

# TECHNICIAN ENGINEER

AUGUST-SEPTEMBER, 1961

*Published for the Employees of the Broadcasting, Recording and Related Industries*

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS — AFL-CIO

# "HOW THE OTHER HALF LIVES"

by Jacob Riis — 1890

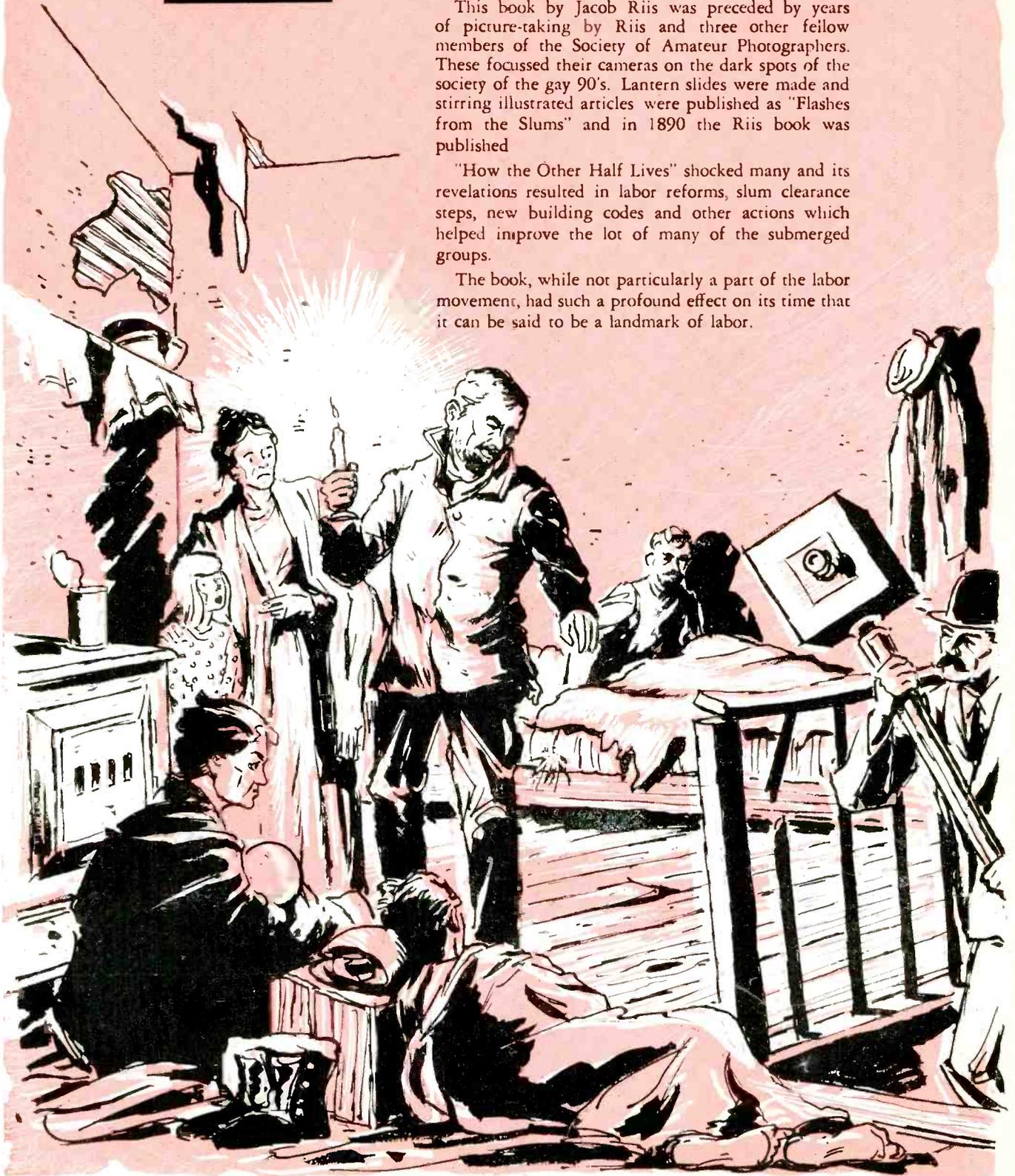
LANDMARKS  
OF LABOR  
No. 27

Great books or great speeches often arouse action and result in long overdue social and economic reforms. Such a book was "How the Other Half Lives", a grim report on poverty in American cities and industrial towns.

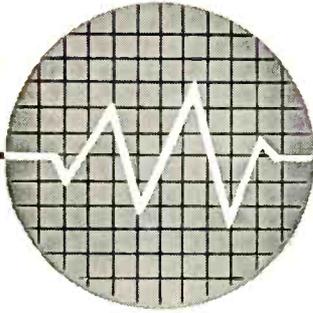
This book by Jacob Riis was preceded by years of picture-taking by Riis and three other fellow members of the Society of Amateur Photographers. These focussed their cameras on the dark spots of the society of the gay 90's. Lantern slides were made and stirring illustrated articles were published as "Flashes from the Slums" and in 1890 the Riis book was published.

"How the Other Half Lives" shocked many and its revelations resulted in labor reforms, slum clearance steps, new building codes and other actions which helped improve the lot of many of the submerged groups.

The book, while not particularly a part of the labor movement, had such a profound effect on its time that it can be said to be a landmark of labor.



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# TECHNICIAN ENGINEER

VOL. 10, NO. 8

ALBERT O. HARDY, Editor

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*the cover* Our cover shows a bit of miscellany for the busy months of August and September. At upper left, a school teacher begins her work anew, aided more than ever by television and other visual aids. The small picture at center shows a typical discussion group on educational TV. At lower left TV becomes a training medium in a U.S. Navy studio. The pictures at right show Dutch cinematographers covering a recent meeting of the AFL-CIO Executive Council for European viewers.

*index* For the benefit of local unions needing such information in negotiations and planning, here are the latest figures for the cost-of-living index, compared with 1960 figures: July, 1960—126.9; July, 1961—128.1; August, 1960—126.9; August, 1961—128.0.

*indices to  
key cities*

As we go to press, the Bureau of Labor Statistics has released the city Consumers' Price Index for July, 1961. They are as follows:

|                   |       |
|-------------------|-------|
| Boston . . . . .  | 103.4 |
| Chicago . . . . . | 130.9 |
| Detroit . . . . . | 125.5 |

|                         |       |
|-------------------------|-------|
| Kansas City . . . . .   | 129.8 |
| Los Angeles . . . . .   | 131.4 |
| Minneapolis . . . . .   | 129.2 |
| New York . . . . .      | 126.4 |
| Philadelphia . . . . .  | 128.3 |
| Pittsburgh . . . . .    | 129.6 |
| Portland, Oreg. . . . . | 129.3 |

## COMMENTARY

Undoubtedly you know of people who say they're against paying union dues "as a matter of principle." *The Boilermakers' and Blacksmiths' Journal* has just come up with an idea to test their sincerity.

The *Journal's* July issue carries a "Free Rider's Card" for such persons to sign. Addressed to "blank" company, the card contains this declaration:

**"I am opposed to all unions. Therefore, I'm opposed to all benefits that unions have won through the years: Paid vacations, paid holidays, sick leave, seniority rights, wage increases, pension and insurance plans, safety laws, workmen's**

**compensation laws, social security, time and a half for overtime, unemployment benefits and job security.**

**"I refuse to accept any benefits that will be won by union negotiations with . . . . . company, and I hereby authorize and direct the company to withhold the amount of the union-won benefits from my paycheck each week and to donate it to charity."**

The next time you run into a person who declares he opposes unionism "in principle," challenge him to sign a pledge, and see what happens!

# Tenth Annual Progress

## LOCAL 292 HOSTS

**T**HE Tenth Annual Progress Meeting of the Radio, TV and Recording Division of the IBEW opened on Tuesday, August 15, in the Roosevelt Room of the Hotel Leamington, Minneapolis, Minnesota. Forty-four local unions were represented by their delegates present, and eight members of the International field staff were on hand to greet the delegates and to participate in the three-day meeting.

A welcome was extended to all by President Robert M. Gomsrud of Local Union 292, and Unit Chairman Bernard J. Renk seconded the welcoming speech and outlined the social program which was planned by the local union. When the organized confusion of the distribution

of printed reference and discussion material was completed, Representative Hardy asked all those assembled to stand and to observe a minute of silence, in respect to the memory of all those brothers who have passed away since the previous meeting. In particular, the absence of Business Managers Charles A. Calame (Local 1212) and George T. Cairns (Local 1228) was so noted; the loss to the entire Brotherhood of Executive Council members Louis A. Marciante and C. R. Carle was also remembered during the respectful silence.

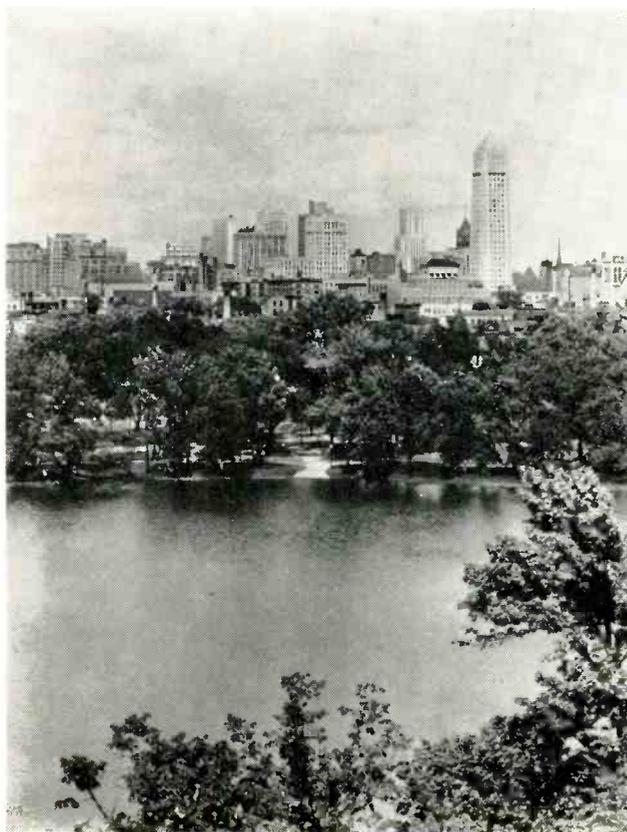
A special, happy circumstance permitted International Executive Member C. E. Nordstrom of the Fifth District to be present and to participate in the first two days of the meeting. He spoke to the delegates briefly on Tuesday on the subject of the IBEW's Skill Improvement Training Program and entered into the various discussions of other subjects during the time he was able to spend in Minneapolis.

A multitude of subjects was covered in the work sessions and small groups of conferees talked shop well into the wee small hours of Wednesday, Thursday and Friday mornings. The excellent turnout of wives and children resulted in many sightseeing and shopping trips, as well as contributing to the festive air of the various social affairs.

Following some preliminary remarks and postscripts on the previous day's session, the delegates warmly welcomed International Secretary Joseph D. Keenan on Wednesday. He brought the personal greetings of President Freeman to the delegates and then spoke at some length on the state and progress of the union. Following his semi-formal remarks, a question-and-answer period brought many more subjects to the attention of all.

Local Union 292 was host for a buffet dinner on Wednesday evening, followed by a delightful theater party at the Old Log Theater. The Old Log Company presented "Roar Like A Dove," a comedy which was first presented at the Phoenix Theater in London in 1957. The local summer stock players did more than justice to the play—their long record with the Old Log Theater was evident from their polished performance.

The dinner-and-theater affair permitted 292's spokesmen an opportunity to show off some of the more color-



The skyline of Minneapolis as seen from Loring Lake, one of the city's 22 lakes and lakelets.

# Meeting in Minneapolis

## THREE-DAY GATHERING

ful scenes in Minneapolis. The chartered buses wound their way through a considerable part of some of the city's residential section and past several of the shores of the many lakes which are within the city limits, to and from Lake Minnetonka, the location of the theater.

Thursday's session wound up the proceedings; an all-day session devoted to such subjects as automation, the trend of labor legislation, Labor Board decisions, etc. Having heard of the Lohman case decision which was issued by the Board only on the previous Friday, an attempt was made to secure its text, but it was found that the Minneapolis office of the NLRB had not yet received it; thus only a general—and a rather speculative discussion of this highly-important decision was possible. (It has since been printed, in the usual digest form, and mailed to all local unions.) A discussion also evolved on the subject of the AFTRA and NABET strike at KXTV (TV), Sacramento, the general subject of hot cargo clauses, and the position of the IBEW with respect to handling, airing or processing material made under strike conditions.

In view of the interest of the delegates in the international field which was evinced partially as the result of Secretary Keenan's remarks, a considerably-detailed explanation of the general significance of International Trade Secretariats, the regional trade union organizations and the particular interest of the IBEW and other entertainment unions in an organization of Western Hemisphere unions was given. It was pointed out that while technical personnel are rarely involved in traveling between countries, this is a recurring problem of the various actors and artists. However, the product of technical work is also often involved and technicians and engineers thus have a very real interest in the international exchange of programs and program material.

Late on the last day, the meeting was adjourned and delegates broke up into small groups, to discuss problems and experiences as between local unions and as between regions having employers with multiple properties. Thus the tenth annual meeting came to a close—and, as might be expected—with a resolution of thanks to Local Union 292, its officers and members, for its hospitality and gracious good-fellowship.

August-September, 1961



International Secretary Joseph Keenan



Executive Councilman C. E. Nordstrom



International Representative Ken Cox

# A YEAR OF CHANGE

## *Remarks of International Secretary Keenan at the Tenth Annual Radio-TV Progress Meeting, Minneapolis*

IT IS a pleasure for me to be here this morning and get a chance to talk to you on the affairs of the International Office. This is the first meeting I believe I have attended of yours in the last couple of years and, needless to say, there has been a great deal of change in many ways as far as the trade union movement of this country is concerned.

First of all, I would like to bring you the greetings of Gordon Freeman. He has been a busy person these days and his problems are great. The International as an International has been doing very well but there are several things that are troubling us. I think that here I might say something about some of these things. As you know, the Landrum-Griffin bill was passed in 1959. Why they had to change Taft-Hartley to produce Landrum-Griffin I'll never understand, because with Taft-Hartley they had the means of destroying the trade unions of this country. Today, the President can hand down a ruling and after a certain period of time it will end up in the courts. We now have two or three cases where the President is being challenged in just administering the Constitution.

### **DECISION BASED ON RECORD**

I'm never surprised to find opposition from the outside but when our local unions and our members set up conditions that could be used against all unions throughout the country in order to just gain a point, I think they are destroying the very instrument that we believe is necessary to maintain our way of life. You will have to bear with the International President and the International Secretary; they are elected, they have the Constitution to administer and we hope to administer it to the best of our ability. I don't know of a person that has more feeling, has more charity than Gordon Freeman. I don't know of anybody that becomes more upset when he is called upon to make a decision where two friends are involved. But that's the job of the President and he has performed it well, in my opinion. You have to depend upon the record; the decision is made on the basis of the record and it is made after each case is fully considered.

In spite of obstacles we are doing very well, but on this particular point I would like to ask again, be careful—this is one day you can't shoot from the hip. These members, many of them are well grounded before they come in to see you, they come in with these peculiar cases and you act and then the thing lies dormant for a few months and then the first thing you know you are cited before the National Labor Relations Board with unfair labor practices. So as officers, with Landrum-Griffin and with the harassment the way it is, it is very important that you look before you leap, because actually your problem will be the same as ours, you'll be in court—and these courts get quite sticky, they take a lot of time and many times you will wonder if there is justice. But that's it and we have to bear with it.

Now as to progress as far as wages are concerned, I think that across the board we have done very well. I'll just have to take these figures from memory but I think that in the past year, the inside construction branch of the trade received an average increase of about 15 cents, linemen in the utilities about 12 cents an hour, manufacturing about 9 cents and in your particular group it was about \$6 a week. Generally speaking, across the board we have done very well.

As I have said before, in the Secretary's office we have to keep records and two of the very important ones are our finances and our membership. As of January 1, 1961, our membership was 730,942. We had a net loss last year of about 2,000 members; and organizing—the fact of the matter is that there is no easy organizing today, whatever organizing there is we must go through the full machinery of the National Labor

Relations Board and when we are organizing large manufacturing plants, because of the delays in the legal procedures, we may have to organize the personnel two or three times. We have had a couple of sad cases where we have worked on these large plants for eight or nine months and felt that we have overcome all of the legal procedures, set a date for an election and three or four days before the election, the employer has called in his supervisors and started a campaign inside the factory and we have lost elections by a count of 80 per cent against us. Everything today seems difficult but in spite of it we are making some progress.

To give you some idea of our membership records, in 1956 we initiated 128,000 members with a net gain of 29,000; in 1957 we initiated 130,000; in 1958 we initiated 89,000; in 1959 we initiated 106,000 and in 1960 we initiated 98,000. That was a total of 552,989 in the five-year period, with a net gain of 41,155; so you see in order for us to keep even, we must organize and initiate 100,000 new members per year. It seems that in manufacturing, the campaigns are getting longer and more difficult. That is what it takes to keep us going and with right-to-work laws and with the Federal laws, we are hindered at every turn of the road. We'll talk about that a little later; I believe the only way we can correct this is by making the corrections the same way the penalties were put on us.

As of January 1, 1961, we had 1754 locals chartered and we are adding locals pretty steadily. So much for the general statistics on the membership and locals.

### **STATEMENT OF FINANCES**

I'm sure you'd like a general statement on our finances.

Two of our most important funds are the Pension Fund and the Pension Trust Fund. In the Pension Fund today we have \$90,200,000. At the present time we have about 15,000 members on pension and this number is increasing at the rate of about 400 a month. Last year we paid out \$7,663,000 in pensions. In the EWBA we have \$54,115,250 and last year we paid 3,055 claims, amounting to \$3,010,450.

I would just like to make a pitch on these two funds. Of course, there is a lot of money there and it seems like it should be enough to take care of any call on them. Both of these funds were borne of necessity. Prior to the first World War, it was impossible for anybody in the electrical industry to get any kind of life insurance and if he did want it he had to buy it at endowment rates. The only kind of insurance policy these fellows had, if anything happened to them, was to pass the hat and raffle off their tools. Charlie Ford was appointed to the War Risk Insurance Board in the First World War and he was able to meet and become acquainted with a number of outstanding actuaries. He pointed out our problem and they worked out this EWBA. At the start we were able to buy this insurance for 72 cents a month. The depression came on, we took in no new members, the average age went up and we finally had to raise the premium to about \$1.60. After we started that and we got by the depression and our membership built up and we were able to reduce our average age, we were then able to reduce it to \$1.20. But today the most of our new members are just taking the BA membership and are not taking on the beneficial part of our organization.

### **PENSION FUND REPORT**

The Pension Fund is much the same story—the Pension Fund was borne out of necessity because in the Twenties, the utility companies and telephone companies started programs,

so-called Health and Welfare programs that we now are all familiar with. In order for us to compete we felt we had to set up a pension of our own. Thirty years ago there wasn't much history; there was plenty of history as far as insurance was concerned, but very little actuarially as far as pensions were concerned. We set up this fund and I believe the first contributions were about 27 cents a month, to pay at that time a \$40 pension. There again we got hit with the depression, we took in no new members and our membership was getting older and both the Pension Fund and the Death Benefit Fund premiums are based on the average age. Today it is projected that by 1980 we will have 40,000 people on pension and that at that time we should have a fund of about \$365,000,000. Today, in both funds we have about \$150,000,000. But the thing that is bothering me is that our income today as far as our pension is concerned, that is the IBEW pension is concerned, is about \$900,000 a month, and our payments out of the Pension Fund are running about \$450,000 and out of the National Electrical Benefit Fund they are running about \$300,000; so in the total we're paying out around \$750,000 a month.

It is my hope that we can get the younger members to take the beneficial part of the membership—it would help a great deal. I wish that you fellows could attend some of the meetings that Gordon and I attend where there are dinners or similar get-togethers for the 50-year members or the old fellows on pension. This is the story they generally tell you—that this \$50 is the difference between existing and living, because with this \$50 they can go out and have a little entertainment, they can get certain enjoyment that couldn't get if it wasn't for this Pension Fund of ours. I say that Gordon and I are obligated to try to keep both of these funds sound. I would make a plea, especially to you fellows, that any of the new members that are taken in, see if you can't get them to take the "A" membership, so it will help. I am sure that at the next Convention we will have to appoint a committee to go into this whole question because we might as well take a hand well in time rather than let it drift until we get into trouble.

### **HOUSEKEEPING JOBS**

In the Secretary's office we also have some housekeeping jobs to do for the President and in the Secretary's office is Research and Education. We are trying to make that department available for every type of research that is necessary for the local unions in their bargaining and in many other things. We have three or four people who are competent in different branches; one is very good in time studies, another is very fine in job evaluations, and we also have a fellow in there who can go into complicated financial reports of corporations and break them down and give you information for use in bargaining. We are also trying to set up programs of education in order to meet the requirements of the day. In conjunction with that we have set up the Skill Improvement Department and that is set up for the purpose of training our people to meet the changing times. One of the things that concerns us at the International Office is this so-called automation and what automation is doing to the whole industry. I don't need to tell you fellows here about automation because in reading your trade magazines and trade papers, I find today that, maybe I'm off but I don't think so, that in a few years there will be nobody working at the transmitters, except for maintenance and it may even come to pass that if anything happens you can pull out a section and send it to the factory and they send a new section in to take its place. But this equipment that is replacing human beings must be maintained and repaired and this is where we hope to do a job in the Skill Improvement section of the Research and Educational Department. Now I know that public utilities are probably the hardest bit. Just recently I was out in Vancouver, British Columbia, and during the recess at noon the chief engineer picked me up and took me to their main office and into a room where there was a series of consoles. I don't know what their generating capacity is but they have 21-hydro-plants and he pointed out that all the controls for those plants were all in that room, that there wasn't a man working at the generating plant at all, that all the control of the flow of the water, control of the pitch of the impellers and everything else was

done in that console room downtown. They had about 16 or 17 trucks with two-way radio and just a few months before they had put on a 100,000 k.v.a. gas plant and there wasn't one person within 15 miles of the plant!

We have the membership, we have the skills, we have the people but it means additional training and in order to do that we have to go into the local unions with this program that we have. In many cases, we have to get dedicated people to go and do it because in many areas they don't have the finances and it is necessary then for people to do this work for gratis, but if we are to hold what we have, then it is obvious that we must protect ourselves. In the manufacturing plants, it is not uncommon that they lay off the help for the period of a month or so, tear down an old production line and put in a new one. On the old production line there may have been 150 people and on the new one maybe there will be 25 or 30. In many cases there is no program to take care of them, no severance pay, maybe a few weeks vacation, but they are just left to the discard and there is nothing substantial done for them. In order for us to protect ourselves I feel and Gordon feels that when they talk about making these changes, that we immediately get in and find out what this new equipment is, what it intends to do, how much maintenance and how much servicing it will take and try to get our people in line for the training in order to maintain it and keep it operating.

### **THE SAFETY DEPARTMENT**

Another department that has been opened up in the last two years is the Safety Department. Here, in going through our records, we find that we lose about 100 people a year in accidents on the job and they tell me also that for every 100 that lose their lives, there are about 2000 that are disabled, either permanent disability or partially permanent and we are trying to do something about that. Making studies we find that there are only eight states with any kind of safety laws to protect our people and we have developed a pattern law that we had introduced in 48 states this year, but I don't think we were very successful. I think we had a law passed in Maine and a law passed in North Dakota. In the future we are going to work very closely with the AFL-CIO and with the State Federations of Labor, with the hope that in the next four, five or six years we can get safety laws in every state. This is a terrible thing, where thousands of people every year are killed by neglect. Sometimes as the result of carelessness on the part of the members, but we as an organization must do everything we can to hold these accidents to a minimum.

### **UNION LABEL SECTION**

The next important thing, as far as the Secretary's office is concerned is the Union Label section. In that section we issue 25,000,000 labels a year. There is hardly an electrical item used that isn't made by a firm somewhere in the United States under contract to the IBEW. In this day and age with Landrum-Griffin and right-to-work and so on, I think that the union label is probably one of the most important functions that we have. As a young fellow in Chicago, attending the Chicago Federation of Labor, I remember that every Sunday afternoon there was a section of the meeting set aside for a point of organization. In those days we had a lot of ladies' garment factories and men's clothing factories, but the ones that struck me mostly were the small foundries. Months would be spent organizing these plants and then they would come to the meeting and announce that they had reached an agreement and that they were going along okay. Lo and behold on a Monday morning, sometime later, this plant would be found to have moved out over the weekend; moved into southern Illinois or over in Indiana or over in Wisconsin. We used to call them runaway shops, and the way we used to try to combat these runaway shops was by boycott, either by the union label or by refusing to use in the union plants the things that they made. Today, 1961, we have large plants in this runaway condition; only a few years ago in the city of Richmond, Ralph Cordiner, then the president of General Electric, was at a luncheon held in connection with the opening of their plant in Staunton, Va. In the course of the speech he made these statements—that the reason that they built this

plant in Virginia was because Virginia had a right-to-work law and in the future when General Electric built plants one of the first considerations would be whether these states had a right-to-work law. But this is the statement that really capped the climax; he made an appeal to the citizens of that area that they didn't have to join unions, that these union racketeers and goons would be in trying to get them to join a union so these people would have to pay tribute to them—he said they didn't need to worry because they would get the benefits of whatever kind of union contracts they had in the northern part of the country. As you know, many large concerns are moving down in Mississippi, North and South Carolina and into areas where they have the cloak of the right-to-work laws. One of the large concerns of this country was planning to locate in the State of South Carolina just a few years ago. They were about ready to close the contract and this question of right-to-work came up. They found that South Carolina had no right-to-work law and they talked about dropping South Carolina from consideration. So in order to save the plant, the Governor called a special session and in four days passed a right-to-work law.

There's hardly an article you buy that isn't made under union conditions and I think that one of the things that is important when you go in to buy a hat or a pair of shoes or any article of clothing, have them ready to wrap it up and just say, "I wonder if you have the label in this article" and if they don't just leave it. The reason I say that is because I believe we have to bring home to the merchants of this country that we have some buying power and we have some influence.

### **POLITICAL ACTIVITY**

The morning they were going to vote on Landrum-Griffin, I was asked to come over to the Senate Office Building and meet four or five Senators. I went over that morning and they started talking to me and they wanted to know what I thought of Landrum-Griffin after it was finished in conference. One of them said to me, "Joe, it's a bad bill" and I asked him how the heck he could vote for a bad bill and he asked, "What can we do?" He said, "Let me show you something." He took me into an anteroom and he had a stack of telegrams and letters about so high, two stacks of them. He asked me what I thought they were. I told him they were stacked there for him to vote for Landrum-Griffin—over here are our people, they didn't take time to send in the letters in order to match those—but I am sure Senator if it wasn't for our people you wouldn't be here and I am sure if you went through that list there wouldn't be 5 per cent of them who voted for you in the last election. Our people work all day, they don't have access or they are not brought into an office or an anteroom and handed a blank telegram sheet and asked to type out or write out some kind of a protest to mail in. The only time we deliver is on election day—we get up an hour ahead of time, go to the polls, stand at the polls and wait our turn to vote. I say to you that if the people in the cities that sent those telegrams received some kind of a protest from us, they'd hesitate sending in those wires. Because in the average store, the average department store and in the average business institution in the cities you come from, it's the working people that keep them going and this is the way I feel that we can offset this program against us.

The next thing I am concerned about is something I have been very active in for a number of years. The Secretary supports all the charitable drives such as Heart, Cancer, United Givers, Red Cross and all the rest and I want to thank you all for your support in helping us because I think that our International stands out as far as contributions to these funds is concerned. The next important one and the one I feel is going to save the day is COPE. I have talked about COPE since 1948. I was the first Director or Acting Director of LLPE and at that time I went about the country saying that the Taft-Hartley Act in its present form was nothing more than a time bomb and if it was allowed, in time, it would destroy the trade union movement in this country as we know it. Now with Landrum-Griffin they are doing a pretty good job of it and I am concerned because it seems that it is impossible to arouse the officers and when they are not aroused I am sure the members have no concern either. In 1958 there was a

concentrated move by right-to-work committees to pass the laws in those five states; it was their hope that if they were able to pass the laws in those five states, then they could go into Congress and get a national law, but only after our membership was aroused to the point where they saw the danger did they really get out and go to work.

In California they tried to circulate a petition and the first time around in the time limit they weren't able to get enough names, the second time around they put on an added drive and they were able to get the names. It rocked along in California in the straw votes where the law would pass by I don't know how many, but about the first of September, our people got concerned and went out and carried on a program; the other three states they selected were Washington, Oregon and Colorado, and Kansas was thrown in also, but in those states we got out and did a job because our people for the first time understood what was in these laws. Around the first of September, things started to change and on election day the right-to-work laws in Ohio and Colorado were beaten by a million votes. They were able to elect Young as the Senator and DeSalle as the Governor, and in California they elected Brown and Clare Engle but only because of the right-to-work. In that year, I sent out books to 1700 local unions and we got a return on 400—there were 1300 locals that made no attempt to make the collections and that again happened in 1960. Now we are coming up to an election this year and I just talked to Washington this morning. Wayne Morse wanted to see me when I get back because they are already starting a campaign against him. Here is a fellow that has put himself on the block day after day for us and we have a division out in Oregon and he wants to know if we won't do something to straighten it out. As I've told you before and I am going to tell you again today, these fellows, these liberal Congressmen and Senators who take the program of American labor and fight it through Congress make a great sacrifice because when they take our stand they cut themselves off from all large contributions and they are dependent upon what they can get from



### **Supreme Court Justice Talks About Unions and Politics**

"If higher wages and shorter hours are prime ends of a union in bargaining collectively, these ends may often be more effectively achieved by lobbying or by support of sympathetic candidates . . . The passage of the Adamson Act in 1916, establishing the eight-hour day for the railroad industry, affords positive proof that labor may achieve its desired result through legislation after bargaining techniques fail . . . The notion that economic and political concerns are separable is pre-Victorian . . . It is not true in life that political protection is irrelevant to, and insulated from, economic interests. It is not true for industry or finance. Neither is it true for labor."—U.S. Supreme Court Justice Felix Frankfurter, June 19, 1961.

the trade union movement and a few liberal organizations and liberal-minded people. But if you could hear the pleas of these fellows a few weeks before election, you wonder why they carry on. Last year, just a few weeks before the primary in Tennessee, Estes Kefauver called Gordon Freeman and said that he needed some money. Gordon asked him how much he needed and he said about \$10,000. He said that he needed to get some time on television, and to get some radio spots and he had to pay cash on the line for the television and radio. Gordon called me in and I told him to go ahead and let him borrow the money and I would find a way to make it good, so he was able to raise the \$10,000 and the thing started to change about ten days before election; instead of it being a narrow squeak he won by 100,000 votes. In Illinois, we had about the same thing—they were after Douglas, but why were they after Douglas and why were they after Kefauver? First of all, Kefauver was carrying on and is carrying on now an investigation against these drug houses. Drug houses that make these pills that are priced at \$25 and \$30 in some cases for half a dozen or a dozen. He went into their records and found that they were making from 1,800 to 2,500 per cent profit and he exposed them and they sent money in—money after money—in order to defeat him. And in the case of Paul Douglas, they must have spent a million dollars in Illinois and why were they after Paul Douglas? Because Paul Douglas is now exposing and investigating “on time” buying. Next year I am sure they are going to center on three or four people—one will be Wayne Morse, the other will be Johnny Carroll in Colorado and probably take on three or four people in the East. We need finances for those fellows and I am going to ask you all, if you will, to go back and get those books out of the package and give your membership a chance to donate their dollar. Many of these fellows will need this money in the early part of next year, because in the South the Primary is election and if we don't have the money early in the year we can't help very much.

### REGISTRATION WORK

There is another important thing and that is registration. We find that in spite of all the effort that in most of the locals that we check, we find only about 50 per cent of the members register. It's no use talking, it's no use making any effort at all unless we are able to get the people to vote on election day. I say and I plead with you to go back to your homes and, if you can, check the records and see if your members are registered and if they are not, set up a committee inside your local union in order to do that job. Today laws are on the books, either by referendum, by an act of the legislature or by an act of Congress. The only way they are going to be repealed, or amended, in my opinion, is by the voice of the people in the labor movement. As far as labor laws are concerned, I don't think there will ever be a case where we will find the black ink as far as the courts are concerned, because when they develop these laws in Washington they have four or five teams drawing up clauses and the others picking them apart to see if there are any flaws if they are brought to the Supreme Court. In order for us to correct the wrong that has been done to us we have to take an active part in the states, in the legislatures, to get a vote for repeal of these right-to-work laws and then we have to vote for members of Congress who will vote for amendment of Federal laws. I don't know that we will ever get repeal but certainly we are entitled to amendment and that will have to be done by electing to Congress people who are sympathetic. I know that there is a group of people in this country who would like to turn the pages of history back and there are people in this country, many large corporations, who still have not accepted collective bargaining. They are hoping against hope that the day will come when they can set us back to the day prior to 1933 when there was unemployment at every factory gate, there were thousands of people waiting for a job. Where there was a fellow inside who raised a protest about conditions, he was discharged and they could walk out to the gate and pick up a fellow to take his place. There are some groups in this country that I feel would like to dabble with Fascism! they would like to take over. I am also concerned when you find General and Admiral after Admiral and Admiral after General retiring and

going to important jobs in the government and becoming leading figures in these large corporations. I don't know whether you spend any time around these fellows but they are a narrow group and what they would like to do when a trade union raises any protest is put them in uniform and do the same as Hitler and Stalin and the rest would have done. The only instrument in this country that can save us from Fascism or Militarism are the trade unions. Show me any place where a dictator has taken over and I'll show you where they first had to either destroy or use the trade union movement. In some cases they used the unions to get the power, like in Czechoslovakia and in Argentina and in other areas, like in Germany, Hitler destroyed them. I feel it is the job of the trade unions of this country to protect us from that danger.

Among your own friends, you can't get out for a few hours with people unless they hit you with “How about Hoffa?,” “How about Cape Canaveral?,” “Is it true?” and there is no way that we can effectively combat the one-sided stories. I say to you that never in the history of the world has any group of people more right to walk with their head on high, and their families also, than the trade union movement of this country. Because the trade union movement of this country has made it possible for us to enjoy the greatest standard of living of any working people in all the world. And we are not only committed to this country—the AFL-CIO has spent millions of dollars to help other democratic trade union movements around the world to organize in order to combat the onslaught from Russia and Red China. Just two years ago I was asked to go to India to try to strengthen and help organize the steel workers union in that country in order to offset the efforts of the Russians to take over the new mills that are being built in India. Because they know if they can control these mills, and they can control the fabrication of the metal coming from those mills, they can very well take India into their camp. We are now sending people in to educate and try to help them in their educational and organizing efforts. Day after day they are calling upon us to get leaders to go to many different countries. So when we sit in these meetings we are not only confining our efforts to what we can do for the United States, we are also helping to aid those countries that are not able to help themselves develop, in order to be a force against the Russians or Red China, wherever they may be working. So I say it behooves us, it behooves us as individuals to keep this movement strong, to protect ourselves and to go out and do what is necessary in order to take the load off our backs so that we can move in the way that we did in years past. And if we do that, I am sure we will not just protect our own unions, we will make a better life for everybody and maybe somewhere along the line we can organize our forces so we can stop both the Reds and the Chinese and we may find that peace in the world that we are all looking for.

### Davy Jones Locker

If you are getting discouraged about cleaning up that attic or workshop, take heart from a recent report from the Army Corps of Engineers. The District Engineer in New York recently said that about 30,000,000 cubic yards of junk are removed from harbor waters every year. In a nice, neat pile, this would amount to a city block square and about 15,000 feet high. Among the choicer items removed last year were grand pianos, telephone poles and—believe it or not—the carcass of a giraffe! (No mention of TV sets or rock-and-roll records.)

## TV Around The World

"Tokyo Tower" is a 1,000-foot structure with five TV antennae, an observation platform for visitors and a modern science museum at its base. The observation platform, at 400 feet, attracts as many as 15,000 visitors a day during the tourist season.

★ ★ ★

The Mexican government estimates that there are about a million TV receivers in that country. Some 748,000 have been legally sold through retail channels and the balance has been smuggled into the republic—principally via free port frontier zones.

★ ★ ★

Within the past few months, the manufacture of TV sets has begun in the Philippine Islands. In July, production reached 15 sets a day at the Carlsound factory. Priced at 1,700 pesos (\$300), the available model was a 17-inch 110-degree deflection receiver.

★ ★ ★

The French Minister of Finance recently agreed to a tax increase, for funds to build a second TV channel facility in that country. He has now discovered that he overlooked the fact that existing receivers would have to be modified—or new ones purchased. Estimates up to \$250 million have been made, as the cost of modification or new sets. The minister is aware of the fact that such expenditures by the public will decrease their ability to buy Treasury Bonds—which he has hoped would help the country's economy.

★ ★ ★

There are about 6 million TV receivers in Germany; 1962 is expected to show about 7.5 million; and by 1965 there may be as many as 12,600,000 in use. Color is expected to be delayed for as many as five years from now. March, 1961, statistics show about 104 commercial minutes daily, nearly equally divided among the seven stations in the country.

★ ★ ★

The 12 ITA companies in Great Britain and the National Association of Theatrical and Kine Employes has just signed a new agreement covering approximately 4,500 employes. Pay increases of 19 per cent, over the three-year term, and a cut in average hours from 44 to 42 per week were the chief features of the new pact.

★ ★ ★

In an effort to "break the language barrier, fight illiteracy, supplement instruction in schools and help in developing Malayan culture," the Ministry of Culture in Singapore has allocated about \$1,850,000 to the development of TV there for the next four years. This

is somewhat more than half of its total budget for that period of time.

★ ★ ★

Watchdog Television is a recent closed-circuit development. The tenants in a seven-story apartment house in Brooklyn are afforded a preview of visitors at outside entrances.

★ ★ ★

Japanese manufacturers have protested to their government about the plans of a department store in Tokyo. The department store wants to import about 5,000 21-inch color receivers, which would sell for under \$900. Japanese-made 17-inch sets are priced at about \$1,000, and their manufacturers want import licenses refused, to protect the market.

★ ★ ★

Bell Laboratories is experimenting with synthesized speech by a digital computer. Punch-cards for speech sounds actuate nine control signals which correspond to pitch, intensity, timing, etc. While the project is for the chief purpose of improving communications techniques, its versatility has been demonstrated by the production of a singing "voice," too. Can't you just see the announcement of a new star's TV or radio program—"Ironhead Digito and His Subtrahends?"

### ERRATA

In the discussion of Stereo Standards in our July issue, an error will be noted on Page 6, where we said "Basically, the signal on the air is comprised of a *mail* radiated channel. . . ." This is quite a trick, if it can be done. The word "mail" should have been "main" and the sentence would have been a whole lot clearer if it had read as follows: "Basically, the signal on the air is comprised of a main (radiated) carrier, frequency-modulated by a left-plus-right and a left-minus-right amplitude-modulated, suppressed-carrier sub-carrier." So there!

T. E. ("Jack") Bobbitt, at the International called this error and still another to our attention. He points out the second is to be found on Page 14 ("Echoes in Space") where simultaneous *two-day* conversations are possible. On second thought, perhaps this is just as appropriate as the intended "two-way"—present-day teenagers make use of both.

In our rush for something-or-other, we overlooked a typesetting error in our cover explanation and WEFM came out WEEM. To make our comedy complete we referred to "Washington's EVT" on Page 16—which should have been "ETV."

All in all, it was a great issue for the gremlins.



# SAFETY FIRST

**is not just  
an empty slogan**

## *Local Union 1200 Business Manager Warns of Toxic Solvents*

*Business Manager Frank Green reported to the Progress Meeting in Minneapolis that film cleaning solvents have been shown to be toxic. He notified all members of his Washington-Baltimore local union of the dangers involved, and the Technician-Engineer has excerpted his bulletin of August 24 as a matter of interest to its readers.*

A FEW weeks ago one of our Washington television stations installed an automatic film cleaner on each of its film projectors. To facilitate filling the reservoirs of the cleaners with a solvent, a plastic container was purchased by the station. Although the solvent is labeled as "non-toxic", subsequent investigation disclosed that it uses perchlorethylene as a base, which is indeed toxic.

The next morning, following the purchase of the plastic container, one of our technicians filled the container with the solvent. Within one hour the container disintegrated and released about one pint of the solvent over the floor of the projection room. About two hours later the two technicians working in the room became violently ill as the result of inhaling the fumes from the evaporating solvent. The men were taken to the Washington Clinic for treatment. After extensive examinations, it has been established that both men have suffered serious liver damage, the full extent of which cannot be determined for months.

As the result of this accident, I have had many discussions with various safety councils, seeking expert advice. All authorities agree that the use of any solvents in improperly ventilated areas is most dangerous; that the problem should *not* be handled by inexperienced

persons, but rather by chemical engineers experienced in industrial solvents; and frequent checks should be made to ascertain the toxic content of the air in areas where solvents are used. The District of Columbia Health Department has facilities to make such checks and it is assumed that the City of Baltimore does likewise. Dr. Harold Magnuson of the United States Department of Health, Education and Welfare, one of the leading authorities on toxic poisons, told me that the inhalation of hydro-carbon (toxics) can cause serious damage to the lungs, kidneys and liver and the effect is cumulative. Over the passage of a few years such damage builds and usually is not noticed until it is too late to effect a cure, much in the same manner as silicosis.

The IBEW Safety Department and the Federal Safety Council of the United States Department of Labor has advised me that all effective solvents contain some type of hydro-carbon and all forms of hydro-carbon are toxic. This is true regardless of the information which may or may not be printed on the container. Most manufacturers feel that the ingredients of their solvents are a trade secret and therefore are reluctant to print such information on their labels. The fault and the basic problem lies in the lack of adequate labeling laws.

The sole purpose of this memorandum is to alert all employers and employes of the potential danger of solvents and to solicit the cooperation of everyone involved to have all areas in which solvents are used inspected by a competent and experienced industrial chemical safety engineer to assure the safety of all persons before someone else is seriously injured.

*Since the issuance of this information to his membership, Green has developed the following further information:*

The Manufacturing Chemists' Association, Inc.  
1625 Eye Street, N. W.

Washington, D. C., can supply data sheets for any chemical solvent (by chemical name). Cost runs from 35c to 75c each.

Mr. W. G. Griffin, Ex 3-2420, Ext. 2493

Federal Safety Council

Department of Labor

Washington 25, D. C., can supply information on any chemical solvent by chemical name and in a large number of cases by brand name.

National Safety Council

425 N. Michigan Blvd.

Chicago 11, Ill.

Write Mr. Roy G. Benson, Director of Industrial Dept.

Can supply a list of toxic solvents. Believe there is no charge involved.

National Association of Mutual Casualty Companies

20 N. Wacker Road

Chicago 6, Illinois, can supply a handbook on industrial solvents. Believe there is no charge for this book.

*It may also be fruitful to contact a local health department; many such agencies have facilities to make tests of the toxicity of confined areas.*

## U. S. Wage Levels No Barrier to Export Markets

The old canard that high wage levels in the United States are driving the nation's products from world markets has been hit hard in a recent study made public by the Committee for a National Trade Policy.

The study clearly refutes the "foreign trade" arguments being advanced by America's industrial giants to beat down justifiable wage increases in collective bargaining.

Entitled "Labor Costs and International Trade," and prepared by Professor N. Arnold Tolles of Cornell University and Betti C. Goldwosser, a Washington, D. C., trade economist, the study declared that the nation "has never been at any general disadvantage in foreign trade because of high wage levels."

It found that the higher U. S. wages are compensated by "the high productivity of the U. S. economy, reinforced as it is by high capital investment per worker." It said that simple comparisons of hourly wages fail to take into account much higher fringe benefit costs abroad.

The study further notes that it is not hourly wages that count but the "low labor costs per unit of output, rather than low wages, which give a country the advantage in international trade."

## Unions Hailed by President As Democracy's Bulwark

Both President Kennedy and Secretary of Labor Goldberg issued Labor Day messages hailing the achievements of workers and their unions.

The President declared Labor Day is a holiday on which we commemorate, among other things, "achievement in human welfare, the strength of our labor organizations, and the exercise of individual decision in guiding our institutions."

Noting that this Labor Day makes a "vital distinction between opposing ways of life in the modern world," the President said: "We look upon man's toil as an expression of individual personality, not a commodity to be exploited for the benefit of a state or ruling party."

"Our free and democratic labor movement is based upon the advancement of individual dignity," he continued. "Today, as throughout our modern history, we rely upon . . . organized labor to help safeguard our democracy whose freedom is inseparably linked with their own."

Secretary Goldberg described Labor Day as a "tribute to the American worker: to his enormous contribution to the national welfare, to his dedicated service to the principles of democracy and human dignity, and to his unflinching support of freedom in times of crisis."

He added: "To the American worker freedom has

come to mean the right to organize, the right of collective bargaining, the right to engage in concerted action for better wages and working conditions, and the right of grievance procedures."

## Utility Engineering Salaries Lagging

A graphical survey of engineers' salaries can be found in the August 7 issue of *Electrical World*. Covering electric and gas utility companies, chemical, railroads, government, the aircraft and aircraft parts industries and electrical machinery and electronics, the survey leads to conclusions based upon the year of entry into the profession. The median salary, for example, in electric and gas utility companies for engineers with 20 years' experience is shown as approximately \$10,500. The graph shows a beginning salary in 1960 of \$4,000. The text of the article which includes four such graphs points out that engineers employed by utilities in 1953 were comparable to the all-industry average but that in 1960 it appeared that utility engineers' salaries were no higher than the all-industry average for 1958. The chief concern of the article is the unfavorable competitive position which is shaping up in engineer recruitment in the utility industry, with emphasis on the continued upward trend of salaries in electronic and chemical industry engineering.

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## In Memoriam

On August 4, Brother Charles R. Carle, secretary of the International Executive Council, was hospitalized in Baton Rouge, La., with a severe heart attack. A second

attack claimed his life on August 8.

A member of the IBEW for more than 35 years, he served Local Union 194, Shreveport, as recording secretary, financial secretary executive board member president and business manager and was appointed to the international staff as a field representative in 1937.



Charles Carle

In 1947 he was appointed to fill a vacancy on the International Executive Council and was unanimously elected at all subsequent conventions as the council member for the Sixth District. At its January meeting in 1960 Brother Carle became the Secretary of the Council.

We can but repeat the sentiments of the August JOURNAL—"C.R." was a soft-spoken and kindly gentleman with keen mind and gentle sense of humor. We are all a little better off for having known him and have suffered a real loss in his passing.



## READING TIME

### Electronic Designers' Handbook

by Landee, Davis, and Albrecht; McGraw-Hill Book Company, Inc., New York, 1,150 pp., 1,100 figures, 1,400 equations, 140 examples, \$16.50.

This is one of the most recent of McGraw-Hill's series of technical handbooks designed for study and for practical use. It is a comprehensive volume developed by three versatile engineers—Robert Landee, director of research and development, Space and Airborne Data Systems, Western Division, Collins Radio; Donovan Davis, vice president, Tridea Electronics, Inc.; and Albert Albrecht, general manager of Space Electronics Corp.

The book is intended to provide material for technical discussions, design data, and basic design procedures for the solution of many design problems.

Opening with general design data—tables and figures, moves into vacuum tubes and transistors, voltage amplifiers, filters, attenuators and equalizers, principles of feedback, computer and servomechanism techniques, transmission lines, antennas, waveform analysis, and network analysis. It's well illustrated throughout and has a lengthy index for reference work.

### "How to Repair Small Appliances"

by Jack Darr, Howard W. Sams' Co., Inc., 128 pages, illus., \$2.50.

This book, while useful, misses being as fully useful as it might have been had the basic research been more thorough, the type smaller, the margins narrower and the book thicker. In five chapters the author gives "a lick and a promise" at fifteen common appliances, discusses line cords, plugs and attachments ("a wire nut is made of cone-shaped plastic or ceramic with a threaded hole in the center"), heating elements and thermostats, small electric motors and "Appliance Servicing as a Business."

Certainly there are many instances where the author writes as though he were addressing himself to a housewife or a visitor from Mars rather than someone in the electronic-electric appliance repair business. He recognizes the fact that disassembling some appliances is often more tricky than the actual repair. Yet there are only scattered details on how to "get into" most appliances. None was identified by brand name, but the accom-

panying photos will allow identification in some instances.

The book states that "time is money" in repairing appliances. Any repair on small appliances which costs more than a couple of hours in shop time probably is not economically justifiable. When discount houses are selling 8-cup automatic percolators for \$7.85, automatic toasters for \$6.89, broiler units with automatic heat control and steam-and-dry irons for \$7.77, nobody wants to pay a repairman \$7 to \$10 to repair a faulty appliance. They will toss it away and buy another.

The book will have its greatest value to do-it-yourselfers who want to tackle a malfunction on the basis that "If I fix it, I'm 'way ahead and if I fail, I've lost nothing but my time" and to youngsters who will find a wealth of information, clear drawings and definitions of terms with which they will ultimately have to become familiar if they are to progress in electronics or electric appliance repair.

### Medical Care Dollars for Better Health

by Lisbeth Bamberger, AFL-CIO Federationist

A new AFL-CIO pamphlet, "Medical Care Dollars for Better Health," explores the various types of health care programs negotiated by unions.

The pamphlet is based on an article in the *AFL-CIO American Federationist* by Lisbeth Bamberger, assistant director of the AFL-CIO Dept. of Social Security. The foreword is by Nelson H. Cruikshank, director of the department.

Copies of the pamphlet, Publication No. 118, at 10 cents each, may be ordered from the Pamphlet Div. of the AFL-CIO Dept. of Publications, 815 16th Street, N.W., Washington 6, D. C. Bulk orders are \$8 for 100 and \$65 for 1,000.

### Automation, AFL-CIO Publication No. 124

by American Federation of Labor and Congress of Industrial Organizations, Free Pamphlet.

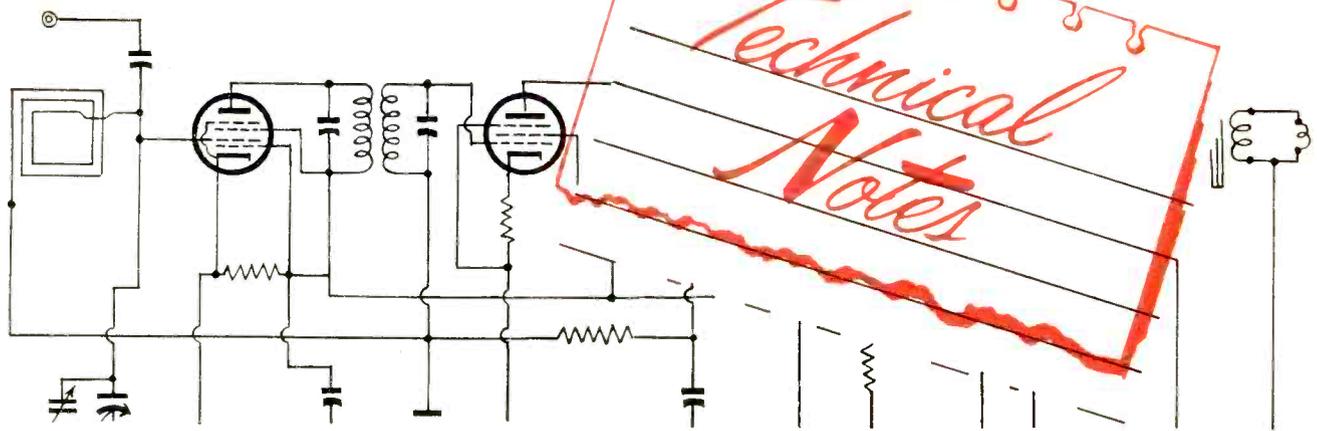
Automation benefits will not come automatically and its problems are not insoluble.

A new AFL-CIO pamphlet *Automation*, discusses in simple terms the impact and the challenge of a changing technology.

A single copy of the pamphlet, AFL-CIO Publication No. 124, is available free. Up to 100 copies, the price is 3 cents each; 100 copies is \$2.50. Orders should be sent to Pamphlet Div., AFL-CIO Dept. of Publications, 815 Sixteenth St., N.W., Washington 6, D. C. Checks should be made payable to William F. Schnitzler, secretary-treasurer, AFL-CIO.

#### BUT CAN IT BE AUTOMATED?

A University of Maryland physicist recently described man as "the only non-linear, 150-pound servomechanism system which can be mass-produced by unskilled labor."



## Mobile Radio Breakthrough

The Air Force has announced the purchase of six units of a newly-developed communications system called RACEP from The Martin Company.

RACEP, a mobile and private radio telephone system that requires no wires or central switchboard, was developed at Martin's Orlando (Fla.) division and was introduced to the public early in June.

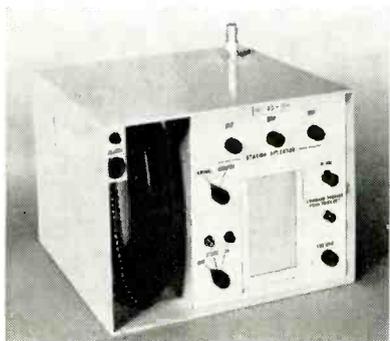
Air Force testing of the system will be conducted in the area of ground-to-ground communications. A product of some three years of research and study by Martin engineers, RACEP has been called the most significant development in voice communications electronics since the end of World War II.

Developers of RACEP say the system has vast potentialities in air-to-ground and air-to-air applications, as well as ground-to-ground communications.

RACEP uniquely permits scores of subscribers to use a single communications channel without interference. Aware that the radio frequency spectrum has become increasingly crowded, Martin designed the RACEP system to make more efficient use of the spectrum, rather than contributing to the crowded communication conditions.

The new system will handle several hundred subscribers and has a maximum ground range of 10 miles.

RACEP breaks each bit of sound into millionth-of-a-second fragments and converts them to radio energy



RACEP packs a lot of communications know-how into a tight box.



G. T. WILLEY, vice president and general manager of The Martin Company's Orlando, Fla., division (right) studies RACEP—a revolutionary communications system, with three Martin engineers instrumental in its development.

pulses. The pulses then are transmitted over a wide spectrum band, with each pulse separated in both time and frequency.

These code signals are accepted only by the receivers having that particular code. The receiving set reconstructs the voice pattern from the radio pulses. All other coded signals are rejected.

A Command Over-Ride feature is built into the RACEP system, permitting an emergency call from a single transmitter to be accepted by all receivers within range, regardless of whether the individual receivers are in use at the time the Command Over-Ride is employed.

## Manufacturer's Report

Hoffman Electronics is discontinuing manufacture of television and stereo home equipment and will use its facilities to expand its operations in military, semiconductor and industrial fields. According to the president of the company, traditional Hoffman quality cannot be maintained in the stereo and TV field at prevailing prices, with reasonable profits.

## A Grizzly Tale of Woe

Things have been getting increasingly gruesome for the grizzly bears in Yellowstone Park, and electronics has galloped to their rescue.

As a result, more than a hundred bears are going on the air with permanently-attached walkie-talkies to track bears to their lairs, and the tracking is done so completely the average TV private eye would turn in his martini glass in disgust.

To put a bear on the air here's what you do: First you locate a bear. Next you shoot him in the southern exposure with a jet-propelled knockout drop. When Mr. Bear does a flopperoo, you quickly slip a plastic collar around his shaggy neck. In the collar is a transistor-powered transmitter and batteries. Each bear has his own signal and wave length so, with direction-finding equipment, any bear can be pinpointed anytime of the day or night for better than a year.

This gives an almost unbearable lack of privacy, but it's all in a good cause. Naturalists want to find out what bears do when not mooching handouts (and hands!) from Yellowstone tourists. Philco Corporation devised the little transmitters to make every bear a disc jockey. Now naturalists can bear down on the problem of why there's such a high cub mortality in the first year that grizzly bears may be following the passenger pigeon and the Carolina parakeet into extinction. Naturalists say the sows are bearing only small and infrequent litters. . .

. . . Maybe they're spending too much time listening to Papa Bear broadcasting on Eat the Press.

## Bouncing Off the Moon

Westinghouse Broadcasting Co. has received FCC go-ahead on a plan to bounce radio signals off the moon from a station near Linthicum, just south of Baltimore, Md. Non-radioequipped satellites will be included in tests. Main purpose is to determine feasibility of frequency sharing between space systems and conventional earth communications.

## Time Signal Adjustment

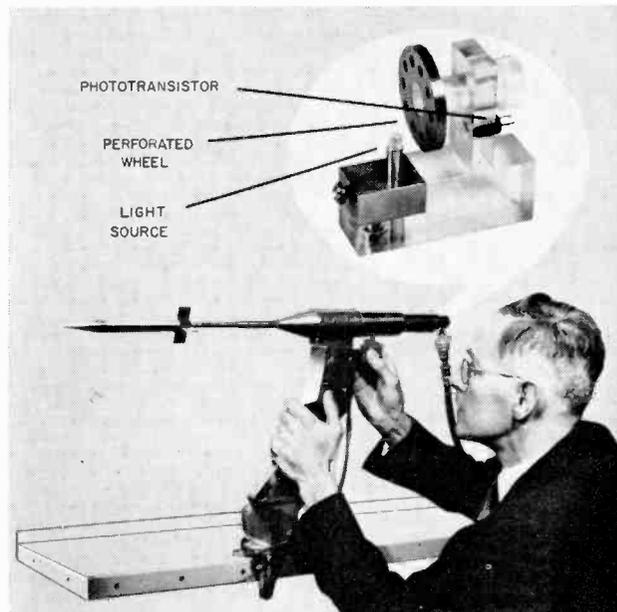
On August 1, at 0000 UT, the National Bureau of Standards, U. S. Department of Commerce advanced the phase of the time signals broadcast from radio stations WWV and WWVH by 50 milliseconds. Such step adjustments are made when necessary to follow the variations in Universal Time (UT-2) so that the time signals remain within about 50 milliseconds of UT-2.

The time signals are maintained on a uniform basis by means of atomic frequency standards. Departure of the time scale from UT-2 reflects a small but perceptible fluctuation in the speed of rotation of the earth.

Similar changes are being made simultaneously on

the other standard frequency broadcasting stations which have been coordinating their transmissions since early 1960 under an agreement between agencies of the United Kingdom and the United States.

## Unit Records Spin Rate



The callout in this picture depicts the essential components of a phototransistor tachometer developed by NOL Aeronautical Research Engineer Charles F. Miller. He is shown attaching the light source and phototransistor components of the tachometer to a sting mount supporting a missile model for a wind tunnel test. Already attached to the shaft extending from the model's tail to the sting mount is the tachometer's perforated wheel component which rotates between the light source and the phototransistor when the model spins in the wind tunnel's airstream. This results in a series of light pulses which are converted to electrical signals and counted per unit of time to reveal the model's spin rate.

## Field Emission Images

While electronics is generally used for amplification of sound, it is also used for amplification of images in the electron microscope. Latest electron microscopes can distinguish bits of matter one fifty-millionth of an inch in diameter. A mouse hair resembles a tree trunk and weird battles between viruses squirting acids into bacteria are observed. The polio virus has now been seen; a sphere 1/125,000 of an inch in diameter.

Great hopes are pinned on the new field emission microscope. Although the full potentialities are yet to be realized, already it has become so powerful that observers can watch metallic atoms evaporating from a surface. It is hoped, eventually, to use it to see even smaller things such as the atomic nucleus, only 1/100,000 of the atom itself. Then more knowledge into the basic structure of matter can be undertaken and as yet unlocked doors of knowledge will be unlocked through the use of electronics.



# STATION BREAKS

## Gomsrud Named CLUC Head

Nearly simultaneous with the opening of the Radio, TV and Recording Progress Meeting in Minneapolis, President Robert M. Gomsrud of Local Union 292 was appointed temporary president of the Minneapolis central body. Under AFL-CIO trusteeship, the CLUC is undergoing reorganization.

Brother Gomsrud is also president of the Minneapolis Building and Construction Trades Council, vice president of the State Building Trades Council, a member of the Minnesota Industrial Relations Advisory Council, a member of the Advisory Committee to Business Development and is serving his third term as a member of the county school board.

As a business representative of Local union 292, one of his primary responsibilities has been the negotiation and administration of broadcasting and recording industry agreements in Minneapolis and St. Paul, serving on the staff of Business Manager Joe Krech. Since Brother Bob's new position is a full-time one, he has resigned his job as Business Representative but has promised to keep in touch with the industry in the Twin Cities and to be of service, upon request.

## Men and Machines

**CHICAGO (PAI)**—Automation is rough enough on a lot of people but when the infernal gadgets talk back to you, that's going too far.

The new automatic elevators at the Sherman Hotel do precisely this. They order people to move back in the cars, tell them to press the button, direct them to "face front" and so on. On top of this, each car replaces three elevator operators.

## AFL-CIO Film for Schools

Educational Screen and Audio-Visual Guide, the nation's leading social studies film magazine, has strongly recommended the "Land of Promise"—an AFL-CIO film—for use in high school and college social studies classes and for adult education.

In a page-long description and appraisal, the publication lauded the film for avoiding "name calling and recriminations," and for its "remarkably mature approach to a potentially controversial subject."

"This film can provide a first-rate springboard for a discussion of the many important economic undercurrents of our society," the review said.

"Land of Promise" was originally produced for public service television showing last Labor Day. Prints are available for sale or rent from the AFL-CIO Department of Education.

## Drug Report Available

The report by the Senate Antitrust subcommittee on the high price of drugs will be a three-alarm shocker. It will show how difficult it is for the public to get lower drug prices under the present patent monopoly.

You can get a copy of this report by writing to Sen. Estes Kefauver (D-Tenn.), chairman of the Senate Antitrust subcommittee, Senate Office Building, Washington 25, D. C. Its revelations are important to your family. For one thing, the report will show how and why you are compelled to pay 40-50 cents apiece for tetracycline capsules—the widest-selling broad-range antibiotic—although they cost only 2.5 cents to manufacture.

## LAST LAUGH



"I see what you meant when you told the union your business was going to pot."

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