deposits held in cash might be fair, it would not be fair, to make deductions from deposits held in securities—because these are not included in the capital base.

Again, Government propose to alter sub-paragraph XVII (2) (b) (xi) of the Sixth Schedule by excluding interest on debentures and on loans other than those advanced by the Board, as a permissible item of expenditure. This amendment may hamper the progress of undertakings, as in the event of a loan application being not favourably considered by the State Government or the Board, a licensee should, perforce, seek loans from other sources, and these loans should not be considered, as being on a different footing.

In conclusion, we would only stress that the Central Government should take notice of the difficulties that licensees experience in attracting new capital and should do everything in their power, to ensure the flow of capital to the Supply Industry.

"Watts" in the area (2)

He turns a new leaf!

(An account of the Pudukottah Paper Mills*)

WHEN it comes to turning a new "leaf" (literally) the "palm" (both literally and figuratively) goes to a young man in the south. He is A. Periyannan, Managing Director, Pudukottah Paper Mills, Limited.

with members of the *Nagarathar* community to have their marriage dowries and settlements inscribed on palmyra leaves.) The fruit is a "cold" favourite with the young, and the juice (until Prohibition



Photo taken on the occasion of the inauguration of the Mills: Mr. T. K. Chidambaranada Mudaliar, the well known scholar and critic formally declared the Mills open early last year.

From time immemorial, the palmyra has had much to offer to man; the trunk is always first-class building material; the leaf, the poor man's "Mangalore tile". (In the good old days, the palmyra leaf, also, held the position that the papyrus did in Europe. Even today, it is a custom

came along) offered practical escapist philosophy!

MEET THE M. D.

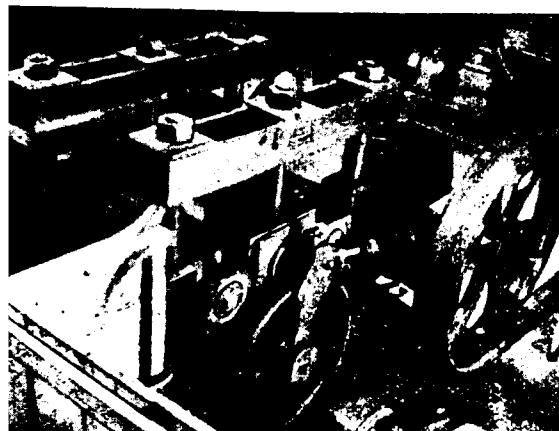
Use had only to be found for the stalk of the versatile tree, and this use was soon found—thanks to the ingenuity and enterprise of Mr. Periyannan.

* Story written after a personal visit to the Mills by the Editor. For much of the material contained in this article, he is greatly indebted to Mr. K. V. Srinivasan, Manager of the Mills.

The Editor also wishes to express his gratitude to Mr. A. Periyannan, Managing Director for the kindness and courtesy shown to him during his visit.

To talk to Mr. Periyannan is an unforgettable experience. For one thing, he has a ready smile—the smile that you come across only in tooth paste advertisements! For another, he is full of an enthusiasm for his business which is positively infectious.

In 1941, Periyannan came to India from Malaya where his father did both private banking and estate management. Periyannan was only 19, when he set foot on the sacred soil of India. He had, of course, a few friends who were prepared to offer him petty jobs, but Periyannan was cut out for something big, something different. He had his business baptism when he started collecting waste-paper. Remember those war-time exhortations asking you not to throw away even the so-called waste paper? Here was a young man who followed those exhortations to the letter. In fact, he went one better on others—he turned waste into wealth.



The Chopping and Crushing Mill.

Stage II in Mr. Periyannan's career was reached when he read an article by Mahatma Gandhi, in his famous paper, *Harijan*. The article was about our neglected village industries, in general, and the hand-made paper, in particular. It set the young man a-thinking... and soon a new enterprise was born.

Periyannan's idea of using the stalk as a raw material was just one of those brain-waves, one of those flashes in the pan. Imagine his gratification when the Forest Research Institute at Dehra Dun tested his not-so-obvious raw material and okay'd it.

PROCESS

Essentially, the enterprise is that of a group of Chettiars. The factory is located at about three miles from the little Railway Station of Tirumayam, on the Tiruchirapalli-Dhanushkodi line. Near the temple tank there is an impressive-looking name-board.

First, the green palmyra leaf-stalks are sized by manual labour, the coarse and sharp edges being chipped off. The sized material is, then, crushed and chopped up, into little pieces, in a crushing machine, powered by a 15 h. p. motor.

The chipped material is, afterwards, charged into four rotary digesters together with the necessary chemicals, and cooked under pressure by steam from the boiler.

The four rotary digesters are powered each by a 3 h. p. motor. The cooked

material is, then, dumped through the man-holes into a receiving pit. From this pit, the cooked material, now known as the stuff, is pumped into two bleaching tanks, by means of an open impeller centrifugal pump coupled to and driven by a 3 h. p. motor. The stuff is now treated with bleaching powder.

The bleached stuff is then unloaded into a bleaching washing engine (powered by a 10 h.p. motor) where it is thoroughly bleached and washed. The washed stuff is discharged by gravity into a pit, from where it is taken in buckets by manual labour to the beating engines.

The stuff—from now on—known as the pulp is beaten to the required characteristics, in six beating engines, each of which is powered by a 10 h. p. motor.

The pulp from the beaters flows by gravity into a pulp pit, where it is stirred by an agitator fitting, and pumped into a regulator, by means of an open impeller centrifugal pump, coupled to and driven by a 3 h. p. motor.

From the regulator, the pulp flows by gravity through a sand-trap and strainer, into the paper machine head box, driven by a vari-speed drive unit. (This and all the other vari-speed drive units are driven by a 50 h. p. motor.) In this machine, wet paper is formed.

The moisture content is taken away by a vacuum pump. From this machine, the paper is passed on to squeezing presses, and from there, to drying cylinders. The



The beater and digester room.

paper is then calendered, reeled and packed, according to market needs.

At present, the Mills manufacture what is known as the "Packing Brown" variety. Demand far out-runs supply. That an *alias* for "Packing Brown" is "Pudukottah Brown" is convincing testimony for the popularity of the product.

Practically the whole of South India looks to Pudukottah for meeting its packing paper needs. During the festive season of *Deepavali*, the Mills transact an impressive turnover of business. The Mills have an ambitious programme of development for the manufacture of other varieties of paper—but all in good time.

POWER

The water requirements of the factory are met from the adjoining temple tank.



The paper-making section.

Power supply to the factory is off a 22 kv line from the Keeranur feeder of the South Madras Electric Supply Corporation, Ltd. All along, the factory had been working only during night hours, for lack of adequate power. Since December 1, 1951, however, the factory has been permitted to work all the twenty-four hours. It is, therefore, expected that the Mills will be able to step up production to the benefit of both itself and the consuming public.

POWER STATISTICS OF COMMONWEALTH COUNTRIES

Serial No.	Countries	Total Installed Capacity of Electricity (kW)			Total Electricity generated in thousand (kWh)	Consumption of Electricity per capita
		Hydro	Steam and Gas	Oil		
1.	Canada	kVA 7,794,543	kVA 351,515	59,408	50,902,000	3,677
2.	Ceylon	1,300	12,000	5,500	...	...
3.	India	531,877	852,639	125,468	4,909,289	14
4.	South Africa	8,533	2,201,621	41,207	10,867,000	882.0
5.	United Kingdom	432,060	12,090,000	82,000	54,959,000	1,086.0

BUSINESS TRIANGLE

by
P. P. VENKATASUBRAMANIAN
MANAGEMENT

A corporation, firm, or company can be compared to a human body in that it can function efficiently only if its component parts, Capital, Management and Labour, are in sound condition, and each performs its allotted duty satisfactorily in co-ordination with one another. Each of these cannot have a separate existence or act independantly. All of these contribute to the production of wealth.

WHO IS A CAPITALIST ?

Capital is necessary for any enterprise whether it be a private firm owned by a single person or by several persons, or whether it be a public or private limited company. Most big businesses, here, in India, as elsewhere in the world, are run as joint-stock companies, with the shares open to public subscription. The large capital necessary for a big enterprise cannot be found by a single person especially in a poor country like ours, and, as such, it has often to be made up of shares of small denominations. The savings of a majority of investors are, as a rule, the result of hard labour and

years of service and these go in no small measure to make up the big capital necessary for large-scale industries. The thrifty and the wise forgo present comforts, for the future, and save something out of their incomes or earnings to take care of the inevitable rainy day. It will not, therefore, be correct to call these small investors, "Capitalists". In fact, these small investors are often people of modest or meagre incomes, and their shares paradoxically enough form the "lion's share" of the capital necessary for big business.

The air is now and then rent with slogans like, "Down with capitalism". It is doubtful, if the people who repeat, parrot-like, cheap platitudes, realise that capital is not only necessary for small industrial enterprises, but that the capital of even big undertakings is, very often, made up of small holdings. Capital concentrated in the hands of a few, and not put to the beneficial use of the nation, may be condemned, but by an extension, we cannot go on condemning capital, whatever its nature or wherever it is to

Mr. P. P. Venkatasubramanian M. A. is Secretary, Seshasayee Bros., Ltd., Managing Agents of this Corporation.

be found. Capital is essential for the production of wealth, and it cannot, therefore, be eliminated.

ALL CAN SAVE

It should be the endeavour of every citizen to earn more, save as much as possible, and put back his savings in the shape of shares in industry. It may be asked how a poor man with a large family, whose income is hardly sufficient even for the bare necessities of life, can think of saving anything. True, many in our country do not earn enough, even for a single square meal a day. These unfortunate people are either incapable of doing any work—either being infirm or able-bodied but unable to find work, or un-willing to do any work. The last class are the parasites of society, a burden and a menace to the nation. The infirm and the old depend upon public charity or the State. For the able-bodied unemployed, work should be given, and this is possible only if we can start more and more industries, and bring into cultivation more acres. For doing this, capital is necessary and this, in turn, means the co-operation of all those who earn enough, or something, and save. The State, by itself, cannot be expected to tackle this job.

Most of us with modest incomes can save something and avoid wasteful and unnecessary expenditure. There are always items of expenditure which we now meet, but which can be cut, such as for example, spending out of proportion in hotels, frequent visits to theatres—

and habits like smoking, chewing, etc. Choice of diet and clean habits will save medical expenses which often take away a goodly portion. It may not also be out of place to mention, here, that families should be limited to the capacity of the bread-winner.

It is not altogether impossible to save at least a small sum each month by economical living. Begun modestly, at the end of the year, the savings will turn out to be a tidy amount. The wise invest such amounts. They buy National Savings Certificates or shares in public utilities and key industries.

Apart from the usual monthly savings company staff can invest their bonuses in Savings Certificates and shares, instead of frittering away money.

MANAGEMENT'S ROLE

In a modern business, management has no less a vital role than capital. By the term 'Management' is meant all those who are responsible for organizing, planning and conducting a business by co-ordinating both capital and labour, such as managing agents, directors, secretaries, managers, etc.—men who are the "brains" of the company.

An individual may find his own capital and manage his own business without a paid manager, and much staff. But a corporation cannot. In a large-scale business with huge capital, employing a large labour force, efficient management is absolutely necessary. Management should plan far ahead, should be shrewd,

should be sympathetic, wise and honest. One false step may mean the ruin of the business. In fact, management are often the chief workers of a company. If they are efficient, the company produces more, by getting the best out of both capital and labour. Without management, business is like a head-less trunk.

LABOUR

Finally, we come to labour. Without labour, both management and capital, are helpless. Labour in its widest sense, includes all skilled and unskilled personnel, foremen, engineers, accountants and others. Labour gets rewarded according to its capacity and usefulness. We find different gradations of wages and salaries, according to the qualifications of labour, its willingness to work and to work earnestly. A skilled artisan gets more than an unskilled worker. In these days, when there is so much talk about equality, why should we have un-equal wages? An unskilled worker is capable of turning out only rough work; so he is rewarded according to his deserts. A skilled worker becomes so, after years of training and experience in the particular branch of his work. He spends time, energy and money on learning his trade or craft. Hence it is we find that there are less skilled workers than unskilled. Because skilled workers produce more, are more useful, they are paid more. Similarly, a foreman or an accountant, or a manager gets more, because he becomes one after years of service and hard work or because he possesses the necessary qualifications to be one.

The reason for labour unrest is mainly economic. It wants more wages and more amenities. Prices of essential commodities have gone up, and there is probably some justification for labour's claim to more wages. With collective bargaining at its disposal, labour is now in a better position than ever before in the past, to better itself. No one will deny the right to a true living wage to works people, but where is the money to be found? This is rather a ticklish issue which will demand attention in an article by itself. Living wages vary from industry to industry and place to place. The capital of an industry has also to be taken into account in fixing the wages of its personnel, as also the cost of living of the place, in which the industry is located.

The capacity of an industry to pay good wages depends as much on its workers, as it does on its management. A thriving and efficient industry, which makes a good profit, will be able to pay better wages, bonus, etc. A badly-run business will not be able to pay good wages.

All the three factors of production, capital, management and labour, require return, capital by way of dividends, management by way of remuneration, and labour by way of wages. If there is surplus after a return is thus ensured, labour gets it as bonus.

It will, therefore, be seen that it is in the interests of all the three parties to produce more.

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"LARGE EXCAVATOR"

A LARGE excavating machine of the "walking" type, with a dragline bucket which weighs 22 tons and digs about 27 tons at a fill, has been installed at one of the ironstone quarries of Stewarts & Lloyds, Ltd., near Corby in Northamptonshire. The machine weighs 1,600 tons and has a dumping radius of 260 ft.; the head of its jib, 175 ft. above ground in its working position, moves at a rate of nearly 23 miles/hr when slewing.

"In Seven-Foot Boots"

The machine "walks" on two "shoes," one on each side, each 48 ft. long, 9.5 ft. wide and weighing 56 tons. The 282 ft. long jib was constructed on site of steel tubes welded together; some 18,000 electrodes weighing 2 tons were used by two welders with two mates, while only eleven men were employed in constructing the jib on site. Its design was evolved by Tubewrights, Ltd., a subsidiary of Stewarts & Lloyds, Ltd., in collaboration with Ransomes & Rapier, Ltd., who had the overall responsibility for the machine. Some 32 vital welds in four tension members were radiographed with Stewarts & Lloyds' mobile X-ray equipment and also examined with gamma-rays produced by radio-active isotopes.

Because of the height of the boom-head when in the working position, it is fitted with warning beacons as an indication of danger to low-flying aircraft at night. Filling the bucket, hoisting it 100 ft., swinging round to the discharge point, emptying the bucket and returning it to the digging position occupies little more than one minute. The machine can walk under its own power in steps of 7 ft. at a time, moving at an approximate rate of 200 yds. an hour.

Electric Drives

Electric drives were the only convenient means of achieving the performance of which this excavator is capable. Electricity is delivered to the site by two 33 kV overhead power lines from the switch-house at Corby which is connected by 0.15 sq. in. 3-core 33 kv screened s. l. and s. w. a. cables to the H-type terminal poles of the overhead lines adjacent to the Corby works 132 kv substation. There are two separate single-circuit overhead lines, each approximately 4,100 yds. long, of 0.15 sq. in. copper conductors, erected by the Contract Department of W. T. Henley's Telegraph Works Co., Ltd. Stewarts & Lloyds supplied the tubular steel supports which are equipped with

Henley cross-arms. Each line has a continuous galvanized steel earth wire and on one line it is heavier and supports a 14 by 3/0-036 plus two by 1/0-036 screened pair 660 v aerial pilot and telephone cable.

The lines terminate at Weldon Lodge substation where the voltage is stepped down to 6.6 kv and a p.i.l.c., s.w.a. land cable for that voltage is laid on the ground surface so that it can be moved about as required to avoid risk of damage by quarrying operations. Ellison plug boxes are inserted in the cable at intervals of a few hundred yards. The stepped-down power is delivered to the machine through two trailing cables at 6.6 kv, which is unusually high for this kind of work. These cables were specially designed and manufactured by Henley's for the purpose. They are of the four-core pliable-armoured t.r.s. flexible type of 3.74 in. diameter overall. Each 500 ft. length weighs 48 cwt.

British Insulated Callenders' Cables, Ltd., supplied upwards of 9,250 yds. of various sizes of v.r.i. steel wire armoured and compounded 660 v cable for the project.

The trailing cables enter the "tub" of the excavator through two oval openings near the base, terminating in slip-ring collector gear on the centre post about which the cab rotates. The cabin has two decks, with a floor area equivalent to that of two tennis courts, with the main machines on the upper deck.

Incoming power goes into two main switching cubicles whence it divides through independent isolating switches for the two main motor-generator sets, a 200 kva, 3-phase, 6600/440 v auxiliary transformer and a 50 kva, 3-phase, 6,600/110 v lighting transformer.

The duplicate B.T.H. motor-generator sets are resiliently mounted across the tail-end of the main structure. Each set is driven by a 1,200 kva unity power factor at 1,000 r.p.m. synchronous motor and consists of a 400 kw 550 v hoist generator, a 400 kw 550 v drag/walk generator and a 200 kw 275 v swing generator. These machines are solidly coupled and run in the five oiling lubricated pedestal bearings with a self-aligning single-row ball bearing incorporated at one end to take the thrust.

An auto-transformer using a single hand-operated oil circuit breaker is employed for starting each set and the change-over from tap to line is accomplished through an airbreak rotary switch operated from the circuit breaker handle.

Two identical motor-driven exciter sets are installed, one of which is maintained as a standby. Each set has a 95 h. p. induction motor driving a 56 kw 125 v constant voltage exciter for the d.c. motors and generators as well as a 17 kw 45 v machine for exciting the synchronous motors. An amplidyne is also included to control the field of the synchronous motor exciter so as to keep the power factor of the main synchronous motors at any desired value from unity to 0.8 leading

irrespective of load variations on the main motor-generator sets.

A separate motor-driven amplidyne generator set is provided for the control of the hoist, swing, and drag/walk generators.

Hand-operated oil-immersed star/delta starters are used for the exciter and main amplidyne sets and are conveniently placed close to the main synchronous motor starters.

The hoist, drag and walk motors are each driven by four 225 h.p. 230 V 450 r.p.m. separately-excited, shunt-wound, heavy duty motors. They operate in tandem and are connected in pairs, in series, across each of the hoist and drag/walk generators. The walk motors take their energy from the same generators as the drag motors, as only one of these motions would ever be in operation at a time. A motor-driven rotary switch is provided for changing over the armature and field connections and is remotely controlled from either control console. All the main driving motors are individually forced-ventilated by separate motor-driven blowers. Two 225 h p motors, one energized from each swing generator, drive the slewing motion. They are vertically mounted on top of their respective gear-boxes, but electrically, they are of the same design as the hoist, drag and walk motors.

Control Gear

The whole machine is controlled by one man from either one of two control cabins situated on either side of the super-

structure at the front, and level with the bottom of the boom. Each cabin houses an almost identical control console. Three cam-operated master controllers are situated behind the seat of the console and are operated by a link mechanism from the two vertical levers for the hoist and drag/walk motions and from the pedals for the swing motion. Along the right-hand arm of the console are the three pistol-grip two-position switches for the brakes on the various motions, and another similar switch for changing over from drag to walk; indicator lamps suitably inscribed show when the motor-operated change-over switch has actually completed its travel and changed over the supply to the motors required. Tumbler switches are also incorporated to control the various floodlighting circuits (through contactors where necessary) to enable the machine to work at night. A central-zero meter at the front of the arm, scaled in ft/min, is coupled to a tacho-generator and gives the driver an indication of the speed of the hoisting line. Another indicator shows the driver when the walking shoes are fully raised into their normal working position. The left-hand arm has an exciter voltmeter, emergency stop and reset buttons at the front, followed by the port/starboard changeover switch and indicator lights. Finally, there is a meter to show how many of the four aircraft warning lights at the boom head are actually alight, together with the switch controlling those lights. All these controls are duplicated in the other cabin with the exception of the port/starboard changeover switch.

The auxiliary B. T. H. machinery on the excavator comprises a 25-ton electrically operated overhead travelling crane in the machinery house with two 10 h.p., one 5 h.p. and two 2 h.p. motors energized from the 125 V exciter sets. There is also an auxiliary hoist gear for raising the boom; it is driven by a 50 h.p. slip-ring type of motor with "Stacreep" control to ensure precision speed regulation when hoisting and lowering the boom.

All the machines and control cubicles are fitted with electric heaters supplied from the 200 kVA transformer and they are automatically switched on by a contactor to guard against condensation in damp weather when the rest of the equipment is shut down. They are arranged in three equal groups of about 10 kw each.

—*Electrical Review.*

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Strictly Personnel

'WHAT'S in a name,' asks Shakespeare naively, in *Romeo and Juliet*, and goes on to propound the interesting theory that which we call a rose by any other name would smell as sweet. True, a rose would retain its "dear perfection", even if it were to be called a chrysanthemum, but there would have been trouble of another kind. S-p-e-l-l-i-n-g!

Our excuse for this incursion into higher literature is a recent editorial article in CONTACT, the Staff Magazine of the Merseyside and North Wales, Electricity Board, Liverpool. Making a brief reference to the International House Magazines Exhibition held at the Power House, in July, 51 the article says:

"We always thought that Welsh place names were difficult to spell, but they are quite simple compared with Indian surnames. We noticed, for instance, that among those present at the Exhibition were Lt. Col. Swami Desikachari, Mr. M. Bhaktavatsalam and Mr. R. Parthasarathy."

We would be the last on earth to contend that Indian names are easy essays in orthography, but really, India has nothing on a nation, which has given to the world such absolutely priceless tongue-twisters (and pen-paralysers) as "Rhuddlan", "Dolwyddelan" "Llanrwst" and "Ffestiniog"!

If ever any one had justification for letting out a mild "Sez you", we should think, we have.

Staff Association: Office-bearers for the year 1951-52 are: Mr. V. Seshasayee (*President*), Mr. R. Parthasarathy, (Sorry, CONTACT) (*Vice-President*) and Messrs. V. Ramaswamy and M. Periaswamy (*Hon. Secretaries*).

Activities: Gandhi Jayanti was celebrated with appropriate ceremony on October 3. Mr. Tiruloka-Sitaram, Editor, SHIVAJI, addressed Members on "Gandhism".

We arranged for a demonstration of physical feats on October 19. Prof. Sathar Sandow was the principal performer.

His looping-the-loop act was particularly well-received.

Our hall was packed to over-flowing when we screened *Christopher Columbus* and *Julius Caesar* on November 5.

Mr. A. Srinivasa Raghavan, Principal, V. O. C. College, Tuticorin, addressed our Members on November 8. His subject was "Bharati and his works". Mr. Tiruloka-Sitaram presided. Such spell-binding eloquence as that of the Professor had seldom come our way before.

On November 29, Members were treated to documentaries lent to the Association by the kind courtesy of the USIS and the Concrete Association of India. *Transportation in U. S. A., Pipe-lines, Building, Concrete-lined Trench Silos* were the titles,

Yet, two more USIS pictures (*Museum of Industry and Science* and *Tennessee Valley*) were screened on December 6.

A musical concert was arranged on December 13. *Sangeetha Bhushanam* R. Ranganathan of Srirangam (Vocal), T. S. Sambandam Pillai (Violin) and K. Ramamoorthy (*Mridangam*) were the artistes. We thoroughly enjoyed the performance. For professional people to spare the time for a free concert is, indeed, a bit of a sacrifice, as Mr. S. Ramamoorthy said, in his vote of thanks, and we are most grateful to Ranganathan and Co., for the delightful music that they provided.

Sports: Volleyball and Badminton continue to hold sway. A tentative beginning was recently made with Cricket, too—in fact, two matches were played against two local sides, but the scores (neither ours, nor theirs) are nothing much to write home about.

At a special meeting held on December 19, we welcomed back Sri V. Seshasayee.



Mr. V. Seshasayee.

President of the Association, after his recent European and American tour. Mr. Seshasayee spoke particularly of his impressions of Switzerland and the hard-working Swiss race. He said that India had quite a lot to learn from Switzerland.

Farewell: We said farewell to Mr. L. Venkatasubbu, P. A. to the Superintending Engineer at a dinner party on October 15. He was with us for over two years, and has now joined the Salem-Erode Electricity Distributing Company, as an Assistant Engineer. A thoroughly

affable personality, a capable and conscientious officer and a frequent contributor to this journal ("Bookshelf" and "South Madras Electric Supply News") we greatly miss "L. V. S."

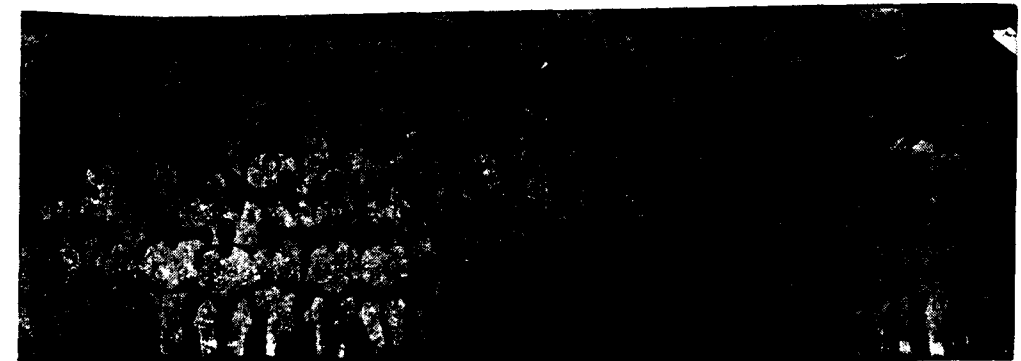
We wish him every success in his new appointment.

First-Aid: First aid classes were formally inaugurated on November 17, 51, by Dr. R. Kalamegham, Corps Officer, (Tiruchi) St. John Ambulance Brigade,

could sink to really abysmal depths—one has only to attend a few first-aid-classes to realise!

Credit for organising the classes chiefly goes to Mr. B. A. Padmanabhan, (*Accounts*) a leading member of the Jiyapuram Ambulance Division.

Works Committee: A works Committee was recently formed with the following members.



Farewell to Mr. L. Venkatasubbu.

(India). We have now a strength of 40 potential first-aiders—nucleus enough to form a division of our own. Mr. T. S. Radhakrishnan, Divisional Superintendent, Jiyapuram Division, St. John's Ambulance Brigade, (India) deserves the warmest thanks of us all for conducting the classes. His lectures were lucid, interesting, and very much to the point.

The questions some of our "boys" asked at the conclusion of each lecture spoke well of their interest in first-aid, but ill of their knowledge of physiology! That adult ignorance of the human anatomy

Management:

Mr. H. K. Ramaswami	(Chairman)
„ M. Dandayuthapani	(Secretary)
„ S. Sankaran	(Member)
„ P. P. Venkatasubramanian	„
„ V. Balasubramanian	„

Labour:

Mr. T. S. Balasubramanian	(Vice-Chairman)
„ D. Vaidyanathan	(Secretary)
„ V. G. Ramaswamy	(Member)
„ V. Rajaraman	„
„ R. Santanam	„

—R. P.



SAFETY IN THE HOME : Issued by the British Electrical Development Association, 2 Savoy Hill, London W. C. 2.

THE British Electrical Development Association (of which the South Madras Electric Supply Corporation is a member) deserves the congratulations of the Electricity Supply Industry all the world over on the series of informative booklets, which it has recently issued under the comprehensive head of **SAFETY IN THE HOME**.

The theme is "Making Safe Safer". The public is told how by intelligent application of simple rules, "safe" electricity can be made safer still.

The folder **MAKING SAFE SAFER** contains precautions for using electricity in the home, in the factory, on the farm, in the street, in the hospital and in the office. "Electrical accidents", as the folder reminds us, "have a news-attraction out of all proportion to their numbers." Indeed, so rare are accidents arising from the use of electricity that the safety of electricity is taken for granted!

The booklet **SAFE AS HOUSES** draws pointed attention to the need for having original wiring work done by a qualified electrician. It is always cheaper—and safer—to have the job done properly. Inferior wire or accessories and shoddy workmanship might cause no end of trouble later on.

The booklet **TELL THEM IT'S SAFER** explains the part the supply industry can play in the drive for safety in the home. Essentially a staff booklet, it takes the reader behind the scenes, and briefs him with a background of knowledge to enable the industry's message to be put over with authority and confidence. (1) Electricity is far and away the safest as well as the most valuable of all public services in the house and (2) Nothing more than *reasonable care* is needed—that is all Staff (and the user) need to know.

The last booklet in the series is **LECTURE NOTES**. As its title implies, it is intended for the use of speakers to organizations such as Rotary Clubs, Rate-payers' Associations, etc.

Electricity is spreading fast in this country, in the house, in the factory, on the farm, and in ever so many other spheres. There is a crying need for similar booklets in Indian languages. Meanwhile, all those who require the booklets reviewed here are advised to write to the British Electrical Development Association. The booklets are most moderately priced. (**MAKING SAFE SAFER**—Price £. 3 per 1000; **SAFE AS HOUSES**—Price £ 15 per 1000; **TELL THEM IT'S SAFER**—Price £ 2 per 100 or £ 18-10 per 1000; **LECTURE NOTES** No price mentioned, possibly given away gratis with the other booklets.

—S. SANKARAN.

1. **NO IDLE WORDS :** (A British GPO publication)
2. **ABC OF PLAIN WORDS** by Sir Ernest Gowers, H. M. Stationery Office, London, (Copies can, also, be had of the British Information Services, Catholic Centre, 6, Armenian Street, Madras. Price Rs. 2/4/- paper bound; Rs. 3/6/- superior binding).

"I don't think"..... said Alice.

"Then you shouldn't talk", said the Hatter.

The first thing to do before you start writing is to **THINK**, says this interesting and instructive booklet issued (Mark you!) by the British General Post Office.

That a Government Office should take time off to produce a little classic of hints on the use of English only shows that the age of miracles is not yet over! Possibly, it is also evidence of the enormous volume of correspondence that the Post Office is now-a-days called upon to tackle.

The booklet admits that it takes time to write a clear, polite letter which is short and to the point; more effort, perhaps, than to string together the usual assortment of *cliches* which have unfortunately become our mental stock-in-trade.

There are at least two good reasons, according to the author of this book, for taking the extra trouble necessary for writing a good letter. One—you are a professional writer and the least that you can do is take a craftsman's pride in your work. Two—from the purely economic angle—good writing is worthwhile.

Clarity, politeness and brevity are the three principal virtues that the booklet enjoins on all correspondents.

Yet another entertaining book dealing with the use and abuse of English is Sir Ernest Gowers's **ABC OF PLAIN WORDS**. This is a sequel to his **PLAIN WORDS** reviewed in **METKEM** (Vol. III No. 3) the house magazine of the Mettur Chemical and Industrial Corporation, Ltd., a sister company.

Do you know what "gobbledygook" means? (In fact, the main object of **ABC** is to analyse and classify its manifestations, and Sir Ernest has succeeded admirably in his task.) A precise definition is hardly possible, but an anaemic apology of a paraphrase will be "pompous and flabby verbosity". The following are choice examples of gobbledygook:

1. "In the initial stages" for "At first".

2. "Circumstances which obtained prior to the out-break of hostilities" for "Conditions before War".

"There is a complete lack of ablution facilities" for "There is nowhere to wash".

ABC OF PLAIN WORDS is primarily a reference book (the entries are all arranged alphabetically) and all offices must needs have a copy together with Sir Ernest Gowers's first book, PLAIN WORDS.

It will, however, be good to remember—as G. H. Vallins reminds us in *Good English*—that language is far too big and living a thing for any dogmatism about "plain English" to have validity.

R. P.

Memorandum on Electric Arc Welding (Revised Edition): Issued by the Factory Department of the Ministry of Labour and National Service, United Kingdom. Copies available from His Majesty's Stationery Office, Price 9 d.

The Introduction states that: "During electric welding, the electrode and parts of the holder are live and hot, so that if touched, electric shock or burns may be sustained. The arc also gives off infra red radiation, visible light of high intensity, ultra violet radiation and heat, while fumes arise from metals and fluxes."

This Memorandum intended to indicate how to avoid any adverse effects of these and other features incidental to the process. The contents cover the following subjects: *Protection against Electrical Risks* (The Circuit; Earthing and Conductivity of the Welding Return Circuit

(The Welding Earth; Conductivity of the Welding Return); *Electrical Protection of Welding Circuits; Electrode Holders* (Construction; Use); *Safety Devices*; (Cables and Cable Couplings; Earthing Clamps); *Protection against Other Risks* (Radiations Skin Effects; Eyeflash (Symptoms; Treatment; Precautions); Chipping of Slag; Fumes; Hot Metal; Ignition of Inflammable Materials; Trigger Finger); *Protective Shields, Screens and Clothing* (Helmets or Head Shields and Hand Shields; Goggles; Screens; Gloves; Aprons; Boots and Leggings).

OFFICIAL CHANNELS

The following definitions which have been prepared by an American Civil Servant appeared in a recent issue of CONTACT

A Programme: Any assignment that can't be completed by one phone call.

Channels: The trail left by an inter-office memo.

Status Quo: This mess we're in.

To Expedite: To confound confusion with commotion.

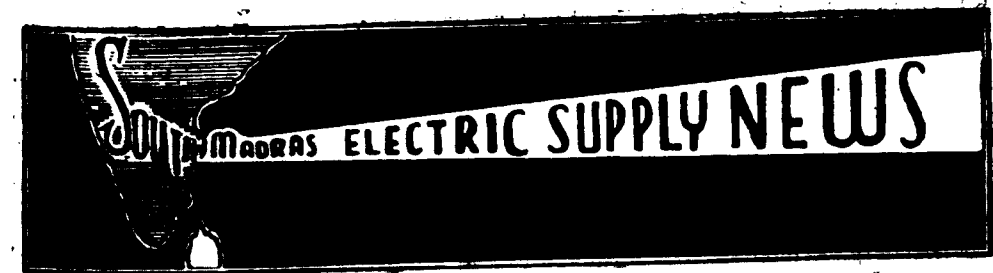
Modification of policy: A complete reversal which nobody admits.

Under Consideration: Never heard of it.

Under Active Consideration: We're looking in the files for it.

A Survey is being made of this: We need more time to think of an answer.

Referred to higher authority: Pigeonholed in a more-sumptuous office.



New Supplies: DURING the period ending November 1951, supply was given to the following villages:

- | | |
|------------------------------------|--------------------|
| 1. Mathur | } Tiruchi District |
| 2. Thalini | |
| 3. Bommasamudram and Solanganallur | |
| 4. Michelpatti | } Tanjore District |
| 5. Segal | |
| 6. Tiruppuvanam | Ramnad District |

1. **Mathur:** Supply to this village was given on September 21. A 10-kva transformer substation was erected, supply being tapped off the Pudukottah bye-feeder line. An L. T. extension for four spans of about 850 ft. was carried out and the 10 h. p. agricultural pumpset of Janab Gulam Mohideen Rowther was connected up on the day of supply to the village.

A. C. S. R. conductors have been used both for the H. T. and the L. T. lines.

About 15 acres of land have now been brought into cultivation, in the neigh-

bourhood, the main crops being paddy, chillies and *cholam*.

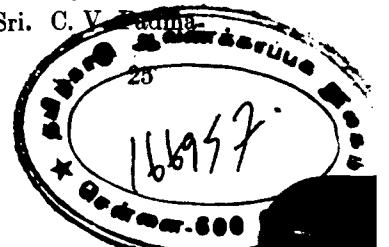
2. **Talinji:** The electrification of this village is covered by the loan scheme of the Madras Government for Rs. 5 lakhs, sanctioned in G. O. No. MS. 3893 dated October 17, 1950.

This village was connected up on September 25, 1951. An extension of 7 miles of 11 kv H. T. overhead lines has been tapped off the 11 kv lines to Vasumathi Farm in Pattavaithalai area. A 75-kva transformer substation feeds at present 3 nos. of 20 h. p. agricultural pumpsets out of a total of 4 nos. contemplated originally. About 300 acres have been brought under the plough. Staple crops are paddy and sugar cane, a subsidiary one being groundnut.

The work was carried out by our Thiruppalathurai staff and our Construction Department at H. O.

No praise will be too high for the untiring efforts that Sri. C. V. Rama-

CL 211, 249
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nabha Iyengar made in having this extension expedited.

The main line to Talinji has to cross two telephone lines, one 66 kv tower line and another 110 kv tower line. Fifty pounds second class rails, 30 ft. long, have been used for the transmission line with A. C. S. E. "Gopher" conductors.

Under progress now is the extension of supply to the villages of Pudupatti, Kagampatti, Ondampatti, Inungur, Nachalur and Porasampatti en route. About 90 pumpsets are expected to be connected up.

3. *Solanganallur and Bommasamudram*: These two villages were connected up on September 28, 1951. An extension of single phase L. T. O. H. lines from the existing Uyyakkondan Thirumalai sub-station for 4500 ft. was carried out with all-aluminium conductors. Supply is now given to twenty houses, and ten more are expected to come up shortly.

4. *Michelpatti*: Supply was rendered to this village (near Tirukkattupalli) on September 28, 1951. Half-a-dozen domestic lighting services have been given, prominent among which is the local church. In fact, it is due to the initiative and enterprise of the priest of the church that the extension to this village was made possible.

Here, again, our H. O. construction department was responsible for the job. L. T. line with all-aluminium conductors was drawn for about a mile to connect this place.

5. *Segal*: Supply was given on November 9, 1951. A 11 kv H. T. O. H. extension of 9,000 ft. was carried out, being tapped off the Vedaranniyam feeder. A pumping load of 38 h. p. is now connected. The Madras Government sponsored the scheme, under their "Grow More Food" Campaign.

The pumps feed a high-level irrigation channel.

6. *Tiruppuvzham*: Informally connected on October 26, (for test) and formally on November 26, 1951. Mr. M. Bhaktavatsalam, Minister for Public Works, switched on the supply.

A special feature of supply to this village is that it is rendered from a separate point given to us by Government, on their Madurai-Sivaganga transmission line.

Total loads (both industrial and agricultural) connected during this period are as follows:—

Licence area	Industrial	Agricultural
Trichy-Srirangam	35.0 h. p.	73.5 h. p.
East Tanjore	80.5 "	46.0 "
East Ramnad	40.3 "	12.5 "

Current TOPICS

POWER SUPPLY TO RURAL AREAS

AN appeal to electrical engineers to put forth their very best efforts in carrying out the programme of Government to take power to villages in order to promote cottage industries and to develop agriculture was made by Mr. M. Bhaktavatsalam, Minister for Public Works delivering the inaugural address of the Madras Government Electrical Engineers' Association, at the office of the Madras Electricity System. Sri S. R. Krishnamurthi, Chief Engineer for Electricity, presided.

Mr. Bhaktavatsalam said that he was happy to note that the electrical engineers of Madras had enhanced their reputation by their exhibits at the International Engineering Exhibition at Delhi. The people of this State had come to realise the value of electricity as an instrument for promoting their prosperity and for increasing the wealth of the country, he said.

Explaining why it was not possible for Government to be too liberal in the matter of releasing some of the officers

of the Electricity Department for service in other parts of the country, Mr. Bhaktavatsalam said that they required the services of all the available personnel to put through Government's programme of development.

Proceeding, the Minister said that though Madras stood foremost among the States in the matter of rural electrification, they had still to go a long way. There was no use in merely advising people to "go back to the villages." They should endeavour to make villages as attractive as towns. During his recent tour in Coimbatore District, he noticed how anxious people were to get electricity to their villages. This only showed that people had come to realise the importance of electricity for improving their standard of living. That was why Government had given top priority for rural electrification.

Though their aim was to take power to every village and town in the State they had, also, to face the problem of limited resources for generating power, the Minister said. There were valuable bauxite deposits in Salem district and he

was told that for exploiting these resources all the power generated in the State at present would be required. While steps would be taken to tap all the available sources of power in the State it was evident that this should be supplemented by thermal power. He hoped that the lignite deposits in South Arcot would enable Government to increase the number of thermal stations.

DESIGN LINK-UP

An agreement was signed in New Delhi in October 1951 between the Government of India and the Government of the United States of America under which the U. S. A. will furnish to India scientific and engineering services connected with river valley projects through the U. S. Bureau of Reclamation. This is in pursuance of the general agreement of December last year providing for technical co-operation between the two Governments. Under this new link-up between the Central Water and Power Commission and the U. S. Bureau of Reclamations designs, specifications and structural details which require a second opinion, or are too complicated for local solution will be sent to the Bureau of Reclamation for review by its experts—where necessary—in co-operation with Indian Engineers. In the meantime, the Commission's Central Designs Organisation is being steadily built up to deal with all possible problems in design and construction connected with river valley projects.

MEKADATU POWER PROJECT

It is reported that final touches were recently given to the draft agreement between the Mysore and Madras Governments in respect of the Mekadatu hydro-electric project sponsored by the Mysore Government. Mekadatu is in Mysore State on the Mysore-Salem borders and the scheme is designed to establish a reservoir there and impound the Cauvery waters and erect a 36,000 kw hydro-electric station at an estimated cost of Rs. 5 crores. Power will be sold to Madras under the agreement yet to be settled.

PENNAH PLANS REVISED

The Madras Government have drawn up a revised scheme of Rs. 1,330 million for the Kistna-Pennar project. Under this, the project is to consist of two dams, one on the Kistna river at Siddeswaram and the other on the Pennar river at Someswaram, forming two reservoirs with a total capacity of 55,000 million cu. ft. Power will be developed at Byth through hydro-electric turbines with an installed capacity of 250,000 kw. It is proposed to split the plan into two stages, the first stage aiming at irrigation of 2.1 million acres for a capital outlay of about half of the total cost on the irrigation site and the full outlay on the power plant side of the dams.



மடல் 3

அக்டோபர்—டிசம்பர், 1951

இதழ் 3

சின்னச் சம்பளத்தில் கூக வாழ்வு

லலிதா வெங்கிடசுப்ரமணியன் *

வாழ்க்கைப் படகை ஆனந்தமாக மிதக்கச் செய்வதற்கு சிக்கனம் அத்தியாவசியமானதொரு கருவி. குடும்பத் தலைவன் சம்பாத்தியத்தைக் கொண்டு கடன் வாங்காமல், சிலவுகளை சமாளிக்க சிக்கனம் உதவுகிறது.

மேல் நாட்டினரிடமிருந்து நம் இந்தியப் பெண்மணிகள் கற்க வேண்டிய நற்பழக்கங்களில் முக்கியமானது சிக்கனம். அதை விட்டுவிட்டு நம் பெண்மணிகள் அவர்களுடைய துர்ப்பழக்கங்களை கற்கிறார்கள். முகத்திற்கு மாவு பூசுவது, அதரத்திற்கு சாயம் தீட்டுவது போன்ற பழக்கங்களை மேல் நாட்டினரின் நாகரிகச் சின்னங்களின் சிகரமாக இருக்கலாம். நமக்குத் தகா.

இந்தியரின் தாராள மனப்பான்மை உலகப் பிரசித்தியானது. திடீரென்று யாராவது அதிதிகள் வந்தால் அவர்களை நன்றாக உபசரித்து வயிறு புடைக்கச் சாப்பாடு அளிப்பதில் நம்மவருக்கு ஈடும், எதிரும், எவருமாகா.

வந்தவரை உபசரிக்காமல் உணவு அளிக்காமல் அனுப்புவது நன்றியிருக்குமா என்ற கேள்வி எழுகிறது. சௌகரியப்பட்டவர்கள். செய்ய வேண்டியது தான். சௌகரியப்படாதவர்கள் தங்களது சக்தியின்மையை மனப்பூர்வமான வருத்தத்துடன் தெரிவித்துக் கொண்டால் அதிதிகள் தப்பர்த்தம் பண்ணிக்கொள்ளமாட்டார்கள். விருந்தினருக்கும் "ஏதடா நாம் பிறருக்கு கஷ்டம் கொடுக்கிறோமே" என்ற நினைவு இருக்க வேண்டும், உதாரணமாக, திடீரென்று பத்து விருந்தினர் நம் வீட்டிற்கு வந்துவிடுகிறார்களென்று வைத்துக்கொள்ள வேண்டும். அவர்கள் வருவார்களென்று ஜோசியமறிந்து அவர்களுக்கு வேண்டிய உணவு பதார்த்தங்களை சமைத்து வைத்திருக்க முடியுமா? அல்லது தினம் ஒரு ஐந்து பேரையாவது எதிர்பார்த்து சமைக்க முடியுமா? பெரிய லக்ஷாதிபதிகள் ஐந்து பேருக்கென்ன, ஐம்பது பேருக்குக் கூட சமைத்து வைக்கமுடியும். அது சிலவாகா திருந்தால் வீணாகக் குப்பைத் தொட்டிகளில்

* இக்கட்டுரையின் ஆசிரியை, சேஷாஸி பிரதீஸ் செகரேடெரி திரு. P. P. வெங்கிடசுப்ரமணியனின் குமாரத்தி; வெஸ்ட் பள்ளி மாணவி.

எறிவார்கள். ஏழைகளுக்கு இடுவோம் என்ற எண்ணம் அவர்களுக்கு ஏற்படாது.

இது நிற்க, நடுத்தர குடும்பத்தினர் எல்லோரும் பிரதி மாதம் ஒரு வரவுசிலவு திட்டம் போடவேண்டும். உதாரணம் ஒன்று கீழே தரப்பட்டிருக்கிறது. குடும்பத்தின் வருமானம் ரூபாய் 150.

சாப்பாட்டுச் சிலவு ரூ. 150-ல்				
50 சத விழுதம்	75	0	0	
வீட்டு வாடகை	15	..	22	8 0
துணிமணிகள்	10	..	15	0 0
படிப்பு	5	..	7	8 0
வரிகள்	5	..	7	8 0
ரிப்பேர்கள்	5	.	7	8 0
சேமித்து வைத்தல்	10	..	15	0 0
			150	0 0

முதலில் சாப்பாட்டுச் சிலவை எடுத்துக் கொள்வோம். மனிதனுக்கு முக்கியம் உணவு. எது இருந்தாலும் இல்லாவிட்டாலும் ஆகாரமின்றி மனிதன் ஜீவித்திருக்க முடியாது. நல்ல உணவை உட்கொண்டால்தான் அவனால் உழைத்துச் சம்பாதிக்க முடியும். வெறும் சோற்றைத் தின்பதில் பிரயோஜனமில்லை. இப்பொழுது போதுமான அளவு சர்க்காரால் அரிசி வழங்க இயலாததால் அதற்குப் பதிலாக, அவர்கள் கோதுமை, சோளம் முதலிய தானியங்களை பங்கிடு செய்கின்றார்கள். இதுவும் ஒரு விதத்தில் நல்லதுதான். அரிசியுடன் இத் தானியங்களை உணவில் சேர்த்துக்கொள்ளல் நம் நன்மைக்கே ஆகும். காய்கறி வகையருக்களை நமது சாப்பாட்டில் அதிகம் சேர்க்க வேண்டும். கீரைகள் விலையும் மலிவு, உடம் பிற்கும் நல்லது.

டாக்டர்கள் அதிகமாக ஆக வியாதிகளும் மலிகின்றன. நாம் டாக்டர்களுக்குப் (பின்னர்) கொடுக்கப்போகும் பணத்தை

முன்னதாகவே நல்ல சத்துள்ள உணவில் போடுவோமானால் வியாதி நம்மை அணுகாது.

குடும்பத் தலைவனின் சம்பாத்தியம் போதாவிட்டால் வீட்டுத் தலைவியும் தன்னுடைய உதவிகளைச் செய்யவேண்டும். அதற்கென்று அவர்கள் வெளியே போய் சம்பாதிக்க வேண்டுமென்று நான் சொல்லவில்லை. அந்த நாகரிகம் நம் குடும்ப ஸ்திரீகளுக்கு ஏற்றதன்று என்று கருதுபவர் பலர். சம்பாதித்தால் என்ன என்று எண்ணுபவரும் உண்டு.

முடிந்த வரை வேலைக்கு ஆள் இல்லாமலேயே சமாளிக்க வேண்டும். வீட்டின் கொல்லைப்புறத்தில் இடமிருந்தால் அதை பாழ் ஆகவிடாமல் காய்கறிகள் போட வேண்டும். தக்காளி, வெண்டை, அவரை முதலிய செடிகள் சீக்கிரம் வளர்ந்து நமக்கு பலனளிக்கும்.

நம்முடைய ஆடைகளை நாமே தோய்த்து சுத்தமாக்கிக் கொள்ளவேண்டும். முடிந்த வரையில் துணிகளை வண்ணாவிடம் கொடுப்பதை நிறுத்த வேண்டும். நாமே அவற்றை இஸ்திரி போட வேண்டும். வண்ணாவிடம் வெளுக்கப்பட்டு வரும் துணிகள் பார்ப்பதற்கு தூய்மையுள்ளதாயிருக்கலாம். ஆனால், அத்துணிகள் "Dhoby's Itch" என்ற வியாதியை கொடுக்கவும் கொடுக்கும்!

முடிந்தால் ஒரு பசுமாட்டை வீட்டில் வைத்துக்கொள்வது நலம். குழந்தைகளுக்கு நல்ல பாலும் ஆயிற்று, அதிலிருந்து வீட்டிற்கு வேண்டிய மோர், நெய் முதலியவையும் கிடைக்கும். பால் மிகுதி இருந்தால் (தண்ணீர் கலக்காமல்!) விற்கவும் விற்கலாம்.

ஒரு குடும்ப ஸ்திரீயின் சாமர்த்தியம் தன் குழந்தைகளை நல்ல பழக்க வழக்கங்களில் கொண்டு வருவதில் இருக்கிறது.

அவர்களைச் சிறுகச்சிறுக வீட்டு வேலைகளில் பழக்கி வீட்டிற்கு உதவுமாறு செய்யவேண்டும்.

கடைசியாக, பால்காரர், மளிகைக் கடைக்காரன் முதலியவர்களின் கணக்குகளை அப்போதைக்கப்போது (அதாவது மாதத்திற்கு ஒரு முறை) தீர்த்து விட வேண்டும். "பால்காரனா, அவன் கணக்கை அடுத்த மாதம் சேர்த்துக் கொடுத்துவிடலாம். இந்த மாதம் ஏகப்பட்ட ஜவுளி வாங்கி ஆயிற்று- அதன் பணத்தை கொடுத்து விடுவோம்" என்று அசட்டையாய் இருக்கக்கூடாது. அடுத்த மாதம் வேறு ஏதாவது சிலவு வரும். இப்படியே பால்காரனின் பாக்கி விடும் போல் ஏறிக்கொண்டே போகும்.

கோபித்துக்கொள்ளாதீர்கள், உதாரணமாக பெண்களுக்கு ஒரு புது மோஸ்தர் புடவையின் மேல் மோகம் ஏற்படலாம்.

"ஐம்பது ரூபாய்தானே, வாங்கிவிடலாம்" என்ற ஆசை தோன்றும். அதற்கு ஒரு போதும் இடம் கொடுக்கக் கூடாது. கையில் பணம் இருந்து அவசியமானால்தான் ஒரு பொருளை வாங்கவேண்டுமே ஒழிய, கூடன் என்பதையே வைத்துக்கொள்ளக் கூடாது. ஒருவன் நான்கு அணு சம்பாதித்தாலும் அதில் ஒரு அணுவையாவது சேர்த்து வைக்கவேண்டும். அது மிகவும் அவசியமானது. அந்தப் பணம் பின்பு சமயத்துக்கு பெரிதும் பயன்படும்.

மேற்சொன்னபடி பல வழிகளில் நம் ஸ்திரீகள் இயன்ற வரை சிக்கன முறைகளை கையாண்டால் நாடு முன்னேற வழி பிறக்கும். சிலர் சிக்கனமாய் இருப்பவர்களை கருமிகள் என்று கருதுகிறார்கள். அப்படி சொல்பவர் வாழத் தெரியாதவரேயாவர்.

★ சுமார் ஐந்து லக்ஷம் பேர்கள் ஒவ்வொரு வருஷமும் நம் நாட்டில் காசநோயால் மார்க்கின்றனர்.

★ இந்தக் கொடிய நோயை தவிர்க்க உங்களாலான உதவி புரியுங்கள்.

★ ஒரு T. B. ஸீலின் விலை அணு ஒன்று தான்.

★ உள்ளூர் கௌரவ காரியதரிசியிடம் ஸீல்கள் கிடைக்கும்.

சிக்கன வாழ்வு

—மின்சாரம் மூலம்

S. சுப்பையா

"இலன் என்று அசைஇ இருப்பானாக்
காணின்
நிலமென்னும் நல்லான் நகும்"

என்று திருவள்ளுவர் நமக்கு ஒரு குடு
கொடுக்கிறார். தன்னிடம் ஒன்றும் இல்லை
என்று வீண்பொழுது போக்குபவர்களைப்
பார்த்து நிலமகள் நகைக்கின்றனாம். கார
ணம் என்ன?

மேழிச் செல்வங்கள் (பூமியிலிருந்து
உண்டாகக்கூடிய விளைபொருள்கள்) எத்
தனை எத்தனையோ நமக்கு இறைவன் தந்
திருக்கிறான். உபயோகப்படுத்தவும் முடியும்.
ஆனால், எவ்வளவு பேர்கள் உபயோகப்படுத்
திக்கொள்ளுகிறார்கள் என்பதுதான் கேள்வி.
அப்படி உபயோகப்படுத்தாதவர்களைக்
கண்டு ஏன் நிலமகள் நகையாள்?

இது போலவே மின்சாரம் என்ற அரிய
சக்தியினால் நாம் அடைந்துகொள்ளக்கூடிய
பயன்கள் கணக்கில் அடங்கா, இருந்தாலும்
அவைகளை எவ்வளவு பேர்கள் அடைகிறார்
கள்? முக்கியமாக, நமது கிராமவாசிகளுக்கு
மின்சாரத்தின் செளகரியங்கள் கிடைப்ப
தில்லை. அதற்காகவே நமது மாகாண சர்க்
கார் கிராமத்து மக்களுக்கெல்லாம் சுலபமாக
மின்சார வசதி கிடைக்கச் செய்து வர முயற்
சிக்கிறார்கள்.

மனிதனால் செய்யமுடியாத காரியங்களை
மின்சாரம் மிக எளிதில் செய்து தருகின்றது.
டெலிவிஷன், ரேடியோ, எக்ஸ்ரே, மோட்
டார்கள், முதலியன நமக்கு மிகப் பெரிய
காரியங்களைச் செய்து தருகின்றன. மனி
தனால் செய்ய முடியாத காரியங்களைப்பற்றி
யது இப்படி இருக்க, மனிதனால் செய்யக்
கூடியவைகளையும் மின்சாரம் நமக்கு மிக
எளிதில் செய்து தருகின்றது. எளிது மட்டு
மல்ல. சிரமம் அன்றியும், சிக்கனமாகவும்,
சீக்கிரமாகவும் செய்து தருகிறது. உதாரண
மாக, தண்ணீர் கொதிக்கவைத்தல், சமையல்
செய்தல், தண்ணீர் இறைத்தல் முதலியவை
களை எடுத்துக் கொள்ளுவோம். இக்காரி
யங்களுக்கு, Heater, Cooker, Pumpset,
முதலியவை பயன்படும்.

HEATER: இது தண்ணீரைக் கொதிக்க
வைக்க உபயோகப்படும். ஓர் பாத்திரத்தில்
தண்ணீரில் இதை மூழ்கப்போட்டு மின்
சாரத்தைப் பாய்ச்சினால் வேண்டிய அளவு
கொதிக்கவைத்துக் கொள்ளலாம். இதற்கு
அடுப்படிக்குப் போகவேண்டாம், கரிவேண்
டாம், விறகுவேண்டாம். பற்றவைக்க மண்
ணெண்ணைவேண்டாம். வெந்நீர் கொதிக்க
வைத்துத் தர மனை வியையோ, அன்றி
வேலைக்காரனையோ எதிர்பார்க்கவும் வேண்
டாம். சிக்கனம் என்பதும் நாம் தெரிந்து

கொள்ளவேண்டியதொன்று. காலையில்
வெந்நீர் போட்டு ஸ்நானம் செய்ய நமக்கு
8 காலன் தண்ணீர் வேண்டும். 8 காலன்
தண்ணீர் கொதிக்கவைக்க சுமார் 20 நிமிஷம்
1000 வாட்டுக்கள் உள்ள ஹீட்டர் வேலை
செய்யவேண்டும். 20 நிமிஷத்திற்கு கால்
யூனிட்டி ஆகலாம். கால் யூனிட்டிக்கு விலை
முக்கால் அணு. சில மின்சார வினியோகத்
கம்பெனிகள் All Electric Home விதம்
என்றும் Domestic Power விதம் என்றும்
இரண்டு வித ரேட்டுகளின்படி மின்சாரம்
அளித்து வருகின்றனர். இந்தத் திட்டத்தின்
படி ஹீட்டரை உபயோகப்படுத்தினால் கால்
யூனிட்டிக்கு மூன்று பைசாக்களேயாகும்.
இதற்கு வேண்டிய சாதனக் கருவிகளை
வாங்குவதற்கும், அதற்கு கம்பி இழுத்தல்,
வைத்து முடுக்கல் போன்ற சிலவுகள் நமக்கு
ஏற்படும். இந்தச் சிலவுகளைப்பற்றி நாம்
யோசிக்கவேண்டியதில்லை. இவைகள் முத
லில் சிலவுபோல் தோன்றினாலும், உண்மை
யில் சிலவாகாது. ஆகையால் நாம் இதை
முதல் ஈடாகவே கருதவேண்டும். நமது
வழக்கம்போல் குளிக்க வெந்நீர் போட
வேண்டுமானால் என்ன செய்கிறோம்?
விராட்டி வேண்டும், பற்றவைக்க மண்
ணெண்ணை வேண்டும், தீப்பெட்டி வேண்
டும். இவ்வளவு இருந்தும் நாம் "உன்,
உன்" என்று ஊதியே தீயைப் பற்ற
வேண்டியிருக்கிறது. விலை போட்டுப்
பார்த்தோமானால் சுமார் 2 அணு ஆகலாம்.
மின்சார வழியில் ஒருநாளை வெந்நீருக்கு
முக்காலான விதம் ஒரு மீ-க்கு ரூ. 1-6-6
ஆகும். சாதாரண வழியில் ஒரு நாளைக்கு
2 அணு விதம் ஒரு மீ-க்கு ரூ. 3-12-0
ஆகும். இதை பார்க்கும்போது குஷாலாக
சுவிட்சை போட்டுவிட்டு 20 நிமிஷம்

கழித்ததும் ஸ்நானத்திற்குப் போகலாம்.
சிரமமூயில்லை, சிக்கனமாகவும் அமையும்.

Cooker: இதேபோன்று தான் சமையல்
செய்யும் இயந்திரமும். இதை உபயோகிப்
பதினால் குடும்பத்திற்கு சிக்கனம் மட்டும்
இல்லை. பெண்களுக்கு சிரமமும் இல்லை.

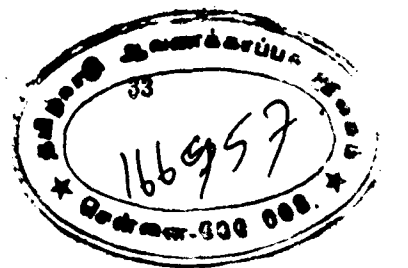
Pumpset: தண்ணீர் பம்பு செட்டை உப
யோகிப்பதனாலும் செளகரியங்கள் உண்டு.
தோட்டத்திற்கு "கவலை ஏற்றம்" முதலி
யன வைப்பதற்கு மாடுகள் வேண்டாம்.
அவைகளை வளர்க்க தீவனத்திற்கு தேடித்
திரிய வேண்டாம். நான் முழுதும் தண்ணீர்
இறைத்து உழைக்கவும் வேண்டாம். தண்
ணீர் வேண்டியபோது ஒரு நொடியில்
நமக்கு வேண்டிய அளவு கிடைக்கும்.

நாகரிக உலகில் கிடைத்திருக்கும் செள
கரியங்களை நாம் கூடிய அளவு உபயோகித்
துக்கொள்ளவேண்டும். பழைய கால வழக்
கங்களை விடமாட்டோம் என்று சொல்லு
வதில் பயனில்லை.

அனுகூண்டு சகாப்தமாகிய இந்தக்
காலத்திற்கு அக்காலத்திய வழக்கம் அடுக்
காது.

கையில் வெண்ணையை வைத்துக்கொண்டு
நெய்க்கு அலைவார்களா? எவ்வளவு மின்
சார வீட்டுச் சாதனங்கள் கிடைத்திருக்
கின்றனவோ, அவ்வளவையும் உபயோகப்
படுத்திக்கொள்ளுவோமாக. மிக வலிமை
யும் எளிதில் காரியங்களைச் செய்து கொடுக்
கக்கூடிய வேலைக்காரனைப் போன்றது
"மின்சாரம்." அதை ஏன் உபயோகப்
படுத்திக்கொள்ளக் கூடாது?

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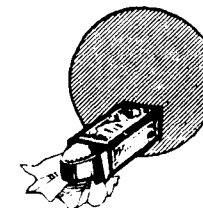
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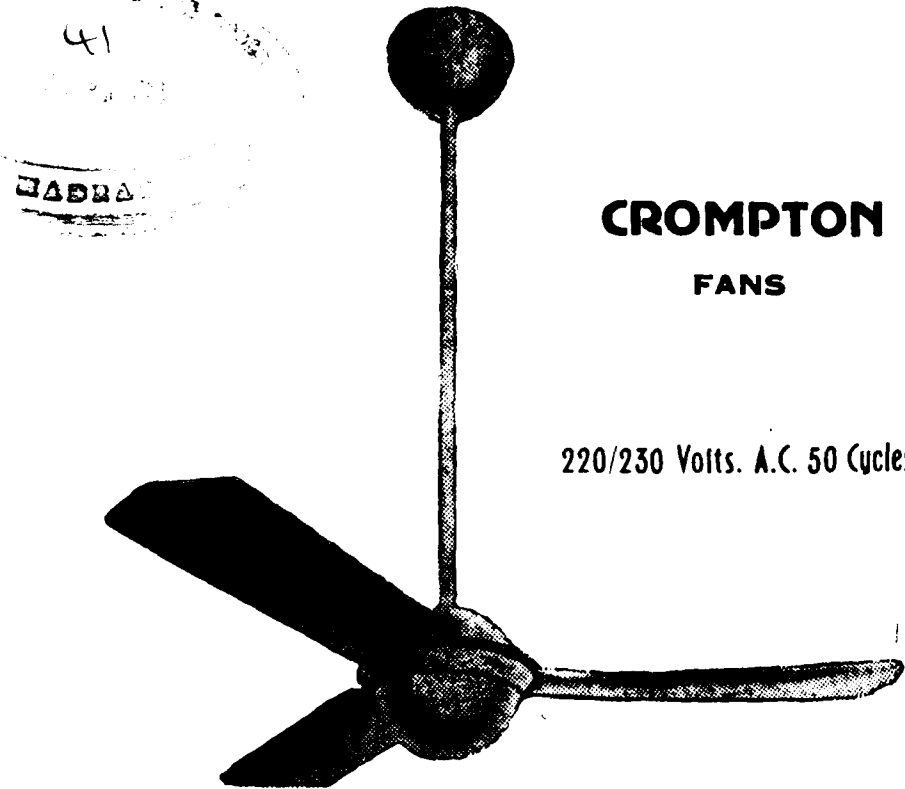


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