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AL-IND *Chronicle*

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SUMMER 1955



THE ALIND

Chronicle

SUMMER 1955

Editor: R. PARTHASARATHY

THE PURPOSES of this publication are:

- (1) To record the accomplishments and achievements of our employees, their joys and sorrows, so that our other friends like our customers, shareholders and neighbours may get to know our family better;
- (2) To encourage in our employees pride in workmanship and the high quality of our products;
- (3) To help create and sustain amongst them a spirit of friendliness; and
- (4) To tell the story of our business and that of our customers and other friends so that mutual understanding and respect might be fostered.



JOINT CONSULTATION

—O—

THE machinery of joint consultation is put to good use by us at Kundara. Apart from our Works Committee meetings, we also hold here at frequent intervals consultative meetings with members of our supervisory staff and other personnel of the various units of our plant. At these meetings are discussed in a free, frank and friendly manner all problems relating to production maintenance, inspection, shipping and so on. A number of constructive recommendations have emerged from these meetings—many of which have been adopted. Good as results have been so far, we would like them to be even better.

Joint consultation is a sensitive plant, but criticism will not retard or stifle its growth. What may, however, imperil its life is half-hearted enthusiasm; equally killing enemies are faint praise and passive acquiescence.

To get the best possible results out of the joint consultative scheme, workers must use it, enthusiastically, constructively, and co-operatively.

To repeat the words of Director B. V. D. Menon at a "Factory Day" function: "Please take these meetings and conferences seriously and contribute to them the best that you can by way of suggestion and criticism."

OUR COVER—

Girija's wedding: one of the highlights of the dance recital got up on November 21, 1955.

news & developments

THE inauguration of the 286.5-crore-rupee Ganguwal Power House by President Rajendra Prasad on January 2, marks the advent of the second phase in the execution of the stupendous Bhakra-Nangal multi-purpose project, the first being the Nangal Hydrel Channel and the Bhakra Canals.

Ganguwal power house is located on the Nangal hydrel channel 12 miles downstream from Nangal Dam, in highly picturesque surroundings. On the east is the famous Naina Devi *mandir*, situated on the top of hills, and on the south lies the historic town of Anandpur Sahib with its magnificent *Gurudwaras* (Sikh temples). A fall of 98 feet has been created at Ganguwal, thereby providing sufficient head to run the hydro-electric plant.

The power house at Ganguwal will ultimately house three generating sets of 24,000 kW capacity each. With the commissioning of the first two sets, 24,000 kW of firm power will be available for transmission to the various consuming centres, the second unit being treated as a stand-by for the time being.

The Kotla power house situated about seven miles further down the Nangal hydrel channel will come into operation sometime towards the end of the year 1955, and it will give an additional 48,000 kW. Kotla would be remote-controlled from Ganguwal. All the machines at the Kotla power house would be started, synchronised and operated automatically from Ganguwal.

Power from the generating stations will be taken to Delhi on a 200-mile long, double-circuit, 220-kV transmission line, the first of its kind in South East Asia. A line has also

been created with the Punjab River system by a 132-kV double circuit line. Six hundred and fifty-five miles of 132 kV and 66 kV transmission lines have been laid to carry power to the farthest areas of Punjab and Pepsu. These lines will be extended by another 200 miles in Rajasthan areas towards Bikaner and Sriganganagar. Besides these, a vast network of 33 kV lines totalling 864 miles has been spread so far in Punjab and Pepsu. In all, there will be 84 load centres from which power will be taken to the surrounding towns and villages by spreading local distribution lines.

PERIYAR HYDRO-ELECTRIC SCHEME

On February 11, Mr. K. Kamaraja Nadar, Chief Minister, Madras State, inaugurated work on the Periyar Hydro-Electric Project—located in the ghāt section of the main road from Cūmbum to Thekkadai, about eighty miles from Madurai.

Mr. V. P. Appadurai, Chief Engineer for Electricity, Madras, stated in the course of a report presented on the occasion that the Periyar Project would contribute about 1,40,000 kilowatts of power from June to February and about 44,000 kilowatts during the months of March to May to the present total installed generating capacity of 2,47,300 kilowatts in the Madras grid.

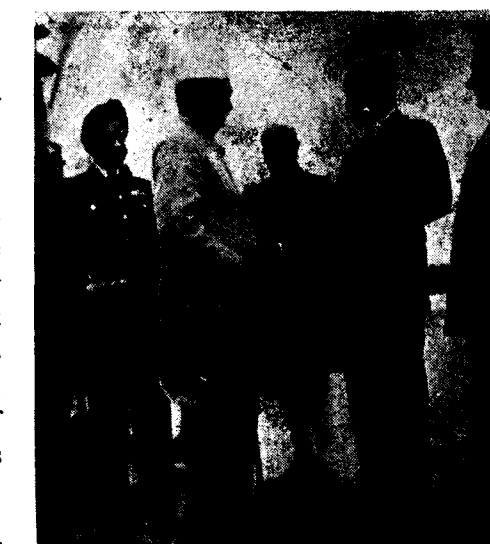
Replying, Mr. Kamaraja Nadar said that the Periyar Scheme would have been taken up long ago if only agreement between the two Governments of Madras and Travancore-Cochin could have been reached

earlier. For some time past, he added, there had been a growing realisation on the part of people about the useful role that electricity was playing in industrial as well as agricultural development. The need for electricity to villages was even greater because electricity helped in the promotion of various cottage and small-scale industries.

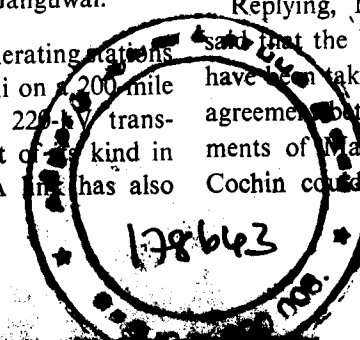
"It is the primary duty of Government", he said, "to improve conditions in villages and to try to contribute to the economic prosperity of the people."

FRENCH VERSION OF THE HINDU ROPE TRICK

Michel Le Roy of Paris has been astonishing citizens of that sophisticated city by demonstrating an extensible girder.



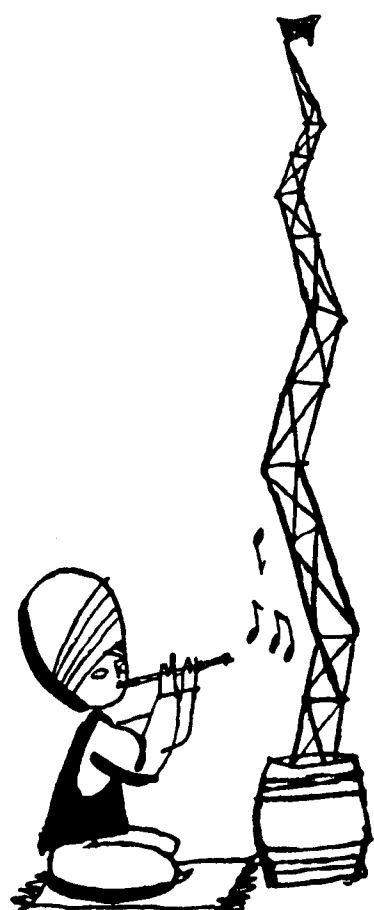
President Rajendra Prasad in conversation with the representative of a foreign firm on the occasion of Bhakra-Nangal inauguration. In the background is R. Chakravathy, our Delhi Representative.



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The girder is composed of interlocking links 16×12 inches which are wound around a drum. The links are automatically folded and locked as they are unrolled from the drum to form a girder or mast of triangular section. Of course, aluminium is the logical material for this application.

It appears that Mr. Le Roy has developed a modern version of the Hindu rope trick, with perhaps a more practical purpose in mind.



FIRST FIVE-YEAR PLAN TARGETS

A significant and all-round economic development has been witnessed in the first three years of the Five-Year Plan. In many vital sectors of Indian economy, the targets set by the Plan have already been exceeded or had been nearly achieved two years before the end of the Plan.

Food: Production of foodgrains in 1953-54 was 65,419,000 tons, that is, 11.4 million tons more than in 1949-50. Thus the target of increasing the annual production by 7.6 million tons by the end of 1955-56 had been exceeded by 50 per cent.

Cotton: The annual production of cotton increased by 33 per cent over that of the base year, 1950-51. Nearly 80 per cent of the five-year target had been realised by 1953-54.

Oilseeds: The country produced 5.59 million tons of oilseeds in 1953-54, exceeding the target of 5.48 million tons set for 1955-56.

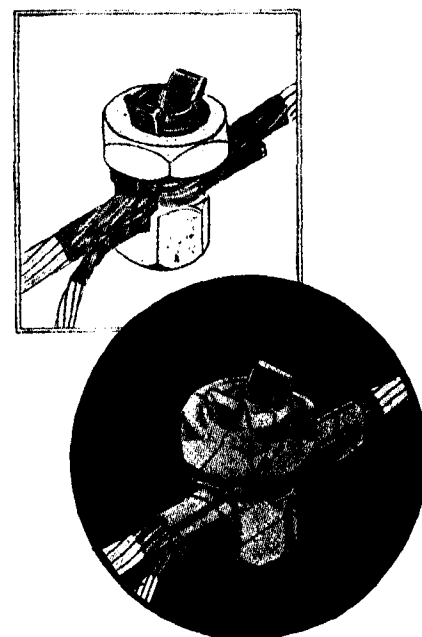
Land Reclamation: The total area reclaimed for cultivation in the first three years was 12.3 acres.

As a result of the many minor and major irrigation works, 8.1 million acres of additional land was brought under irrigation. Additional power generated during the same period was 450,000 kW.

BI-METALLIC CONNECTIONS

The electric supply industry requires anti-corrosion and sealing products that are absolutely waterproof, can easily be applied, have outstanding electric properties and can ensure virtually permanent protection against various corrosive influences. Denso Tapes, compounds and cords would appear to be the perfect answer to the sealing problem. For affording protection to copper-aluminium line taps, for example, all one has to do is first to coat the connector surfaces, threads and clamping nuts with Denso paste and then wrap with Denso Tape moulding closely over

all contours. The tape is then sealed well over the end of the tapping connector and around the down lead, thereby ensuring perfect protection against atmospheric, chemical, and electrolytic corrosion.



ALUMINIUM-CLAD STEEL WIRE

"Research and development by Aluminium Company of America has resulted in the successful production of aluminium-clad steel-wire—ACSW" reads a news item in a recent issue of the *Electrical Worlds*. "It has been produced on an experimental basis and the Company is preparing for its commercial production. The new wire has been tested in the field as the neutral in self-supporting service drops. Used as the neutral in this application, it can be readily wrapped around itself at terminal points. Use is also expected in the utility and communications fields for this strong, easily-worked wire. Its strength is claimed to be greater than alloys commonly used for electrical conductors."

technical notes

HOW TO APPLY TAPERED ARMOUR RODS

Tapered armour rods derive their name from the fact that they are tapered for a certain proportion of their length at both ends, the centre portion being cylindrical. The straight rods are of uniform diameter throughout their length. A few of the smallest sizes of conductors require eight rods per set, whereas, for all of the larger sizes ten rod sets are provided. For holding the ends of the rods in position two ferrules are required for each assembly. For applying the armour rods two wrenches with dies are required. For applying the ferrules a single press with dies is sufficient. When two men are working at the same time at the support, an additional press will save time.

1. Thread the set of rods through a pair of armour rod wrenches.
2. Tie the ends of the rods together temporarily with friction tape or string to prevent their slipping out of the wrenches while being raised to the tower support.
3. Lift the cable from the sheave with a set of blocks and a rope strap looped around the cable about two feet from the centre of the sheave. Hooks or other devices which might damage the cable must not be used.
4. Open the armour rod wrenches and clamp the rods around the cable while it is hanging in the rope strap, the centre of the rods coinciding with the correct centre location of the suspension clamp. The armour rods close over the rope strap, which is far enough to one side so that the suspension clamp can be loosely bolted over the rods, and then connected to the insulator string. (See fig. 1).
5. Slack off the blocks until the insulator string takes the load, and then remove the rope strap.
6. Remove the friction tape from both ends of the rods and twist the rods in the same direction as the outer strands of the cable, leaving the bolts in the suspension clamps loose to permit the middle section of the rods to spiral in the clamp. As soon as the middle section is tightly spiralled give the suspension clamp bolts a final tightening.
7. Continue the twisting of the rods around the conductor moving the wrenches gradually away from

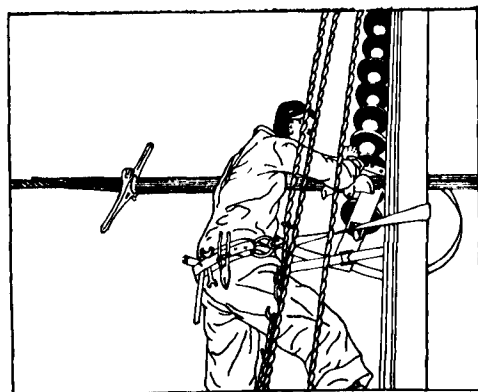
the ends of the suspension clamp on each side, in steps of about 2 or 3 inches each. At each step twist the rods up tightly as far as they will go, then move the wrenches one step and repeat the operation. This gives the rods a "crimp" or permanent "set" at each step, and ensures that they enclose the conductor tightly (See figs. 2 and 3). The correct minimum pitch angle for the straight part of 10 rod sets is 12 degrees and for 8 rod sets it is 11. Continue the twisting until the rods are completely twisted around the cable and then remove the twisting wrenches.

8. Then take the armour rod ferrule and ferrule press, and after opening the press, place the ferrule on the lower die of the press so that the pin of the die is inserted in the punched hole in the ferrule. Then apply the ferrule underneath and near the ends of the rods as shown in fig. 4 and by means of a light hammer, bend the ends of the ferrule around the rods. Continue this operation until the ferrule is formed completely around the rods as shown in fig. 5.

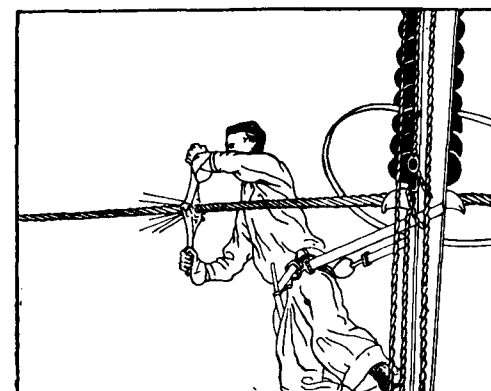
The ferrule should be near the ends of the rods, but if it is not, it can be forced into position by tapping with a hammer.

9. Then close the press and give a final tightening to the ferrule by forcing the die together by the method provided, that is screwing down the nut on the eye-bolt. (See fig. 6).

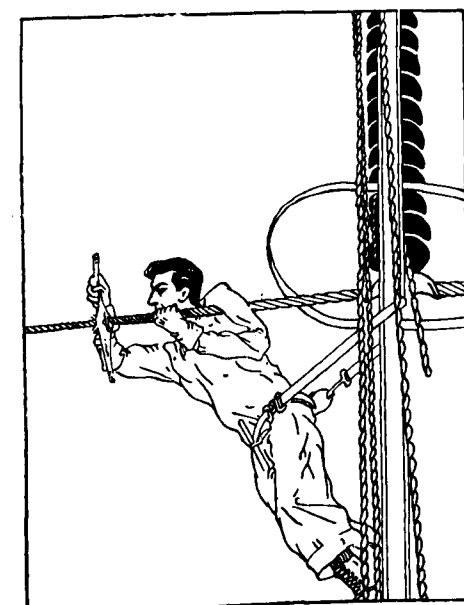
10. Remove the ferrule press. The ferrule will be tightly in place, as shown in fig. 7.



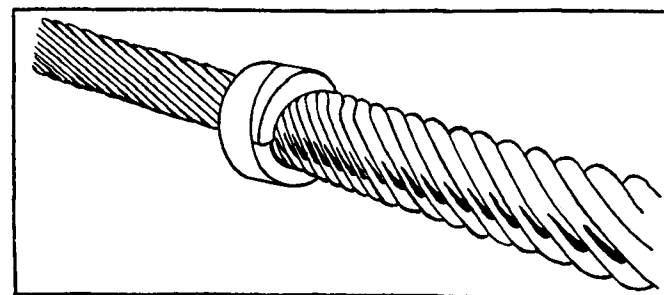
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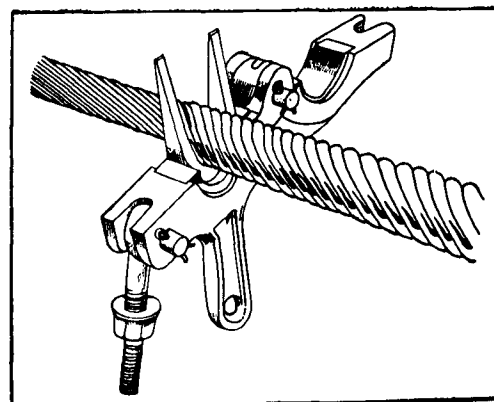
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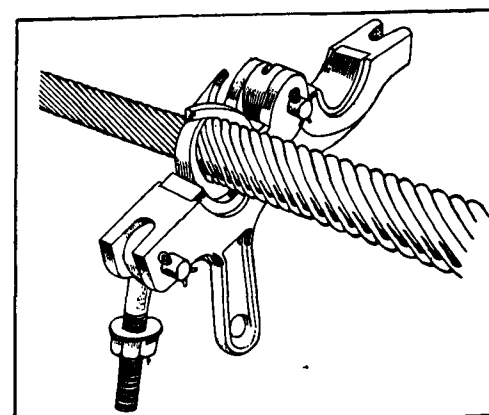
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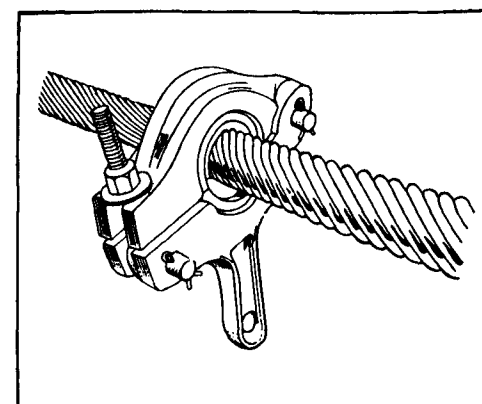
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Our Family



V. Paramoo, Mech. Foreman with his bride Miss Sri Devi.

We said welcome to...

Apprentices—K. Narayana Iyer, P. Madhavan, A. P. Jacob, R. Gopalakrishnan, P. Krishnan, J. Harry D'Cruz, M. I. Thomas, M. K. Chandrasekharan Pillai, E. Gaineos, T. K. Ipe, and M. Joseph (Works), K. Shams (Planning), P. Sukumaran Nair (Bills), K. P. Prabhakaran Kartha (Drawing Office) and C. N. Chandrasekhara Kaimal (Accounts).

Probationers—N. Gopalakrishna Pillai, K. Prabhakaran Pillai (Planning), E. P. Radhakrishnan (Accounts), K. Govinda Pillai (Head Guard), P. Narayana Pillai (Time Office), K. Ramachandran Nair (Bills), T. Raman Menon (Shipping Foreman), N. P. Krishna Pillai (Personnel Section), K. M. Ebrahim (Electrical), K. Kunju (Engine Driver).

New Appointments—V. O. Mathew (Chief Time-Keeper), K. Antony (Moving and Handling), K. Gopalan (Gardener), S. Kunjukrishna Pillai (Moving and Handling), R. Sasidharan Pillai (Steel Spooling), T. Janardhanan Pillai (Steel Spooling), N. Kuttan Pillai (Steel Spooling).

Births

To the wife of:

K. Padmanabha Pillai, Stores, a daughter on October 2, 1954 ; V. O. Mathew, Chief Time-keeper, a daughter on October 7, 1954 ; A. M. John, Charge-man, Shipping, a daughter on October 8, 1954 ; P. K. Raghavan Pillai, Reel Shop, a son on November 2, 1954 ; A. R. Gopalan Nair, Operator, Cable Mill, a son on November 26, 1954 ; N. Sreedharan Pillai, Cable Mill, a son on November 28, 1954 and N. G. Das, Junior Machinist, a son in December.

Wedding

On November 27, 1954, V. Paramoo, Mechanical Foreman, was called upon to assume an additional charge by Dan Cupid! The wedding seemingly chronic bachelor of this which was largely attended by Alinders, took place at the Sivagiri Mutt, Varkala. The bride was Miss Sri Devi.

At a home-coming reception held in Kundara, some days afterwards, friends presented the couple with a radio set and a chest of drawers, the former gift coming from works staff and the latter from office staff.

Here's wishing the couple lots and lots of happiness.



A.T. George Paniker, Works Supdt.'s Office, and Mrs. Kunjamma Paniker. Their wedding was reported in the last issue of the Chronicle.





ANOTHER STRANDER GOES INTO ACTION!

In September last, Mr. V. Seshasayee switched on another strander; this increases further our capacity for making 7-strand conductors.

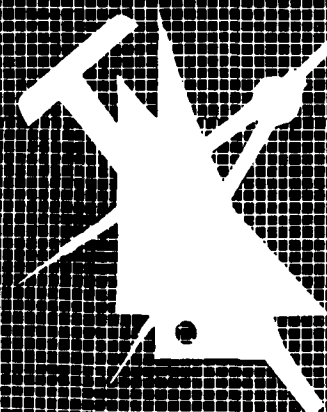


Director B. V. D. Menon at the Santa Cruz Airport, Bombay, on his return from a brief business trip to the U. K. in Sept.-Oct. 1954 with M. P. M. Pillai, our Bombay Representative.

Group photo taken on the occasion of the retirement of N. Parameswaran Pillai, Head Guard.



T. C. ENGINEERS visit ALIND PLANT



- (1) Mr. A. O. Oomen, Mr. Kumarankutty Menon (with V. G. G. Nayar) and Mr. P. G. K. Ayyar.
- (2) Mr. B. V. D. Menon and Mr. U. Chandu Nair.
- (3) K. S. Kalyan Krishnan, Inspector, demonstrating the making of a compression joint with a hydraulic compressor.

In the discussion that resulted, several interesting factors pertaining to joints and bi-metallic clamps emerged, members expressing views based on their own experience. Among those who participated in the discussion were Mr. U. Chandu Nair, Superintending Engineer, Mr. P. G. K. Ayyar, Executive Engineer, Mr. K. P. Padmanabhan Nair, Executive Engineer, Mr. S. Peer Mohammed, Assistant Engineer and Secretary of the Association, Mr. K. G. Seshan, Assistant Engineer, and Mr. S. Paramu, Assistant Engineer.

THE members of the Travancore-Cochin Electricity Department Engineers' Association honoured us with a visit on September 18, 1954. Occasion was an extra-ordinary meeting of the Association.

Members spent some time first in seeing the 66 kV sub-station at Kundara. The party next came to our works and were taken around the wire drawing and stranding sections. How joints were made and conductors were tested were demonstrated to the visitors.

At a meeting held later, with Mr. M. Kumarankutty Menon, Deputy Chief Engineer (Electricity), Trivandrum, in the chair, Mr. B. V. D. Menon, Director, formally welcomed the Engineers. He said that he would like to express the grateful thanks of the company to the Department for all the co-operation and help received. "Competition was rather keen", he continued, "but, thanks to the continued preference for AL-IND cables by customers like State electricity departments and private electricity undertakings, the company hoped to hold its own and ensure for itself a fair share of the business." With the installation of its rod-rolling mill, the company would be taking a big step forward in achieving self-sufficiency in respect of the electrolytic aluminium rods used in the manufacture of cables, Mr. Menon added.

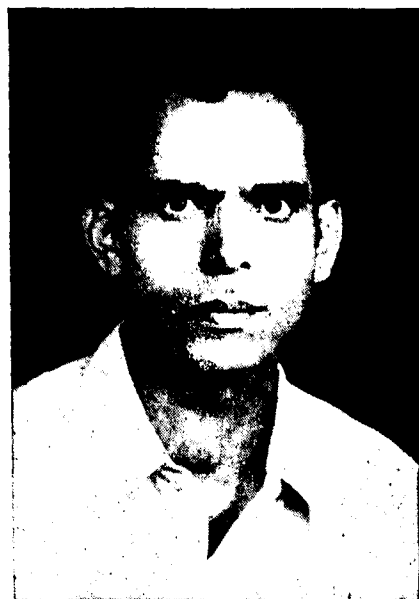
Mr. V. G. G. Nayar, General Manager, then answered questions on the applications of ACSR and All-Aluminium Cables, in the twin fields of transmission and distribution.

(Continued in previous col.)

Mr. S. Peer Mohammed, Secretary.



Alinders



M. Mathen.

"I have not wasted one single moment in my life", says M. Mathen of Despatch. We can well believe him, for he is always as busy as a beaver. He has to be active, more active and still more active all the time, as otherwise, our letters which now take two days to reach a place like Tiruchi—thanks to the Trivandrum Express not making Kundara a port of call—might take even more days.

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By qualification, Mathen is a Surveyor. After doing his High School at Chathannur, Quilon, which he left in 1941, he studied Surveying and Civil Engineering for a year. He joined the Railway wing of the Indian Army in 1942, and served with it for a period of four years. What might be called a ring-side view of the fighting in Burma was his unique experience—he had often to jeep his way through enemy-infested jungle.

In the surveying of bridges in Burma—practically all of them—Mathen has had a hand. He has also travelled extensively in India and Ceylon.

After V-J Day, Mathen joined F.A.C.T. Ltd., Alwaye, with which company he was for a year, and came to us in 1948. Initially, he worked as a Stores Assistant.

Volleyball, basket-ball and ring tennis are his favourite games.

A man of affable manners, always ready to help, and very good in his work, we are proud to have him with us.

P. Bhaskaran Nayar

In work and play, an Alinder who has consistently been showing that very valuable quality—enthusiasm—is P. Bhaskaran Nayar, Planning.

Young Bhaskaran had his schooling in Cherpallchery, South Malabar. He passed his school final examination in 1950, and joined us in January 1951.

Bhaskaran is a very fine sportsman and has been annexing year after year several prizes in Badminton, Volleyball, Ring Tennis, Caroms and Chess.

Photography is one of his holiday interests. Although he does not as yet own one of those expensive cameras, he takes sharp enough pictures with his box.

Keen, alert and active, Bhaskaran Nayar is a lively, likeable lad.



P. Bhaskaran Nayar.

AYUDHA

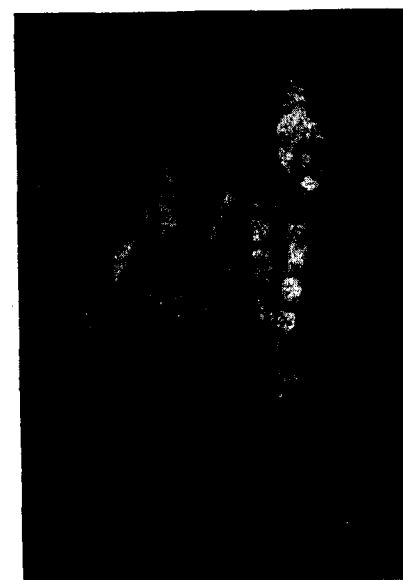


PUJA DAY

WE had music, we had a *Kathakali* recital, we had an *Akshara Slokam* contest, we had readings from the *Bhagawatham*, as in last year, and we had additionally a poets' symposium for our *Ayudha Puja* celebrations held on October 6, 1954.

K. Ramakrishna Nair, Works Superintendent, had a lovely little *mandap* constructed for the *puja*; it looked a miniature temple with multi-coloured bulbs and buntings lending it an eerie beauty. Inside was installed a picture of Saraswathi—the patron goddess of learning, and wisdom.

Worship was offered in the presence of a large gathering that included Director B. V. D. Menon.



"Radha Krishna", one of the items, in the dance recital.

In the evening, we had a dance recital by the children of the *Sri Devi Natana Kala Samithi*, Quilon.

The second day's worship was offered early in the morning with readings from the *Bhagavatham*, the great Hindu epic, by Veliyam Ramakrishna Pillai and Perayam Gopala Pillai, well-known scholars and expositors of Kerala.

At 4 o'clock in the evening there was a meeting with Mr. M. N. Karunakara Nair in the chair. In the course of a brief speech, he said that functions like this helped to bring about team-spirit, as members, regardless of communal affiliations, co-operated in the celebration of a festival not necessarily their own.

Later, there was an *Akshara slokam* competition in which there were as many as twelve participants. First prize-winners were N. Neelakanta Iyer, Bills, and T. A. Narayanan Nair, Machine Shop. The second prize went to S. Damodaran, Bills.

A feature of this year's celebration was a "poets' symposium" in which several employees (including an encouraging contingent) from the reel shop took part. Dizzy Parnassian heights were touched. The poem of P. K. Parthasarathy, Accounts, was adjudged the best, and he was accordingly declared the first prize-winner. Runner-up

in the Pegasus stakes was K. M. Yohanan, Watch and Ward.

At night, we had *kathakali*, Kerala's famous dance-drama. Scenes from *Nala Charitam*, First Day, and *Keechaka Vadham* were put over. Top-flight exponents of the art took part in the recital. As cognoscenti can testify, Kudamalur Karunakaran Nair, Kurichi Kunjan Panikker and Haripad Ramakrishna Pillai are all names to conjure with in the *kathakali* world.

Employees and the several guests present thoroughly enjoyed the recital.



Mrs. Vijaya G. Nayar awarding a prize to a girl of the dance troupe,



Kathakali recital—

- (1) Haripad Ramakrishna Pillai as Nala,
- (2) Kurichi Kunjan Paniker as "Swan".
- (3) Kudamalur Karunakaran Nair as Damayanti with K. K. Paniker as "Swan".

Obituary

The death took place on September 13, 1954 of N. Parameswaran Pillai, Head Guard, who had retired from service only a few months earlier. At the farewell function got up in his honour on the eve of his retirement (June 26) V. G. G. Nayar, General Manager, and P. A. Ibrahim, Personnel Officer, paid tributes to Pillai's devotion to duty and to his attitude of general helpfulness and friendliness. At that time no one ever suspected that his end was so near, but divinity proved us wrong. At the function itself Parameswaran Pillai was so overcome with emotion—a small purse was presented to him—that he could hardly utter a few words in reply.

To his two sons with us—P. N. Sivasankara Pillai and P. N. Gopinathan Pillai—and other members of the bereaved family, we tender sincere sympathy.

- (1) Lord Buddha and Chandaliika—the untouchable girl.
- (2) The *Bhagavad Gita* or the Song Divine is the essence of the Vedas, a book containing the highest esoteric doctrines, as expounded by Lord Krishna to Arjuna. Picture shows [the Lord expounding the philosophy of *karmayoga* or the "Yoga of action"—the performance of one's duty, in a detached way—to Arjuna, who wants to lay down arms on the epic battlefield of Kurukshetra.
- (3) A *Bharata Natya* number.
- (4) Peasant Dance—Girls about to plant seedlings.
- (5) Fishermen Dance.

Dance



Recital

4th
HAPPY
BIRTHDAY

ALIND
RECREATION
CLUB



INDIAN dancing is acknowledged to-day to be one of the world's priceless art heritages, embodying as it does, expressions of beauty,

rhythm, poetry, music, drama and colour. Broadly speaking, Indian dancing can be classified into two types—the *Tandava*, representing the cosmic dance of Shiva, virile and

vigorous and *Lasya*, the dance of his consort, Parvati, soft and graceful. All dancers must master both types to strike a happy balance between vigour and grace.

Gestures or *mudras* are the essence of Indian dancing. The *mudras* constitute a close and comprehensive idiom, any incident from the rich Hindu mythology being capable of gestural interpretation.

And there is an intimate relationship between dance and music. In some dances, as for instance, in the number where, Arujuna, one of the Pandava brothers, is torn between his duty as a *Kshatriya* and the killing of his kith and kin, percussion can be specially important.

These dissertational remarks on Indian dancing have been prompted by the memorable recital given by Chandrasekharan and members of his troupe—the PRATHIBHA NRITHIRYA KALANILAYAM, Trivandrum, in aid of the Alind Recreation Club and the Alind Ladies' Club on November 21, following our fourth Club Day function on November 20. Their repertoire included many classical and popular items. Particularly well-received were (1) Lord Buddha and *Chandalika* ("untouchable" girl), (2) *Geethopadesam* and (3) Girija's wedding.



S. Damodaran, receiving his award (Factory Day 1954—best acting performance) from Director B. V. D. Menon.

Mr. U. Chandu Nair, Superintending Engineer, Electricity Department, Travancore-Cochin State, who delivered the "Club Day" address, observed in the course of a most interesting speech that clubs like the Alind Recreation Club helped members develop *esprit-de-corps*, shed petty communal jealousies, and sink age and other differences. "Social graces are developed, selfishness and arrogance go by the board in a club", he added. Mr. Chandu Nair, also, said: "Agriculture by itself cannot support our growing population. Industry has to be developed side by side. Our leaders appreciated the position in its correct prospective, and formulated the First Five-Year Plan, setting up ambitious targets of achievement. We have not only to develop new industries, but revive the older ones."

Touching upon employer-employee relations, the speaker observed: "If a business is to thrive, management-worker relations must be of the utmost cordiality. Both parties are essential for industrial advancement. There is no use one party blaming the other, and talking only of rights forgetting altogether one's obligations. We cannot simply afford the extravagance of even a single machine standing idle even for a single moment."

Earlier, M. K. Varughese, Secretary, presented the Annual Report. Membership had more than doubled since last year, he said. "The library was set up with gifts of books from members and friends to start with. As the demand for books grew, we spent a sum of Rs. 485-12-0 on the purchase of new books," he added.

A quiz contest, as usual, monographing by M. V. John and speeches by members followed the reading of the report.

Here's a brief summary of the speeches:



Mr. U. Chandu Nair.

Mrs. Varughese: (Member of the Ladies' Club). Participation in games helped in the cultivation of the mind also.

V. O. Mathew: Build up the technical and reference sections of the library.

P. Ramachandra Nair: To get the utmost out of the Club, give it your whole-hearted support.

T. K. Krishnan: Anecdote is all right, but not malicious gossip or slander.

P. Sivasankaran Nair: Start an arts section.

Prabhakaran Kartha: Participate in outside tournaments also.

K. Seetharaman: Partaking in games must not be sporadic and seasonal; it must continue all through the year.

B. Kesavan Nair: Reorganise the library on a bigger scale.

K. S. Krishnan: Develop still further interest in activities.

K. M. Yohanan: Make notes of the books you read.

PRIZE-WINNERS

Badminton: (Mixed Doubles):
Winners—K. Bhaskaran Pillai and C. S. Kaladharan Pillai.
Runners-up—N. Neelakanta Iyer and P. Balan Pillai.

Badminton: (Open Doubles):
Winners—K. Bhaskaran Pillai and M. Srinivasan.
Runners-up—O. C. Chacko and N. Neelakanta Iyer.

Badminton: (Singles):
Winner—K. Bhaskaran Pillai.
Runner-up—K. R. Sankaranarayanan.

Ring Tennis: (Mixed Doubles):
Winners—V. G. G. Nayar and M. V. Johnson.
Runners-up—O. C. Chacko and N. Neelakanta Iyer.

Ring Tennis: (Open Doubles):
Winners—K. Bhaskaran Pillai and O. C. Chacko.
Runners-up—V. G. G. Nayar and M. V. Johnson.

Ring Tennis: (Singles):
Winner—C. S. Kaladharan Pillai.
Runner-up—M. V. Johnson.

Caroms: (Mixed Doubles):
Winners—K. Bhaskaran Pillai and M. K. Varughese.
Runners-up—O. C. Chacko and V. Paramoo.

Caroms: (Open Doubles):
Winners—K. Bhaskaran Pillai and O. C. Chacko.
Runners-up—M. K. Varughese and M. V. Johnson.

Caroms: (Singles):
Winner—N. Neelakanta Iyer.
Runner-up—M. K. Varughese.

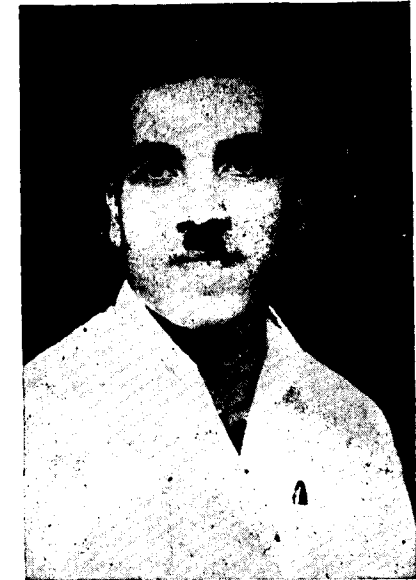
Table Tennis: (Singles):
Winner—K. Bhaskaran Pillai.
Runner-up—V. Paramoo.

Volleyball:
Winners—P. Balan Pillai, M. K. Varughese, B. V. B. Menon, M. Srinivasan, N. Neelakanta Iyer, K. R. C. Nayar, K. R. Balakrishna Pillai and K. M. Nair.

Chess:
Winner—V. O. Mathew.
Runner-up—S. Damodaran.

Quiz:
Winner—N. Neelakanta Iyer.
Runners-up—T. R. Raghunandan, P. Ramachandran Nair, K. S. Kalyanakrishnan, P. Bhaskaran Nair and S. Bhaskaran Nair.

OUR PRODUCTION FOREMAN—M. K. VARUGHESE



M. K. Varughese, Production Foreman, is one of those creative pace-setters, remarkably good in his work. He came to us in 1947 as an Assistant Mechanic, and in the early, formative years of the company, made a significant contribution. In the erection of the wire-drawing machines and stranders, and in the installation of the foundry, lathes and other equipment—in short, during construction in all its phases—he played a very important part. When the plant went into full production, he was first promoted to the position of Supervisor, Cable Mill, and then to that of Production Foreman.

Prior to coming to us, the iron had entered his soul! He was with the Mysore Iron and Steel Works, Bhadravati. During the erection of this plant around 1935, he was working in the rolling mill section, and picked up a lot of valuable knowhow from German engineers. While with this company, he took a correspondence course in A.M.I.E., but, somehow, failed to complete it. He left the Steel Works as an Assistant Foreman, in 1945.

Varughese belongs to Niranam, Tiruvalla Taluk, famous for a magnificent edifice, the St. Thomas Church. He left school in 1935 and spent another year at a Commercial Institute before taking up his appointment with the Mysore Iron and Steel Works.

Mr. Varughese is the Hon. Secretary of the Alind Recreation Club. In the three years he has held charge, there has been a spectacular rise in membership as well as a considerable widening of club activities.

Volleyball and caroms are his two games interests. Partnered by M. V. John, Varughese has taken several prizes in caroms.

Varughese is, also, a forceful speaker. He is invariably laconic, and very much to the point, in his speeches. Even while at school he had collected prizes in elocution contests.

As a character actor, Varughese is among one of the very best that we have known. As Krishnan Unnikartha in *Minnal Pranayam* (1953) and as Adikari in *Pennarasu Nad* (1954) Varughese scored two positive acting triumphs.

As Foreman, as Secretary of the Alind Club, as sportsman, speaker, and amateur actor, M. K. Varughese has endeared himself to quite a large number of friends, both within the colony and without.



Social Welfare Project

- (1) Miss Kumari Varma speaking on the occasion of the inauguration of the Project.
- (2) Miss Kumari Varma and Mrs. Freda Bedi, Editor, *Social Welfare*.
- (3) Group photo taken on the occasion of the inauguration. Fourth from left is Mrs. V. G. G. Nayar, Convener.

declared, "there could hardly be a feeling of perfection even if we advanced much in commercial, industrial and other fields.

Miss Grace Mathews, Secretary of the Alind Ladies' Club, proposed a vote of thanks.

THE Quilon Welfare Extension Project was inaugurated at Kundara on October 2, 1954, with Miss Kumari Varma in the chair. A large gathering of social workers of the locality and neighbouring centres was present.

Representing Mrs. Durgabai Deshmukh, Chairman of the Central Social Welfare Board, Mrs. Freda Bedi, Editor, *Social Welfare*, was present.

Mrs. Vijaya G. Nayar pointed out in her welcome speech that the Social Welfare Scheme had many Extension Projects throughout the length and breadth of India. The fact that such prominent ladies as Mrs. Deshmukh and others were at the helm of affairs, she said, was ample proof of the important part women played in the social welfare field.

In her presidential address, Miss Kumari Varma said that Indians were qualified by tradition and temperament to render social service. "We in India are greatly handicapped for lack of training organizations" she added. "This grievous disadvantage should be remedied, if this country is to take its proper place among progressive nations."

Miss Nalina Kumari, Lecturer, Women's College, Trivandrum, stressed the urgency of promoting cottage industries to put an end to unemployment. "These industries must be organised universally", she said, "and social welfare agencies can do a lot in organizing them".

Mrs. C. M. Stephen, Advocate, Quilon, pointed out the various fields of social welfare work in which women could engage themselves.

Mrs. Freda Bedi said: "Speeches can be made volubly and can also be listened to with rapt attention, but what was required was action—service. What independent India demands of you is selfless service in the social field."

Dr. E. K. Raman Pillai pointed out that social welfare organizations would do well to devote some thought to the subject of family planning. "Without family planning," he

(Contd. in previous col.)

NEHRU'S BIRTHDAY CHILDREN'S PARTY

TO many children in this country, Prime Minister Nehru's birthday is even more important than their own individual birthdays. They look forward year after year, to November 14 on which memorable date "Uncle" Nehru was born—with gay and anticipatory interest.

Kundara children are no exception to this general rule, and so as to give them an opportunity to demonstrate their affection and regard for our well-beloved leader, the Social Welfare Project, Kundara, arranged a brief function on November 14, with sweets for the children and speeches for the grown-ups. A Baby Show was also held. Entries totted up to a sizeable fifty. Dr. P. K. Sukumaran, M.L.A., who was the guest of honour at the function, said that he was genuinely pleased to see the many beaming and bright faces. He appealed to parents to rear their children carefully, devoting special attention to problems of their health. Children were future national assets, so they were worth all the care in the world, he said.

Rev. Fr. Cameons, Parish Priest and Dr. (Miss) Nanikutty Amma were other speakers on the occasion.

Fr. Cameons said that other industrial establishments in the state might as well take a leaf out of

the book of Aluminium Industries in the matter of welfare and community service programmes.

Miss Nanikutty Amma offered in her speech much practical and helpful counsel on baby care.

The Baby Show consisted of two categories—infants up to 12 months, and toddlers from one to three years.

Prize-winners in the first group were:

1. Jesantha—I.
2. Sossamma—II (Daughter of Mr. M. K. Varughese, Production Foreman).
3. Santhra—III (Grand-daughter of Mr. Stephen Fernandez, Supervisor, Civil Works).
4. Indumathi—IV (Daughter of Mr. P. K. P. Kaimal, Time Office).

Winners in the second group of one year and above were:

1. Meher—I (Daughter of Mr. P. A. Ibrahim, Personnel Officer).
2. Seethalakshmi—II (Daughter of Mr. A. R. Nadar, Registered Office).
3. Jameson—III (Son of Mr. M. V. John, Chargeman, Mechanical Maintenance).

The first prizes for both groups were gold pendants. The other prizes consisted of Horlicks bottles, dolls and toys.

Judges were: Dr. E. K. Raman Pillai, Company Medical Officer, Dr. (Miss) Nanikutty Amma, Quilon District Hospital, Dr. P. T. John, Government Dispensary, Kundara, Dr. (Mrs.) J. John, London Mission Hospital, Kundara, and Mr. Vasudevan Nair, Advocate, Quilon.





NEHRU'S BIRTHDAY

- (1) Mehr, daughter of P. A. Ibrahim, First prize-winner in group II.
- (2) Santha, grand-daughter of Stephen Fernandez.
- (3) Kannan, son of V. G. G. Nayar, in cow-boy outfit.
- (4) Indumathi, daughter of P. K. P. Kaimal.
- (5) Sosamma, daughter of M. K. Varughese.
- (6) Seethalakshmi, daughter of A. R. Nadar.
- (7) Jameson, son of M. V. John.
- (8) Dr. P. K. Sukumaran who presided.
- (9) Rukmani, little daughter of G. V. Nair.
- (10) Rev. Fr. Cameons who spoke on the occasion.



- (1) Santa Claus (T. Levorio) with the son of K. Ramakrishnan Nair (left) and the son of M. V. John (right).
- (2) Sitting on Santa's knees, are the daughter of M. K. Varughese (left) and the son of V. G. G. Nayar.
- (3) The string band which was in attendance at the party.

A Merry Christmas, indeed, it was, at the Colony this year. Important Hindu religious festivals like *Ayudha Puja* and national festivals like Republic Day had always been celebrated in the township, but for the first time in its annals, the company got up a gala function for Christmas with a party for the children.

Invitations had previously been sent out to all the children of employees, and at the appointed hour, an impressive crowd of parents and offspring collected in the open space, near the front office, the venue of the celebration, where a glittering Christmas tree had been set up.

To the children, eager and ebullient, soon rolled along Santa Claus in red suit and white beard (impersonated by T. Levorio, Reel Shop) in a Rolls-Royce of a gaily-decorated bullock-cart! He arrived in fine style to the accompaniment of a blare of trumpets, and in a blaze of fire-works. Santa first wished the children present a Merry Christmas, and then proceeded to shower on them sweets and choice gifts. Children in the 2 to 4 age group received dolls, bunnies, and similar articles. Those in the other age groups of 4 to 6, 6 to 8 and 8 to 10 received presents appropriate to their age, the last category receiving some lovely picture-books.

A string band from Quilon led by our own V. D'Cruz was in attendance. Interspersed with this music were patches of "canned" Indian song-hits from recent films.

Oh yes, it was a lovely, little function all right with soft lights and sweet (but loud) music and the gay and irrepressible laughter of children.

Congratulations to V. G. G. Nayar, General Manager, for dreaming up the Christmas party idea, and to E. J. Rozario for working it out to a beautiful and successful climax.

CONGRESS EXHIBITION, MADRAS ENGINEERING EXHIBITION, HYDERABAD

"If you can make a cheaper and better mouse trap than ever before", runs an old proverb (which, incidentally, Burmah-Shell have made all-too familiar) "the world will make a beaten path to your house".

"Sez you," we are inclined to comment. Probably in the halcyon days in which this adage originated, the world wore out its shoe-leather seeking out budding, manufacturing geniuses, but, certainly, not to-day. Super mouse traps are not in our line, but we do make decidedly cheaper and—according to many—definitely better conductors, but goodness knows that customers do not just walk into our offices to place their orders. On the other hand, we go for them in a big way. Through press advertisements, direct mail and participation in industrial exhibitions and trade shows—where our goods can be seen, examined and compared—we make ourselves, and our products, known.

In recent months, we participated in two Exhibitions, one in Madras held in January-February and the other in Hyderabad held in mid-February. The latter one was held under the auspices of the Institution of Engineers (India) as an integral part of its Thirty-sixth Annual General Meeting.

Highlight of our stand in the Madras Exhibition was an illuminated map of India showing present and proposed hydro-electric and thermal projects and Alind lines, framed in masonite, and carrying colour transparencies of an electrical interest. Other items were posters and photographs and a small mounted flow-sheet showing the various processes from "pig" to cable. Also on view were a cable reel, a sample sizes-board and an accessories board.

The Hyderabad stall which was slanted for an audience of engineers was a compact and well-laid out, little affair. On display at this stand were the conductors and accessories we make, a big flow-sheet

illustrating how Alind cable is made, charts pin-pointing the position of aluminium *vis-a-vis* copper and other non-ferrous metals, with regard to production and prices, and also photographs.

In both places, our stalls attracted large numbers of visitors, and among them, several Union and State Ministers, Members of Parliament and State Legislatures, Engineers of

Government Electricity Departments and private undertakings.

The two stalls were designed and erected under the supervision of R. Parthasarathy, our Publicity Officer. For distribution to visitors, he also brought out a very readable booklet with the title, "In Which We Serve". (Shades of Shakespeare and the very much alive and kicking substance of Mr. Noel Coward!) In putting up the Madras stall, V. Ramaswamy, Assistant, Publicity Department, considerably helped. Artwork and general decor were by P. D. Sagayam of Tiruchirappalli.

COPPER vs. ALUMINIUM Symposium in Hyderabad

The replacement of copper with aluminium in electrical appliances formed the subject-matter of a symposium in the Electrical Section of the 35th Annual General Meeting of the Institution of Engineers (India) held in Hyderabad in February.

Prof. M. S. Thacker, Director, Indian Institute of Science, Bangalore, and Chairman of the Section, presided. Initiating the discussion, Prof. Thacker observed that the copper resources of the country were extremely meagre, and that the large availability of workable bauxite ores in India pointed to aluminium being the logical alternative to copper in the electrical field.

While Mr. A. R. Narayana Rao, Madras Electricity Department, narrated the experience of his Department in the use of ACSR and all-aluminium cables, Mr. S. A. Quadir, Chief Engineer, Hyderabad State Electricity Department, stated that the installation of aluminium conductors would, for one thing, do away with pilferages of copper conductor spans.

Mr. P. V. A. Narayanamurthy, Madras Electricity Department, observed that both ACSR and all-aluminium cables had come to stay in overhead transmission and distribution. The Madras Electricity System had put through several bus-bar installations where the bus-bars were welded *in situ*. He stated further that technical problems encountered first in the installation of aluminium lines like bi-metallic connections, fatigue failures due to vibrations, etc., had all been satisfactorily solved.

Mr. H. K. Ramaswami, Deputy Chief Engineer, South Madras Electric Supply

Corporation, Ltd., Tiruchirappalli, said that the experience of his company in the use of all-aluminium cables for rural lines has been extremely satisfactory. It was well known, he added, that in initial costs alone aluminium conductors meant a saving of 30 to 35 per cent and that the overall saving would be more than 15 per cent.

Mr. V. G. G. Nayar, who took a prominent part in the symposium, referred to the recent technological advances that had been made in aluminium applications. He further explained the mechanism of electrolytic corrosion and how troubles in bi-metallic connections could be overcome by using the proper fittings which were now available in the country at reasonable prices. He added that the establishment of insulated aluminium for house service connections was a long stride forward in the utilization of aluminium.

Winding up the discussion, Prof. Thacker referred to research work recently completed at his institute leading to successful development of processes for aluminium-clad steel sheets and steel wire. He also mentioned that special-high, conductivity aluminium alloys which were very nearly equivalent in conductivity to copper, at the same time possessing high tensile strength, had also been evolved by his metallurgical department. "These will shortly be made available for exploitation by commercial channels after the necessary patent formalities are completed," he said.

Mr. Thacker also put forward a vigorous plea for offering a preferential tariff to electro-metallurgical industries like aluminium production.



Hyderabad Engineering Exhibition:

- (1) V. G. G. Nayar and Mr. H. K. Ramaswami, South Madras Elec. Supply Corporation, Tiruchi. (2) & (3) Display pieces at the stand. (4) A flow-sheet showing how "Alind" cable is made. (5) From L. to R.: (1) Mr. H. K. Ramaswami (2) Mr. J. H. Subbiah of Glenwel & Co., our Hyderabad Agents (3) R. Parthasarathy, Publicity Officer, and (4) Dr. G. S. Melkote, Minister for Public Works.

Madras Congress Exhibition:

Highlight of the stand was an illuminated map of hydro-electric and thermal projects.

WELCOME

Visitors

ADORNING this centre-page spread are pictures of some friends who in recent months paid us the compliment of a most welcome visit. We are grateful to them for the honour.

1. Students of the Economics Honours School of the University College, Trivandrum, led by *Mr. Kesava Panicker*, Lecturer (in the foreground).
2. *Mr. Ch. P. Prasada Rao*, Assistant Engineer, Government Electricity Department, Andhra.
3. With *Mr. V. G. G. Nayar*, General Manager, are (from left to right): *Mr. V. P. Appadurai*, Chief Engineer, Government Electricity Department, Madras, *Mr. V. Ekambaram*, Superintending Engineer, Madras, *Mr. P. V. Chellam*, Divisional Electrical Engineer, Construction, Madras, and *Mr. T. Ramanath*, Technical Assistant to Chief Engineer.

4. With *Mr. B. V. D. Menon*, Director, in the centre, are *Dr. A. Nagaraja Rao*, Chief Industrial Adviser to Government of India, New Delhi (left) and his Assistant.

Wrote *Mr. Nagaraja Rao* in our Visitors' Book: "It really contributes to our national wealth filling an essential need of the country; very well organized and should have a good future."

5. *Mr. J. K. Uttam Singh*, Manager, Associated Electrical Industries (India), Ltd., Coimbatore, and members of his family with *Mrs. Vijaya. G. Nayar* (first from left) and *Kannan* (Master Nayar) standing in the foreground.
6. *Mr. J. Sharma*, Allied Engineering Corporation, Jaipur, *Mr. N. T. Alexander*, Indian Aluminium Company Limited, Alupuram, Alwaye and *Mr. Z. Barron*, Chief Engineer, Indian Aluminium Company Limited, Calcutta.
7. *Mr. Punnose*, Assistant Director of Industries, Travancore-Cochin State, *Mr. D. S. Munro* of the Australian High Commission, New Delhi, and *Mr. P. G. Verghese*, Businessman and Contractor, Kundara.
8. *Mr. K. P. Bhatt*, Executive Engineer, Electrical & Mechanical, Government Electricity Department, Andhra, with *Mr. V. G. G. Nayar*.
9. *Mr. T. M. Varghese*, M.L.A., formerly Minister, T.C. State and *Mr. P. R. Kochukrishna Pillai*, Municipal Chairman, Quilon.
10. *Mr. Harold L. Walker*, Visiting Professor, Indian Institute of Science, Bangalore and *Mrs. Walker*, with Students of the Institute.

Wrote *Mr. Walker* in our Visitors' Book: "Progressive industrial plant. Great future in store."

11. *Mr. V. P. Narayanan Nair*, Project Executive Officer, Neyyattinkara-Vilavancode Community Project, *Mr. H. K. Ramaswami*, Deputy Chief Engineer, South Madras Electric Supply Corporation Limited, Tiruchirappalli, and other friends.
12. With *K. R. Sankaranarayanan*, Secretary & Accountant, are (from left to right): *Mr. S. S. Narayanan*, Works Manager, Indian Aluminium Company Ltd., Alwaye, *Mr. M. H. Fowler*, Peirce, Leslie & Co. Ltd., Kundara, *Mr. C. P. Howell*, Northern Aluminium Company Ltd., U.K., *V. G. G. Nayar*, and *Mr. John McKenzie*, Production Manager, Indian Aluminium Company Ltd., Alupuram, Alwaye.
13. *P. A. Ibrahim*, Personal Officer, with *Mr. B. E. Coulthard* of Madura Mills, *Mr. A. V. Mathew*, Inspector of Factories and Boilers and *Mr. E. J. B. Greenwood*, formerly Chief Electrical Inspector, Government of Madras.

REPUBLIC DAY, 1955

REPUBLIC DAY came round again on January 26, and we celebrated it with our wonted enthusiasm. From early morning to dewy eve, the colony wore a festive, new look. Flags and festoons and buntings met the eye, wherever it turned. And music was continually on tap.

Celebrations started with a procession of the children through the colony, employees bringing up the rear. In their spotless, white khadi uniforms, and Gandhi caps worn at smart angles, Alinders did make a pretty picture.

Directly the party reached the venue of celebration, which was this year "up above", opposite the garages, and not "down under" as in other years, V.G.G. Nayar, General Manager, unfurled the National Flag. Our Publicity Officer, R. Parthasarathy, then explained to the children the significance of "Republic Day."

Shortly afterwards, we adjourned to the dormitory quadrangle, where the children tried their strength, speed and skill against one another in several sporting events. As usual,

musical chairs proved to be the most exciting item.

But an event to which children were looking forward with eager interest was the Fancy Dress contest in the evening. If the wild enthusiasm they showed, as they submitted themselves to the ministrations of Alind make-up wizards (like K. S. Kalyanakrishnan) was even a mild indication, the children did not, certainly, subscribe to Shaw's sentiment in *St. Joan*: "What is all dress but a fancy dress except our natural skins"? Master Kannan, son of V. G. G. Nayar, (since up at Lovedale, Ooty) who showed up as a priest in white beard and surplice easily outclassed his competitors and was declared winner. Runners-up were Lalu Varughese, son of M. K. Varughese, Production Foreman, and Mohammad Ali, nephew of P. A. Ibrahim, Personnel Officer. Lalu was effectively disguised as a demure maidservant, and Ali brandishing a (cardboard) sword looked a passable enough *Yamakinkara* (attendant of the Lord of Death) despite his small size—which the boy made up by his jaunty air. Entries received this year exceeded those of previous years, and included a wide range of

characters from toddy tappers to black-marketeers.

Mr. K. Gangadharan Thampi, Additional Judge, Quilon, who presided at the meeting held later, observed that it behoved every one to help in the achievement of a socialistic pattern for the country, and to which, significant attention had been drawn at the Avadi session of the Indian National Congress. Other guest speakers were :

Rev. Fr. Cameons, Parish Priest,

Dr. E. K. Raman Pillai, Company Medical Officer,

Mr. N. Appukutta Menon, Income-Tax Officer,

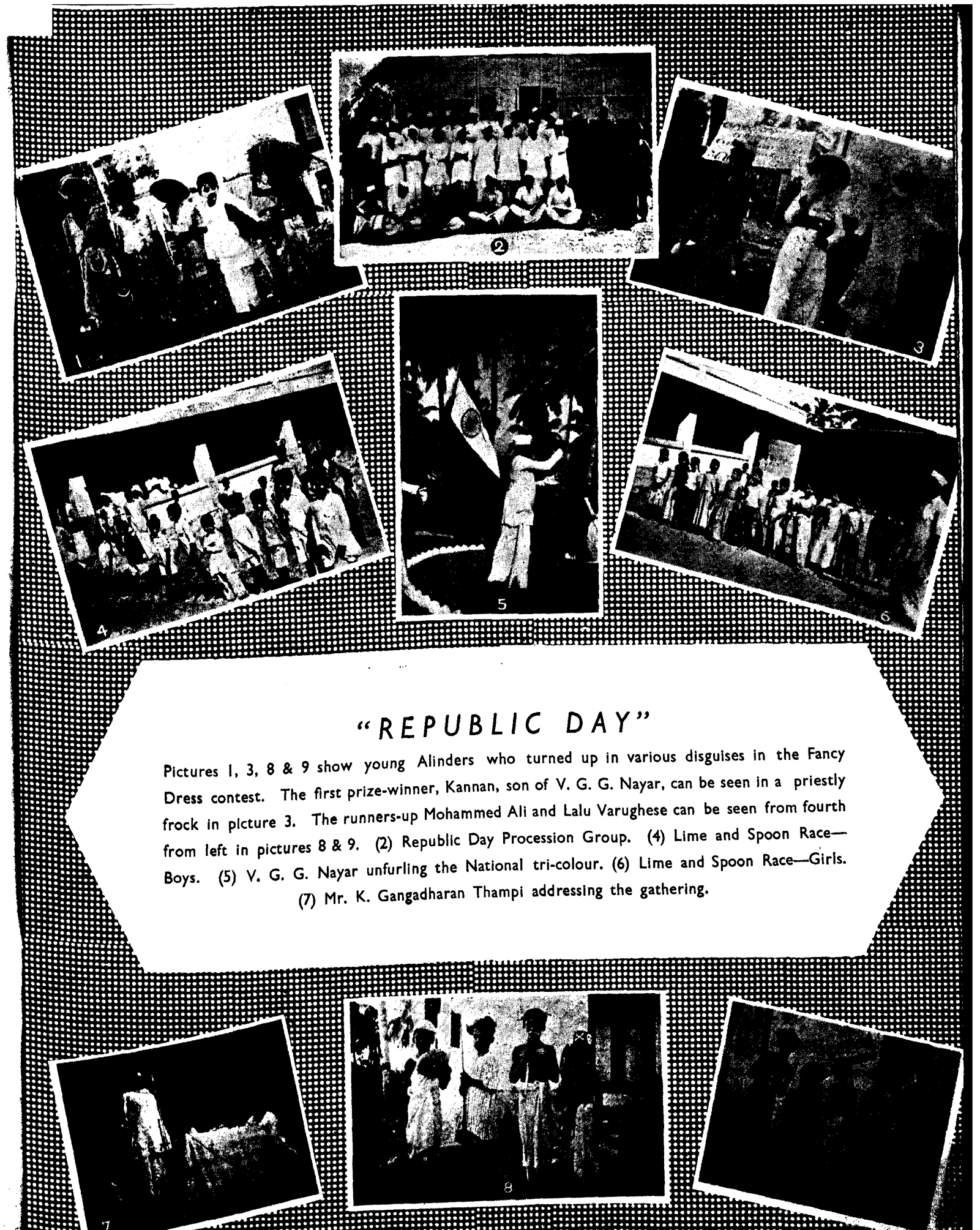
Mr. K. Govinda Pillai, President of the Local Congress Committee,

Mrs. M. Sankaranarayanan and Mrs. Sridevi Paramoo.

Several employees, also, spoke—among them C. A. Antony, V. O. Mathew and K. Narayana Iyer.

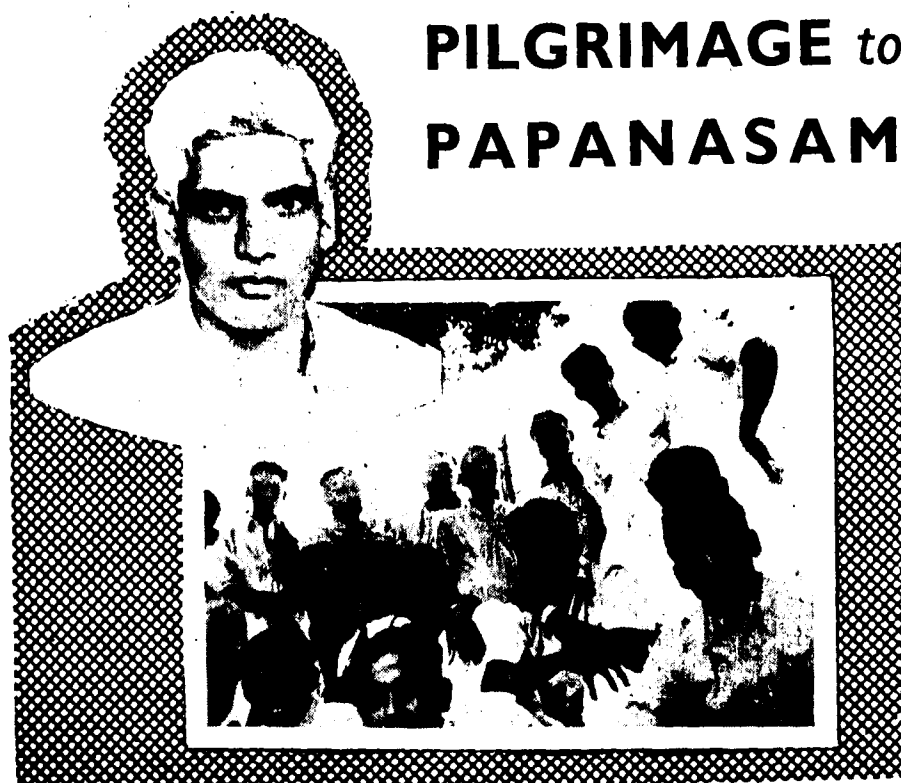
With a vote of thanks proposed by P. A. Ibrahim, Personnel Officer, and the singing of the National Anthem, the function came to a close.

Later in the night, there was a thrilling display of fireworks which children and grown-ups alike enjoyed very much.



"REPUBLIC DAY"

Pictures 1, 3, 8 & 9 show young Alinders who turned up in various disguises in the Fancy Dress contest. The first prize-winner, Kannan, son of V. G. G. Nayar, can be seen in a priestly frock in picture 3. The runners-up Mohammed Ali and Lalu Varughese can be seen from fourth from left in pictures 8 & 9. (2) Republic Day Procession Group. (4) Lime and Spoon Race—Boys. (5) V. G. G. Nayar unfurling the National tri-colour. (6) Lime and Spoon Race—Girls. (7) Mr. K. Gangadharan Thampi addressing the gathering.



PILGRIMAGE to PAPANASAM

Inset—T. K. Krishnan, leader of the excursion party. Picture shows some members of the party.

IN January, a party of Alinders went on a pilgrimage (with a difference) to Papanasam, headquarters of one of the four hydro-electric generating stations of the Madras Grid. Able skipper of the team was T. K. Krishnan, Assistant Accountant, Costing. Papanasam, colloquial variant of *papa* (sin) *vinasanam* (destruction) is a place dear to the Hindu worshipper, a dip in the holy waters of Tambaraparni, the river of the place, being supposed to wash off all one's sins.

Here's an account of the trip by a member of the party in his own words.

"Some thirty of us collected at the Kundara Railway station on Saturday (January 15) night. The Trivandrum Fast Passenger steamed in at 11-30 p.m. and we jumped into it. It was a jolly good trip with 'variety entertainment' from

members continually (and often simultaneously) on release.

Reaching Tenkasi on Sunday morning, we took the bus to Ambasamudram. The morning breeze was invigorating and the surrounding scenery was most enchanting.

From Ambasamudram, we took another bus to Papanasam. Leaving our baggage at our rooms, we went to the river where we had an excellent bath.

We had about two hours to spend, before the bus for the Lower Dam would come. This interval, we spent in taking a few snaps of the beautiful scenic sights around. With its heavy sluice gates, air diversion pipes and the two main water pipes (9 ft. dia.) the dam was an entrancing sight. The lower dam feeds water to the two main pipes leading to the surge tanks and the penstock for the power house

which is a mile away. We were then shown round the water works which supplies water for the people employed in the Dam area.

Our bus took us next to the Upper Dam which is about six miles from the Lower Dam. This is one of the finest trips we have ever made, the route being beautifully lined on either side with sandalwood trees, a veritable sight for the gods above.

The Thambaraparni Dam, as it is called, provides a large catchment area, and a certain surplus amount (18 ft. head) of water is discharged to the Lower Dam. There are six surplus gates to effect this discharge. There are also in operation two main shutters which would be opened out to meet requirements when the surplus is exhausted, as it often happens in dry seasons. Five rivers contribute to the water storage of the Upper Dam which is 173 ft. high.

After lunch, we went to the Power house, and were shown round in two convenient batches.

Four generators of the BTH vertical type form the main unit. The Section turbines (EFC) driving the generators, access to which has been made easy, are housed downstairs. To keep up a constant speed, the operation of the guide vanes is effected by a centrifugal governor on the top, worked on oil-pressure.

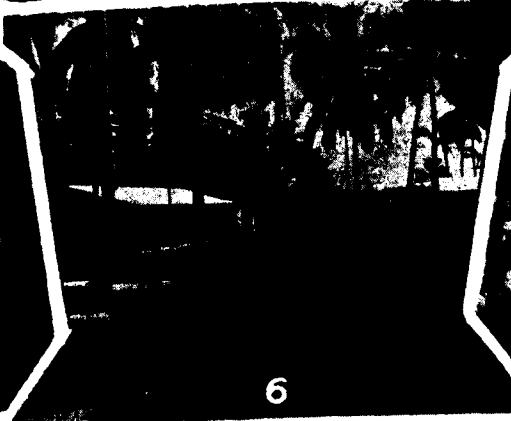
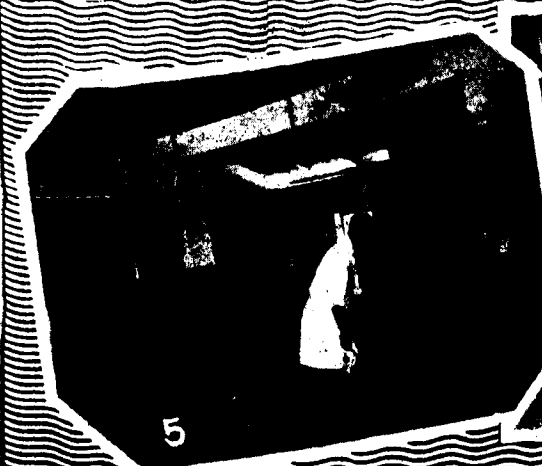
The main yard outside contains four giant 7250 kVA transformers which step up the voltage from 11 kV to 66 kV.

Having completed the day's visits, we trekked back to Papanasam. After some coffee and light refreshments, we returned to Tenkasi and took the train bound for Kundara."

Our Neighbours



THE NORWEGIAN INDIAN PROJECT



THE good neighbours whom we propose to consider in this issue are our Norwegian friends who have established a project in Quilon for the development of the coastal fisheries of the State.

The Norwegian Foundation for Assistance to under-developed countries was established on 25th of June 1952 when the Norwegian Storting (Legislative Assembly) appropriated 10 million kroner for assistance to economically under-developed countries. In May 1953, the Storting appropriated an additional 10 million kroner. Another 4 million kroner was raised by public subscription. The Board of Directors in charge of the administration of the Foundation has five members with alternates. The head of the Board is Mr. G. Natvig Pedersen, President of the Storting. The Foundation is attached to the Ministry of Foreign Affairs.

India signified her acceptance of Norwegian assistance by two agreements: the first agreement (between the United Nations, India and Norway) was signed in New York in October 1952 and the supplementary agreement covering the implementation of the aid programme was signed in New Delhi in January 1953.

Selection of Project

In October 1952, a delegation of three members (Dr. H. U. Sverdrup, Leader, Mr. Diderich H. Lund, Civil Engineer, and Dr. H. J. Ustvedt) came to India to confer with Government authorities about the selection of project. As a result of a series of meetings and conferences with Government of India Officials, it was decided to

launch a project devoted to the development of coastal fisheries in the Travancore-Cochin State. The delegation visited the State in November 1952 and submitted a preliminary plan. It was, based on this plan, that the second agreement already referred to, was signed.

Objects

The purposes of the Project are (1) to bring about an increase in the return of fishermen's activity in the area, (2) to introduce an efficient distribution of fresh fish and improvement of fish products, (3) to improve the health and sanitary conditions of the fishing populations in the area, and (4) to raise the standard of living of the community in general in the area.

Activity

To begin with, the two villages of Sakthikulangara and Puthenthura on both sides of the Neendakara bridge have been chosen. Between them, these two villages cover roughly an area of 10 sq. miles, have a total population of about 12,000, and own approximately 500 fishing boats. If work in these two villages proves successful, activity will be extended to other fishing communities along the coast. Work will consist of motorization of the fishing boats, provision for repair facilities, introduction of new types of fishing gear, improvement of processing and curing methods, construction of ice plants, improvement of environmental sanitation with the stress laid on the supply of drinking water. (The supply of safe drinking water is one of the main problems of the area, and it is proposed to be solved, by the laying of a 20-mile pipeline from the Sasthamcotta Lake to

the two villages and to neighbouring Quilon).

The canoes now used by local fisherfolk have a limited operational range. Fishing activity has, therefore, to be confined to waters near the shore. The canoe-types are fast being replaced by motorized boats. With these boats and with improved fishing tackle and improved fishing methods, larger catches are bound to result.

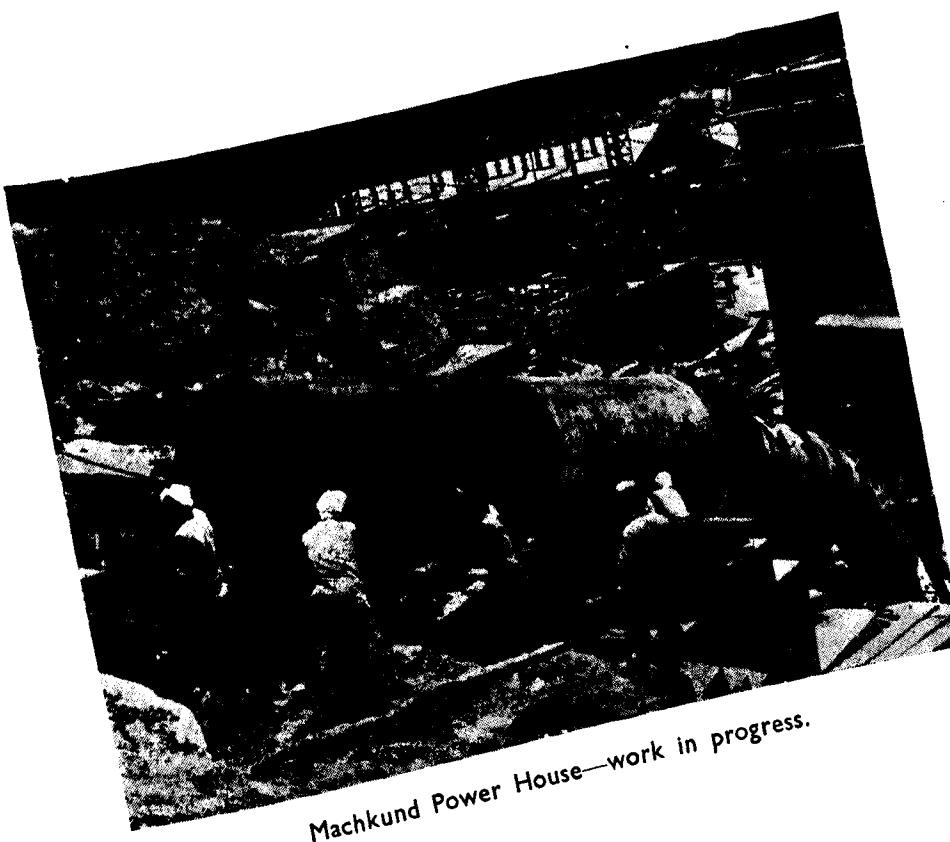
A small health unit consisting of a Norwegian doctor and nurse, an Indian nurse and a midwife, is attached to the Project. The unit is primarily engaged in maternity and child welfare work and social and preventive medicine.

In an attempt to check soil erosion, the Project has built several groynes along the coast of Sakthikulangara, thereby saving scores of fishing huts and coconut palms, and reclaiming much valuable land.

Personnel

The Project is headed by Mr. Diderich H. Lund of the Norwegian Board of Directors and a member of the three-man delegation that visited India in 1952. He is assisted by an able team of officials. The Project suffered a severe loss in the death of Mr. M. O. Krissensen, Fisheries Expert, in October 1953.

For help given in the preparation of this article our thanks are due to Mr. Paal Bog, Economist and Secretary to the Project Director. He was good enough to show this writer round the works and explain to him in simple terms the great humanitarian work in which Norway has engaged herself on behalf of, and in, distant India.



THE ANDHRA STATE ELECTRICITY DEPT.

THE esteemed customer whom we would like to present to our readers in this issue is the Andhra State Electricity Department.

The Andhra State (which was formed on October 1, 1953) comprises an area of 63,000 square miles, and consists of a total number of 15,750 villages.

About 400 villages now receive the benefits of electric supply. About 2,350 pumpsets, 1,400 cottage industries and 40,600 domestic consumers are at present being served. The grid map on page 29 shows details of power stations, substations and lines in the First and Second Five-Year Plans.

The State is well served with plentiful water supplies by the two

great rivers, the Godavari and the Krishna—not to mention the Pennar—with their several tributaries. They hold almost all the potential hydro-electric power resources of the State. However, as only the reaches of these rivers in the plains—that is, after they have descended from the Western Ghats—lie in the new State, and the Eastern Ghats contribute only a small number of tributaries getting their supply from the undependable north-east monsoon, scope for high-head, hydro-electric projects is very limited. Most of the potential water power has, therefore, to be derived from irrigation-cum-hydro-electric projects involving large dams and reservoirs. The interests of irrigation will also generally require that the waters

from these reservoirs should be regulated to suit irrigation needs. The result will be that not all the hydro-electric power that can be produced from these reservoirs will be firm. In other words, the generating capacity will not be uniform throughout all the seasons.

This leads to the question of firming up the difference in quantity of power by installing thermal stations.

At present, there are three thermal steam stations at Visakhapatnam, Vijayawada and Nellore. These stations are expected to be expanded in future to co-ordinate with hydro-electric power generation.

- (1) On October 2, 1954, three modern fishing boats left Norway for Cochin. Picture shows two of them, "Travancore" and "M. O. Krishensen."
- (2) The research boat "Neendakara" built of aluminium.
- (3) Project Personnel.
- (4) The fishing boat "Sakthikulangara," built of steel.
- (5) Carpenter shop, Sakthikulangara.
- (6) Living quarters ("prefabs") Neendakara.
- (7) Mr. D. H. Lund, Project Director, speaking on the occasion of the opening of the first work taken up by the Foundation which was the construction of a sea-wall for protection against erosion in the village of Sakthikulangara.

Present Assets

Visakhapatnam has an installed capacity of 6,750 kW, Vijayawada 12,000 kW, and Nellore 6,000 kW. Additionally, there is a diesel power station aggregate of 11,500 kW.

The State also takes hydro-electric power in bulk from the Mysore and Madras States to the extent of another 6,000 kW.

The total mileage of existing high tension transmission lines including those nearing completion is approximately 2,700 miles.

Scheme under First Five-Year Plan

An expenditure of about Rs. 24 crores is provided for power development in Andhra under the First Five-Year Plan. The Department has, on hand, the following major projects :—

(a) *Machkund Hydro-electric Scheme* : This is a joint venture of the States of Andhra and Orissa and is expected to go into operation by about the middle of this year. Three units of 17,000 kW each are being installed initially. Three more similar units would be added in the Second Plan period, thus developing the full capacity of the project—

namely, 102,000 kW. The expenditure and power generated will be shared in the ratio of 70 : 30 by the States of Andhra and Orissa.

A double circuit 132 kV trunk line up to Vijayawada with four intermediate substations feeds the power from Machkund throughout coastal Andhra. The construction of these lines has already been completed. Extension of this transmission scheme by a single circuit 132 kV line from Vijayawada to Ongole is in progress.

Machkund Power House under construction.



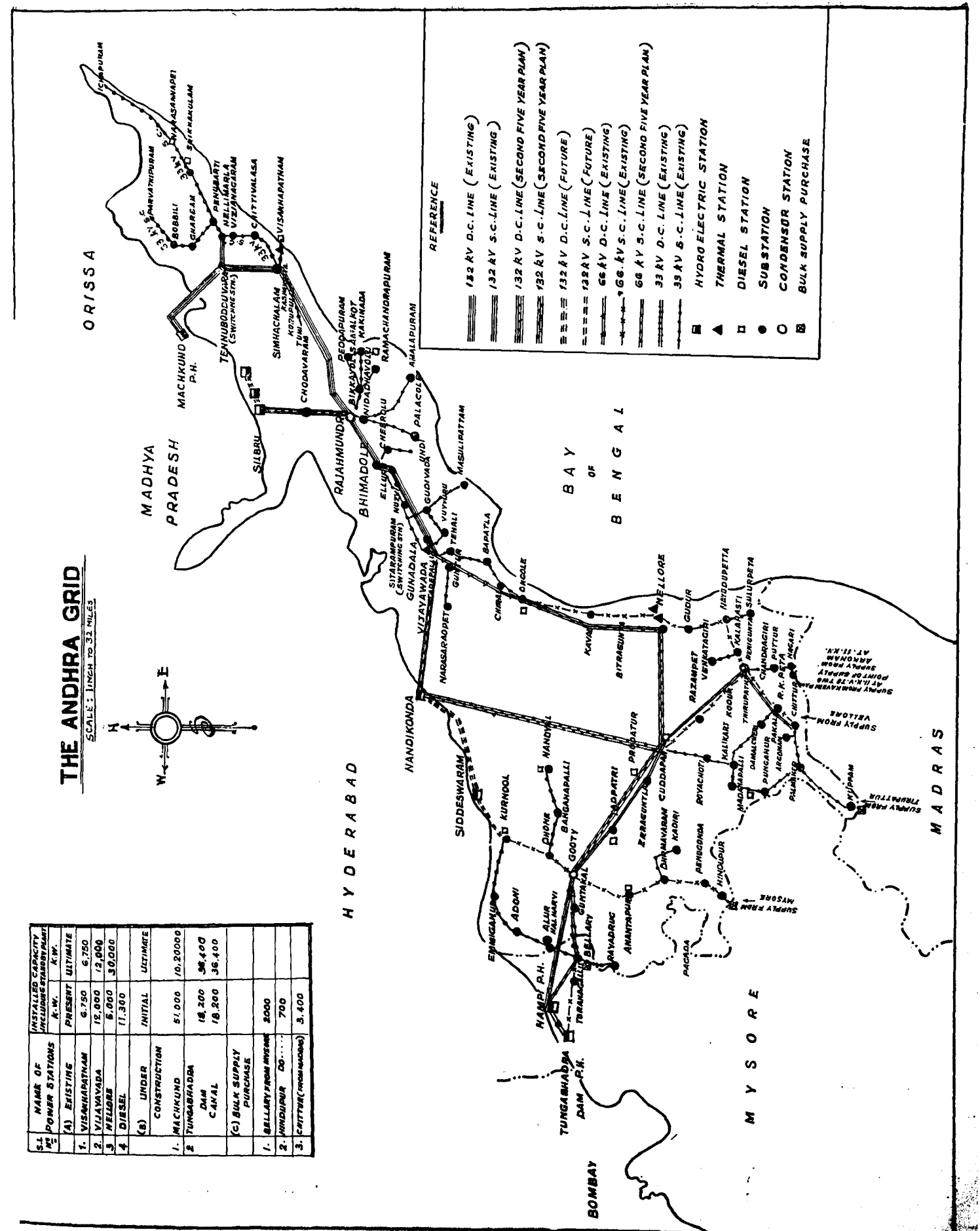
Mr. B. R. Somayajulu,
Chief Engineer.

(b) Tungabhadra Hydro-electric Scheme :

Two power stations with two 9,000 kW generating units in each are initially being constructed. Ultimate development envisaged is four units of 9,000 kW each. One of the stations is located at the foot of the Tungabhadra Dam, and the other at Hampi 15 miles away on the main irrigation canal. The capital expenditure and the power generated will be shared by the States of Andhra and Mysore in the ratio of 80 : 20.

So far as Andhra is concerned, the Tungabhadra transmission system comprises about 600 circuit miles of 66 kV covering the entire Rayalaseema area up to Renigunta. The construction is practically over and will be completed in a few months. In all probability, the scheme will come into operation towards the middle of 1956.

By the end of the First Five-Year Plan period, the Andhra grid will materialise, interconnecting the hydro stations of Machkund and Tungabhadra and the existing thermal stations.



Given below are the details of the major transmission lines included in the First Five-Year Plan.

Transmission line	Voltage	Length	Power conductor
1. Machkund—Tennubodduvara-Visakhapatnam ...	132 kV Double circuit	90 miles	37/0.118 A.C.S.R.
2. Visakhapatnam—Rajahmundry Bhimadole—Vijayawada ...	..	195 ..	37/0.110 ..
3. Vijayawada—Ongole ...	132 kV Single circuit	81 ..	6/0.186 + 7/0.062 ..
4. Tennubodduvara—Nellimarla ...	132 kV ..	23 ..	37/0.102 ..
5. Ongole—Nellore ...	66 kV. ..	73 ..	7/0.144 ..
6. Nellore—Gudur—Nayudupet—Kalahasti—Renigunta ...	66	81 ..	7/0.144 ..
7. Tungabhadra Dam Power House—Hampi Power House ...	66 kV Double circuit	18 ..	7/0.161 ..
8. Hampi P.H.—Bellary ...	66 kV Single circuit initially.	32 ..	7/0.161 ..
9. Bellary—Guntakal ...	66 kV Single circuit	29 ..	7/0.161 ..
10. Guntakal—Gooty ...	66 kV Double circuit	19 ..	7/0.161 ..
11. Gooty—Tadpatri—Erraguntla—Cuddapah ...	66 kV ..	98 ..	7/0.144 ..
12. Cuddapah—Rajampet—Kodur—Renigunta ...	66 kV—Two lines	81 ..	7/0.144 ..
13. Gooty—Dhone—Kurnool ...	66 kV Single circuit	56 ..	7/0.161 ..

NOTE : (1) The majority of the lines have been constructed, the rest nearing completion.
(2) 66 kV lines in the Chittoor area have not been included.

Schemes in the Second Five-Year Plan

The following projects at an aggregate estimated cost of Rs. 45 crores are expected to be taken up in the Second Five-Year Plan.

Project	Additional installed capacity.
1. Balance development at Machkund (additional 3 units of 17 kW each) ...	51 kW
2. Balance of the Tungabhadra Hydro-Electric Scheme (additional 4 units of 9 mW each) ...	36 kW
3. Nandikonda Hydro-Electric Scheme I Stage (3 units of 25 mW each) ...	75 kW
4. Sileru Hydro-Electric Scheme I Stage (3 units of 25 mW each) ...	75 kW
5. Nellore Steam Station (2 units of 15 mW each) ...	30 kW
Total targets ...	267 kW

The *per capita* consumption of electricity in the State at present is only about 5 units. An accelerated pace has, however, marked electrical development since the State was formed in 1953. At the end of the Second Five-Year Plan, the *per capita* consumption is expected to increase to 10 units. Blessed in the pre-requisites of industrial development like raw materials, labour, water and transport facilities, all that the State requires to set itself on its industrial feet is an adequate supply of power.

Here's wishing to the new State:
"More Power!"

* In the preparation of the article, the writer is vastly indebted to material kindly made available by Mr. B. R. Somayajulu, Chief Engineer.

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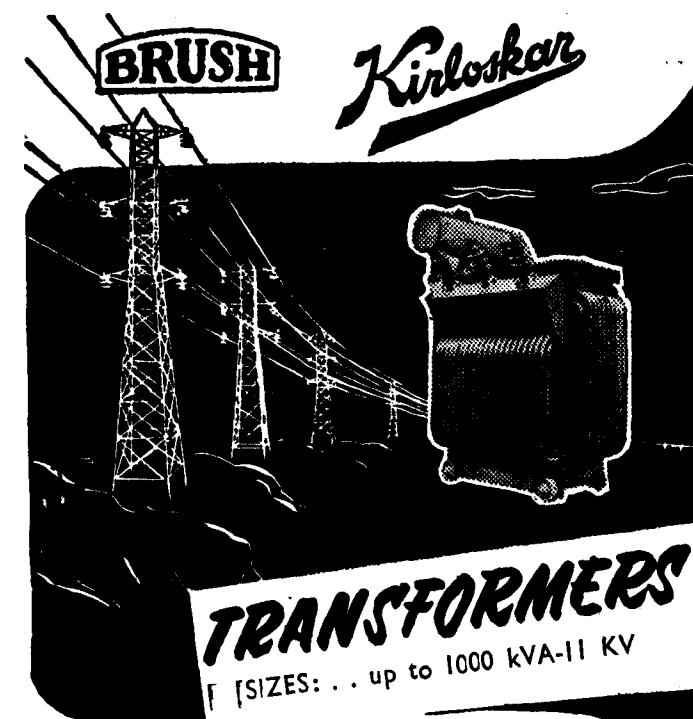
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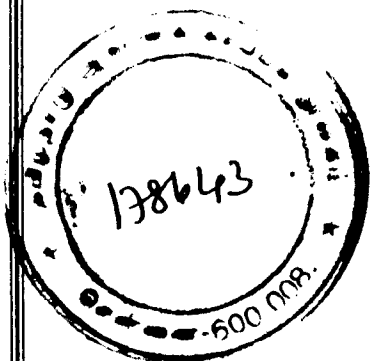
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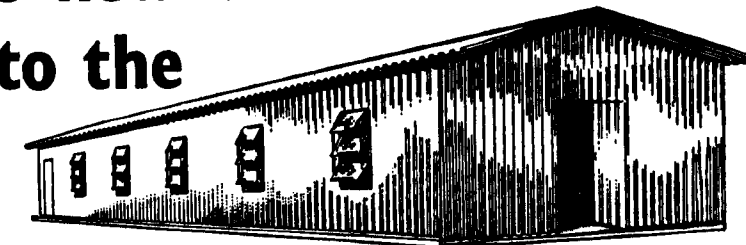
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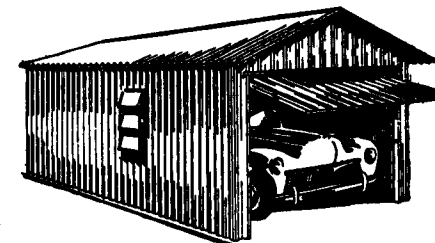


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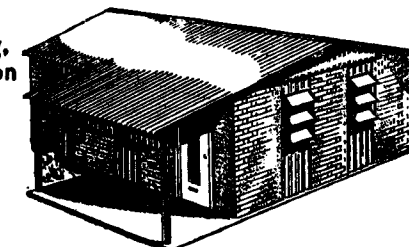
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