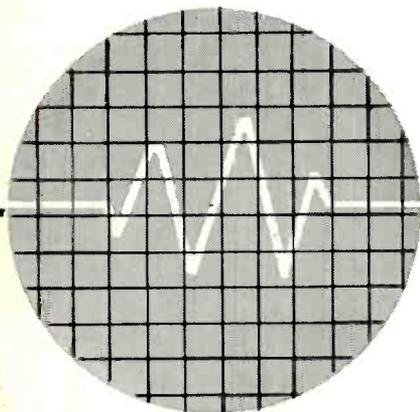


A WHITE ALICE INSTALLATION—Air Force Photo by Western Electric

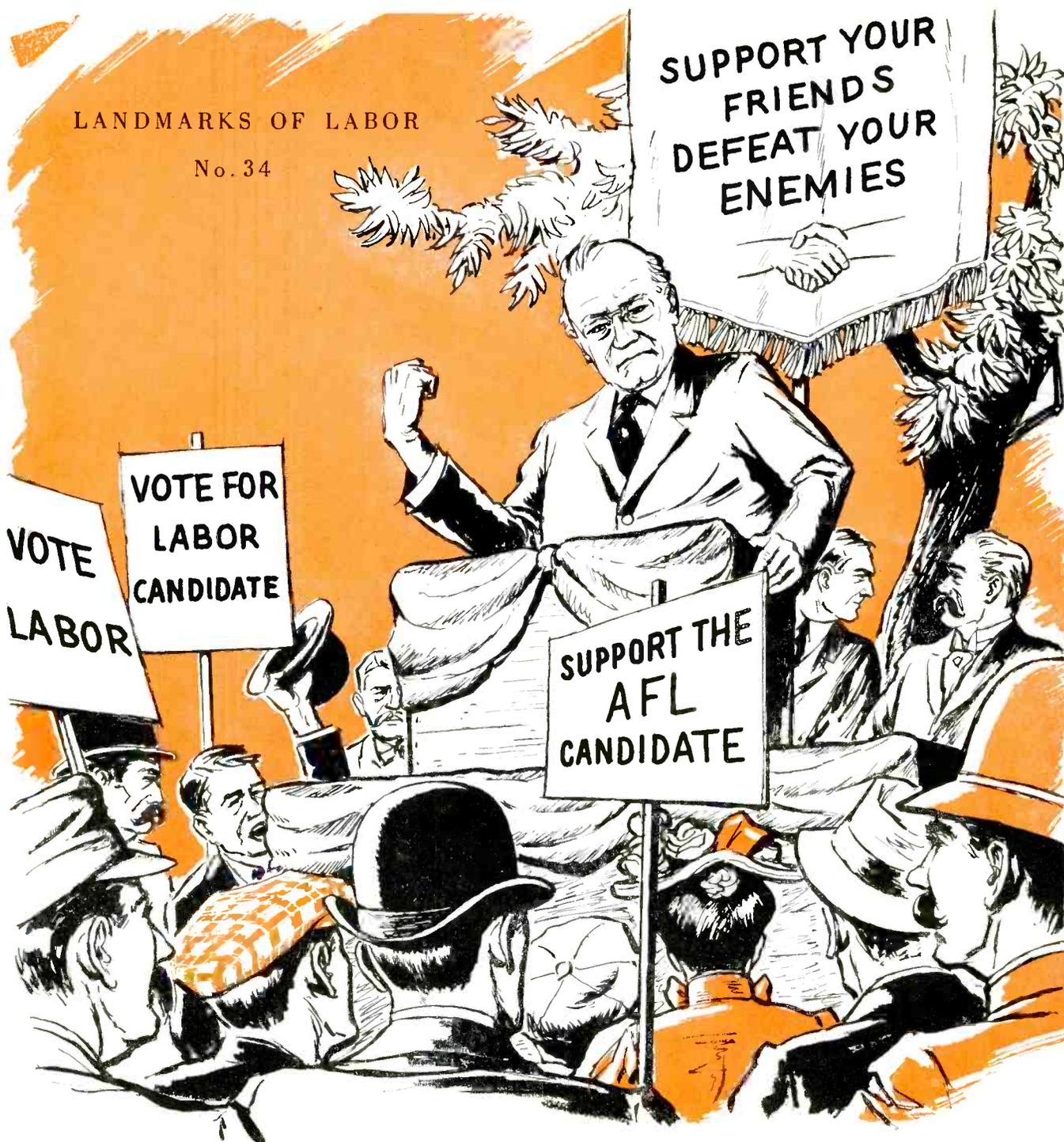


TECHNICIAN ENGINEER

APRIL, 1962

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

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS — AFL-CIO



PIONEERING IN POLITICAL ACTION—1906

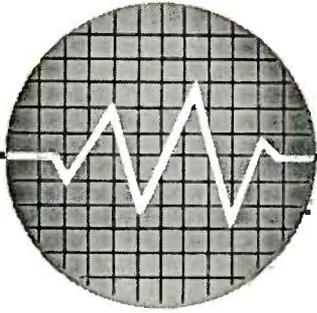
Organized labor speaking through the American Federation of Labor Executive Council in the spring of 1906 presented to President Theodore Roosevelt and to Congress a "Bill of Grievances" incorporating its principal legislative demands. When this presentation was ignored labor took to the political hustings in the congressional election of 1906.

A "Labor Representation Committee" headed by Samuel Gompers was formed to guide political strategy and the unions were urged to support labor's friends and help defeat its enemies. Where labor was not

favored, a labor candidate was to be chosen. Labor leaders, including Gompers, actually took to the political stump and campaigned vigorously. Pluralities of labor's opponents were reduced and six card-carrying candidates were elected to the U.S. Congress. The sum of \$8,225.94 was spent in the campaign and the AFL 1906 convention upheld the "new policy" in politics.

This campaign practice did not persist, but organized labor had set a precedent—a longtime forerunner of modern political education and action committees. The development well deserves to be designated a landmark of labor.

The INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS
 GORDON M. FREEMAN International President
 JOSEPH D. KEENAN International Secretary
 JEREMIAH P. SULLIVAN International Treasurer



TECHNICIAN ENGINEER

VOL. II, NO. 4

ALBERT O. HARDY, Editor

<i>in this issue</i>	The Men of White Alice	4
	Progress Meeting Plans	5
	The Passing of the TV Blooper	6
	Too Few Really Understand Great Issues Confronting Us	8
	Beware of the Smiling Cat	10
	Some Recent Headlines	11
	The Mystery of the Missing Workers	13
	Technical Notes	14
	Station Breaks	16

the cover A cold and lonely radome installation in the White Alice phase of the DEWLINE system, which stands guard duty along the Arctic approaches to North America. Many members of the International Brotherhood of Electrical Workers are employed in the White Alice operation. A report of a recent visit to their outposts by an International Vice President begins on Page 4.

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 1961 figures: February, 1962—104.5; February, 1961—127.5. (Please note: With the January, 1962, index, the reference base was changed to 1957-59=100, from a previous base of 1947-49.)

COMMENTARY



During its eleventh year of publication, the TECHNICIAN ENGINEER has become a member-publication of the International Labor Press Association. This, we anticipate, will be a mutually profitable association and hope that we will be of some assistance to the ILPA in its efforts to improve the quality and effectiveness of the labor press. The ILPA has made outstanding progress in combatting "phony" labor papers which have extracted large sums from gullible employers through high-pressure advertising methods of solicitation. The Association is a member of the National Better Business Bureau and cooperates closely with local Better Business

Bureaus, the Federal Trade Commission, the Department of Justice and local prosecutors.

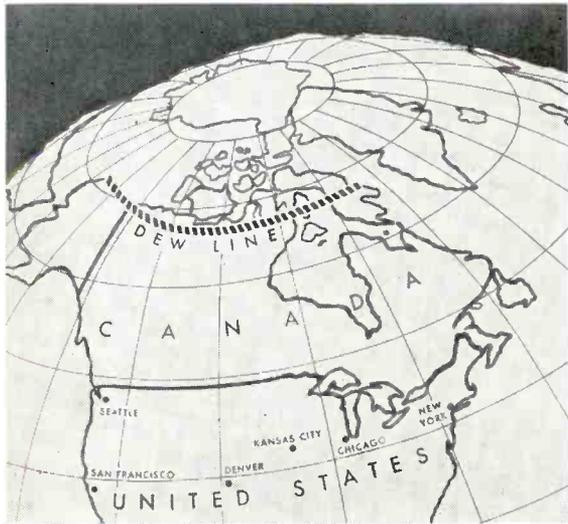
In extending congratulations to the members of ILPA at their Golden Anniversary Convention last year, President John Kennedy said:

"The labor press has throughout the years established for itself a proud tradition of speaking out firmly and forcefully in support of economic and social progress for all America.

"You perform a crucial function for the free labor movement for whom you speak. For a well informed and participating union member is a necessity for union democracy, just as a well informed and participating electorate is essential to a free society."

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Vice President of Ninth District Visits Alaska's Vast Communications System



The White Alice phase of the Dew-line is that part of the dash line, at upper left, which crosses Alaska.

THE MEN OF WHITE ALICE

By GEORGE A. MULKEY
International Representative

DURING his recent visit to Alaska, Vice President Foehn of the Ninth District took time out to visit some of the White Alice and Alaska Communications sites operated by RCA under contract for the Air Force.

These sites are operated by approximately 350 technicians, coming principally from the telephone industry, but a good many broadcast technicians are among them. The Vice President met and talked to technicians from many IBEW locals. There were members who had traveled from Locals 45, 202, 77, 336, 827, 1245, 1011 and 2051; independent telephone companies were represented, Bell affiliates, Pacific Missile Range, Atlantic Missile Range and many other companies.

The trip to most of the sites was made by car, traveling the highway between Anchorage and Fairbanks. It was a delightful trip, made in perfect weather during the time that the days and nights are the same length, and with the exception of a few hours during one day, we had our full quota of twelve hours of sunshine.

On our trip to the Clear site we took time out to visit the Ballistic Missile Early Warning System installation. This is also operated by RCA. The technicians introduced the Vice President to nearly every type of elec-

tronic communication equipment, including several varieties of microwave, tropospheric scatter propagation, "plain old" transmitters, etc.

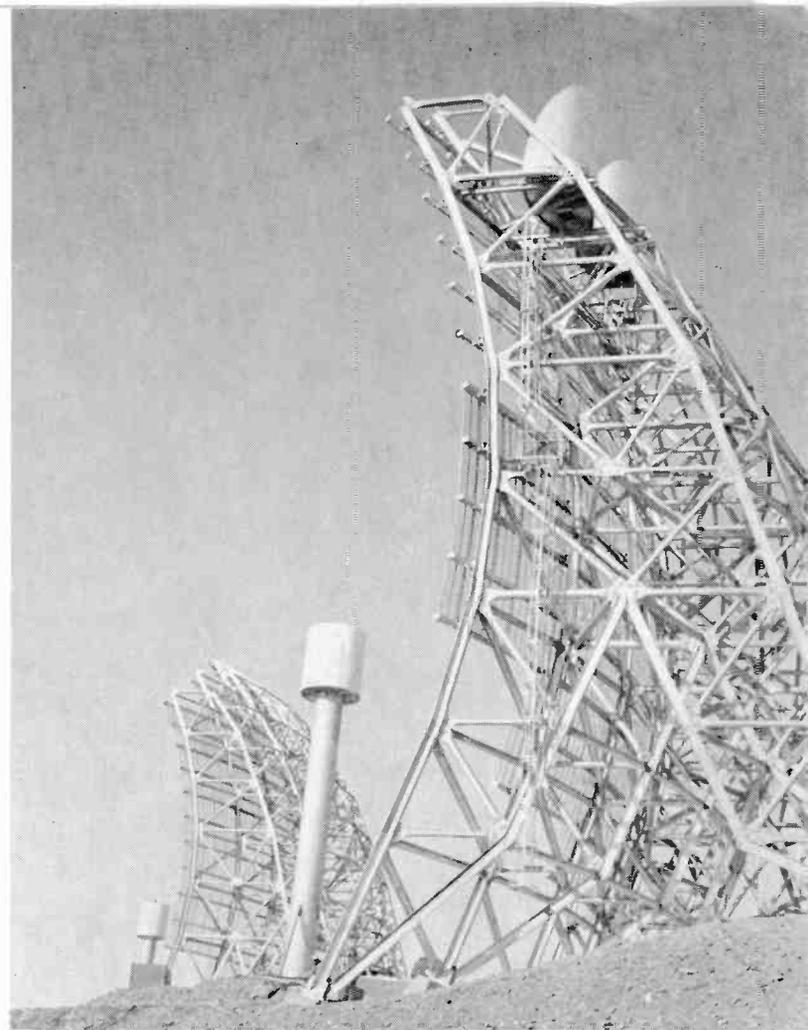
At the tracking station recently completed near Fairbanks, we were given the full treatment and here we found an amazing amount of data processing equipment to be used to transmit the information received from the satellite Nimbus regarding its observation around the world. All this information will be relayed by microwave, bouncing the signals off a bill-board into the receiving antenna at Fairbanks and through the White Alice System to the contiguous United States and then by commercial wire to Baltimore where they will develop the pictures and do the final analysis and permanent recording of the weather information in each orbit.

THE signals from Nimbus are received on an 85-foot parabolic antenna. The information is received by triggering the memory bank with a secret pulse code. All the information Nimbus can provide is transmitted in approximately 4½ minutes. I am sure all the technical people who receive this magazine are familiar with the punch-tape process of receiving this information at

astronomically high speeds. The information includes, of course, pictures of the cloud formations around the world from pole to pole and other information such as temperatures, density of atmosphere, the bounce of cosmic rays on cloud formations, etc.

Vice President Foehn told the technicians that he had been busy ever since he was appointed Vice President contacting every branch of the trade by going to the location where the work is being performed so that he would have first-hand information concerning the prosecution of this work. Undoubtedly, the technicians overwhelm all of us a little bit with their explanation of what the apparatus they are operating could do, but we, at least, are fully aware of the physical placement and operation of this equipment, the living and working conditions in the Land of the Midnight Sun and the important parts our members in Alaska play in maintaining the welfare and security of the United States.

RIGHT: Tropospheric communication antenna used in conjunction with the Distant Early Warning System (Dewline), in the Arctic, constructed under the engineering supervision of the U. S. Army Corps of Engineers. Note the inter-site reflectors (microwave) located at the top of the rear reflector. (U. S. Army photo)



Plans for 1962 Progress Meeting Underway



THE QUEEN ELIZABETH HOTEL, CONVENTION HEADQUARTERS

THE 27th International Convention of the International Brotherhood of Electrical Workers will be held September 10-14 in Montreal, Quebec, Canada. Sessions are scheduled to be held in the Show-mart Auditorium, and the convention headquarters hotel is the Queen Elizabeth, shown at left.

The annual progress meeting of the Radio-Television-Recording Division is to be held in Montreal, too—on September 7, 8 and 9, immediately preceding the Brotherhood Convention. The hotel in which the progress meeting is to be held is not yet announced, but local unions should make plans now to send delegates to the important gatherings.

The International Office is expected to send out soon more detailed information regarding accommodations in Montreal, so that delegates can plan their trips accordingly.

The Passing of the TV Blooper

THE gangster stepped into a telephone booth, a gunshot shattered the glass, and the man fell to the floor. The telephone receiver dangled over the corpse.

It would have made a great scene on TV; indeed, it was supposed to. Unfortunately, when the camera dollied in for a closeup of the swinging phone receiver, it also caught a stagehand supplying the swinging motion.

It's happened before—viewers' suspense dissolving into giggles and "Hey, did you see that?" and "There's a cameraman who'll be looking for work tomorrow."

Television has been the goof gleaner's happiest hunting ground for more than a decade. Hilarious happenings *not calculated* to delight flub fans have been countless. Some have been memorable.

As when a famous director thanked Martha Scott for a fine performance. "Thank you, Miss Foch," he said. Then, as if once were not enough, he said it again!

And the time an oriental prince (the genuine article) on the Fatima cigarette program calmly announced that his preferred brand was Camels.

Reprinted with permission from The Tartan, Minnesota Mining and Manufacturing Company publication.



There was the purebred pooch who practically inhaled the sponsor's dog food during rehearsal but turned up his aristocratic nose at the expensive crucial moment. Other animals have put on unscheduled performances not at all suitable for family-type audiences.

Because fortunes often ride on television shows, boners are deeply distressing to those involved. Yet even they enjoy telling about their sad experience—afterwards.

They usually enjoy their colleagues' disasters any time!

Like the theater, TV sets swarm with booby traps. A door in an exciting mystery is opened, slowly, slowly, revealing . . . no, not the murderer, but a television cameraman. Or the desk in a private office (just the place to discuss a top-secret secret) only partly conceals—another television cameraman.

Playing a TV monster, a well known actor left his dressing room and hurried to the set for what he thought was a final rehearsal. He lifted a "breakaway" chair over his head as if to dash it to pieces in anger, then carefully set it down saying, "Might as well save this for the show." Later a door didn't open properly. "Why doesn't someone fix this — — door?" he shouted.



Not till midway through the show was the director able to tell him that he was on the air. The result was one visibly shaken monster.

Three Russians who were to be interviewed on a news-background show reversed the monster situation. The rehearsal went off perfectly. But when air time arrived, no Russians. Their stint over, as they thought, they had left the studio.

Myriad details mean myriad opportunities for slip-ups. Snow has fallen in living rooms, stage carpenters have wandered across lunar landscapes, "corpses" have nonchalantly risen, brushed themselves off and walked away, a 17th Century sea captain charting his course was caught studying a 20th Century auto road map.

A cowboy hero once reached for his gun and found it missing. The "bad guy" was considerably astonished to be choked without warning instead of shot at.

And once when a political bigwig was announced, the audience found themselves staring into the sinister visage of Mephistopheles, who was supposed to advertise a *Faust* recording album somewhat later. (Those of the opposite party are said to have considered this flub rather appropriate.)

Raymond Massey was playing his familiar role of the Civil War President in the television version of "Abe Lincoln in Illinois." One of the most dramatic scenes found Lincoln aboard a train about to leave

Springfield for his inauguration in Washington. Amid farewells from the crowd gathered to see him off, an over-exuberant extra was heard shouting, "Goodby, Mr. Massey!"

Boners aren't necessarily confined to full-length shows. One-minute commercials offer possibilities, too. During a pitch for a patent tonic, the announcer was to pour some of the stuff into a glass, drink it and smack his lips. "Man, this is really good!" he was to exclaim. It was rehearsed without the product.

On the air, the announcer poured generously and downed it in one swallow. He never spoke his line. He choked and coughed. Tears ran down his cheeks. His voice had gone. Whatever that medicine was to cure, on this occasion it didn't.

Then there was a wrist watch attached to an out-board motor propeller and whirled at top speed under water. The announcer was to remove the watch and show that it was still intact and running. But it broke loose from the propeller and couldn't be found. The announcer could only assure his viewers that wherever it was, it was still running.

Considering that more than 100 people can be involved, one way or another, in even a brief telecast, it's a credit to the industry that more things don't go wrong. An occasional miscue is understandable, but to the people in television no longer tolerable.



Ten years ago a national magazine writer said, "Some day television may achieve a state of enameled, boner-proof perfection. And when that stage is reached, the industry's craftsmen will breathe easier, suffer less and live longer."



That day has now arrived, and bloopers are on their way out. The magic of video tape—magnetic tape produced specifically for recording television programs—makes it possible to capture both sound and picture for immediate playback. Producer, director, performers, crew and sponsors gather around the monitors. Flubs of any kind—in staging, lighting, camera angle, pacing or delivery—can be caught while everyone is still on the set.

A dramatic scene or commercial can be taped several times and the best portions of each "take" edited into one perfect sequence.

One playback is worth 10 rehearsals, according to announcer Dennis James. Actor-producer Peter Lawford adds: "Tape is the reason so many film stars have consented to appear on television. . . . It gives them a feeling of security, such as they have in motion pictures." It's making life happier for TV executives, sponsors and ad agency people, too.

If anyone feels deprived, it's probably the flub lovers. To these TV sadists, a perfect performance is much less fun than a corpse that gets up and walks away.

A cast watches the playback of show just recorded on video tape at Station WCCO-TV, Minneapolis, Minnesota—an IBEW-manned operation.



Too Few Really Understand Great Issues Confronting US



TOO few American citizens really understand the great issues that we face today. This rather alarming conclusion is reached in a study conducted by the Fund for the Republic's Center for the Study of Democratic Institutions. It is based on interviews with two of the nation's outstanding public opinion analysts—Dr. George Gallup and Elmo Roper.

Roper for example, says that only 10 per cent of the American people are "politically active" and he blames the situation on widespread apathy and vast "areas of ignorance."

"We show in our polls," Roper said, "that 70 per cent of the American people do not know the length of the term of the United States senators; that 56 per cent cannot name either of the two senators from their own home states; that they haven't the vaguest notion of what a tariff is; that Americans are all in favor of selling American goods abroad but not of buying imported goods (as though this were possible).

"So we expose areas of ignorance in American life. And once you know where the areas of ignorance are among the American people you can do a better job of educating them."

This points up the tremendous job that faces our entire educational system, labor's political education arms and other groups which have the responsibility of bringing light where there is ignorance.

Roper thinks that exposing the "areas of ignorance of the American people, their ignorance of economics,

their ignorance of politics," will help to bring understanding.

"We find that ignorance is the cause of most of the 'anti' feeling in this country," he said. "People who are afraid of Jews and are anti-Semitic haven't known many Jews in the first place. In Connecticut we found that we had a minority of about 18 per cent who are anti-Negro, but these people have never seen a Negro to talk to in their lives."

Gallup substantiated Roper's view that people just don't understand the issues.

"It has been assumed that people want to be regarded as well-informed on every issue," Gallup said. "In the 25 years we have been polling, we've never found that to be true."

He recalled some early polls on the now vital issue of reciprocal trade, "when 90 to 95 per cent of the people said they did not have sufficient information on which to base an opinion. That, of course, was a case when they actually did not have enough information to make a judgment."

To those who believe that issues are the basic means of making a determination of opinion, this question and Gallup's answer are alarming:

Question: "What are the factors that seem to influence and affect opinion in this country most? Is it events? Political leaders? Religious leaders? Educators? Entertainers? The Press?"

Gallup: "I don't believe this question has ever been answered, but I think statements from political leaders do not have much effect upon opinion. Events, on the other hand, have a tremendous impact on opinion. I'm always amazed at Washington correspondents who believe that some act taken by Congress will somehow exert a tremendous effect upon opinions and attitudes.

"When we go to the people, we find that very few of them even know what any given congressman has said or done. The factors that are the long-term influence on opinion in this country are education, social and economic background and religion. Those are the constants. People's basic attitudes change very little."

Organizations such as the AFL-CIO Committee on Political Education have worked hard turning out voting records of members of Congress, recognizing that the votes on key issues make a vast difference in the life of individuals and the welfare of the country. The obstacles they face are tremendous.

"The thing that always amazes me is how badly in-

formed a lot of our college graduates are," Gallup observed. "It is absolutely shocking to one in our business to see how anyone can graduate from college and be so ignorant about economic issues."

While he favors putting some requirements on the right to vote, Gallup feels that the voter with less education frequently shows at least as much understanding as his college counterpart.

Both Roper and Gallup believe that the people are often ahead of their leaders and feel that people have a "practical wisdom despite their gaps in knowledge."
(PAI)

ONE MOMENT PLEASE

A Miami, Fla., television station was broadcasting a live commercial for a used car dealer. The announcer proclaimed the most fantastic qualities of each car driven up beside his microphone.

To show that nothing was hidden from the TV audience, he'd swing open the door of each car, then slam it shut, achieving a sound of solid body construction. At least that was the plan, until . . .

One special vehicle was driven up, he went into his spiel, opened the door with a flourish, then slammed it shut and watched with horror as—you guessed it—the "dealer special" fell apart and clattered to the ground in pieces.

MANPOWER AGENCIES

A leading supplier of temporary help for business organizations has been recommended for investment by a brokerage firm. Most of the income derived by this company is through the placement of office workers, including stenographers, typists, file clerks and tabulating machine operators.

A number of these firms are in the process of supplying such help throughout the United States.

The Executive Board of the Office Employees International Union, at its last meeting, took cognizance of the increasing use of such manpower agencies and recommended that OEIU contracts be changed to provide protection for OEIU members against the inroads of these temporary workers for whom the employer does not pay fringe benefits, health and welfare benefits, nor does he provide pension plan coverage.

These services not only tend to eliminate permanent employment for office and clerical workers, but provides a regular kickback of daily wages to the companies providing the services.

Worse still, the OEIU has found in its experience that the manpower agencies are perfectly willing to provide scabs to companies against whom strikes are conducted.



Unions Get Strong Public Support in U. S. and Canada

TORONTO, Ont. (PAI)—In view of the deluge of anti-labor propaganda from both sides of the border to which the public has been subjected, a recent poll released by the Canadian Institute of Public Opinion shows a surprising majority of the public approves of trade unions both in Canada and the United States.

The question asked was "In general do you approve or disapprove of Labor Unions?" The results were as follows:

	U.S. %	Canada %
Approve	63	66
Disapprove	22	23
No opinion	15	11
	100	100

One outstanding fact, says the Cooperative Press Association of Canada, is that professional men and women, owners and managers as well as white collar workers, seem to approve of unions by a substantial majority. But farmers both in the U. S. and Canada are split down the middle.

White collar workers, among whom the big organizing job has still to be done if the trade union movement is to grow, are shown to approve of unions almost to the same extent as skilled and unskilled labor. This is demonstrated by the following table:

	Approve %	Dis- approve %	No Opinion %
Professional workers; owners, managers	65	26	9
Sales and "white collar" workers	69	18	13
Skilled and unskilled labor	73	17	10
Farmers	44	42	14
All others	67	20	13

These figures would indicate that the attitude of white collar workers to unions is healthy and is not the basic problem when attempts are made to organize them. The trouble probably lies elsewhere—maybe in fear of dismissal, possibly in loss of "status" through association with "labor," maybe the large number of women in the unorganized service trades and office jobs, says the CPA.

In any case the public opinion poll bears out the contention of Andy Andras, Legislative Director of the Canadian Labour Congress, who argued in a recent article in *Canadian Labour* that trade unions must cast aside many of the myths they have about organizing white collar workers. They can be organized, he stated, but to do the job, unions should overhaul their organizing techniques.

Andras contends that women are not as difficult to organize as many trade unionists think. Better methods of approaching the problem are essential, is his conclusion.



Beware of the Smiling Cat

By Omer Becu, ICFTU

Excerpted from an address by General Secretary Omer Becu of the International Confederation of Free Trade Unions, to a meeting of the New York City AFL-CIO Central Labor Council.

TODAY the free trade unions are confronted by an enemy, perhaps even more dangerous than the Nazi-Fascist armies which sought to impose their dictatorship over the free world.

I say that this is a more dangerous enemy because he knows how to smile while he subverts, how to look pleasant while he explodes nuclear bombs, how to promise peace while he threatens war and engages in undeclared wars and how to speak in sweet accents of freedom while he blights that freedom wherever he is.

For us in the free trade union movement, Communist totalitarianism is the grave menace we have known almost from its inception. We have understood the gravity of this menace because free trade unions have been the target of international communism from the day Lenin took power. By every tactic, stratagem and maneuver, they sought to create a power base in every country of the world by subverting the free workers and their trade unions.

Perhaps as important as the Polaris submarine, or the deterrent significance of your thermonuclear armory or even the heroic flight into space of Col. Glenn is the fact that the American labor movement understands that free trade unionism can never compromise with totalitarianism—whether Communist or fascist—without suffering irreparable injury. A democratic government may necessarily engage in summit conferences, in negotiations, in all kinds of arrangements with Moscow. In the maintenance of peace, there is no reason why such confrontation should be excluded from diplomacy.

But a free trade union movement would imperil its moral reason for existence were it to deal with totalitarian labor fronts which afflict millions of workers from East Berlin to Peking.

That is why the ICFTU has steadily refused to engage in so-called cultural exchanges with Moscow, with Belgrade, with Madrid or with any government which enslaves workers and trade unions. For us it would be a betrayal of these millions of workers behind the Iron Curtain who cannot be brainwashed but who await a day when they will be free again.

I am thinking of the workers in East Germany who

in 1953 rose up against Communist tyranny, the workers of Poznan in Poland, the workers in Hungary, and who can say where else, who risked lives and freedom in an attempt to break their Communist chains. It is little known that one of the first things the workers of Budapest did during the glorious days of the Hungarian revolution in 1956 was to apply for membership in the Intl. Confederation of Free Trade Unions.

Moscow knows that if ever it permitted a free election in its vast imperialist empire, it would be the end of that empire. It knows it so well that when the workers of East Germany began voting for freedom with their feet, Moscow had to build this inhuman monstrosity, a wall, to cage them.

That is why the ICFTU has decided to hold its seventh world congress in free Berlin next July, to demonstrate our solidarity with the persecuted peoples behind this wall and behind the Iron Curtain. We want free trade unionists from all the world to see the documented record of what totalitarianism means while its propagandists tell us that Moscow is busy "liberalizing" itself.

In struggling against totalitarianism, we are also aware of the sins in our own backyard. We must face the fact honestly and uncompromisingly that Angola and South Africa are evils we ought to be able to do something about. The free trade union movement has from its inception fought colonialism. We are pledged to fight this evil in our midst until the colonial peoples are liberated. And one of the most effective ways of ensuring that freedom from colonialism will not be fictitious is by helping the struggling trade unions in these less developed countries to stand on their own feet.

The free union movement insists that helping the developing nations embark on the road to political and economic maturity does not exclude free institutions and particularly the free trade union movement. In fact, the surest way of preventing the post-colonial growth of a people is by a continuing colonial oppression under the guise of independence, but this time under a native dictator. There has been far too much admiration for strong men in the new states of Asia and Africa and too little sympathy for their victims.

Some Recent Headlines

EIA Head Says Bargaining Suffers from Win-Lose Complex

Both management and unions should give up the idea that "winning" or "losing" must be the outcome of collective bargaining, and focus instead on negotiating settlements that meet the real interests and needs of employees while promoting the ability of companies to grow and profit, L. Berkley Davis, President of the Electronic Industries Association, said in a keynote speech opening a three-day EIA industrial relations conference. Mr. Davis, who heads General Electric's Electronic Component's Division, said at the March 28 meeting in Florida:

"Any settlement of this kind obviously calls for the solving of increasingly complex problems. And right now there is a serious weakness in current union-management relations. Many negotiators don't even try to identify the real problems, let alone solve them."

He called on both management and union representatives to take a new approach to collective bargaining, based on an investment in solid fact-finding before negotiations begin. Citing the many unresolved problems in the job security area, Mr. Davis spoke of the need for both union and management to find factual answers to questions such as what the real effect of automation has been on employment in a given company. "With factual answers to questions like this," he said, "you can help steer the negotiations into constructive channels, and persuade union officials to help you seek real ways to keep people working, and not just ways to give them more pay for not working. If you can get agreement on this principle, you will have taken a worthwhile step forward."

He warned that developing such a fundamental change in approach to labor negotiations cannot be done overnight, and that to embark on such a new approach would require careful preparation, courage, forthrightness, and a willingness to face great risks. But, he said, businessmen have demonstrated these qualities in overcoming other business problems and could do the same in meeting labor relations challenges. Citing the basic objective of industrial relations as "to enhance the growth and profitability of the enterprise by assisting managers to effectively and productively utilize the total human resources in their organizations," Mr. Davis

urged that industrial relations personnel reassess their roles to see if they are meeting this objective.

He said that there is a "growing amount of executive unrest about the burgeoning costs of the salaried payroll, and a growing uncertainty about the degree of effectiveness with which these functions are organized and managed." Noting that operating managers desire effective counsel in organizing and managing the work of salaried employees, Mr. Davis urged industrial relations people to "gear up now to meet these needs" in six specific areas:

Designing positions to fit employee's abilities and interests; providing managerial leadership that will enable employees to motivate themselves; establish performance standards for individual positions; appraise each individual's performance against these standards; provide appropriate recognition and reward for each individual; and provide each employee with the information he wants and needs to do a better job.

Sarnoff Makes Recommendations To Congress on Satellite System

On March 22, David Sarnoff, Chairman of the Boards of RCA and RCA Communications, Inc., said that RCA favors private ownership and operation of a communications satellite system, subject to suitable government regulation. He urged at the same time that any legislation to establish such a system spell out the right of international communications companies to own ground stations and to interconnect with the facilities of domestic companies.

General Sarnoff appeared as a witness before the House Committee on Interstate and Foreign Commerce, which is holding hearings on proposed communications satellite legislation.

He told the Committee that RCA Communications, as an authorized international communications carrier, expects to make use of a satellite system when it becomes available and to invest in the establishment and operation of the system. "A satellite system which will serve our communications business is one in which we would certainly be willing to invest," said General Sarnoff. "In addition to any investment which RCA Communications would make in the satellite company, it is also prepared to make the necessary investment in its own ground transmitting and receiving stations. It would do so, of course, where such ownership and operation is justified for its communications business and where this would serve the public interest."

He called "essential" the establishment of a high-altitude system of synchronous satellites in orbit 22,300 miles above the equator, where a satellite would remain in a fixed position relative to the earth's surface. This type of system "offers more advantages than do other proposed satellite techniques for practical global com-

munications," said General Sarnoff. Among its advantages he listed the ability of ground stations in the United States and many foreign countries to communicate simultaneously through the satellite, and the ability of only three satellites to cover virtually the entire inhabited land area of the earth in contrast to the requirement of 40 to 50 low-altitude satellites for comparable global coverage.

"We believe that a synchronous system can be achieved in practical form for commercial operations within approximately the same time that will be required to achieve a fully operational global low-altitude system," said General Sarnoff. "A number of important technical problems remain to be solved before any satellite system becomes practical for global communications service. The need for solution of these problems makes it likely that a synchronous system could obsolete a low-altitude system by the time the latter became fully operational."

General Sarnoff told the Committee that certain basic principles are essential in any legislation providing for a communications satellite organization:

- a. the right of international carriers individually or jointly to own and operate their own ground stations, in addition to those which the satellite corporation may operate;
- b. provision for unrestricted and direct access to and use of the satellites through any of the ground stations, and
- c. provision for full interconnection on reasonable and non-discriminatory terms between the facilities of authorized international carriers and the domestic communications systems of any other carriers.

"We understand that the intent of the legislation is to strengthen competition in international communications services and ensure the non-discriminatory use of the satellite system," General Sarnoff said. "To fulfill this intent, we respectfully recommend that the principles we have enumerated be expressly set forth in any legislation. This would assure that the public would derive maximum benefits from the promising new satellite techniques within the framework of the competitive private enterprise system."

Labor Secretary Shortens Financial Reporting Form

A major reduction in paperwork will now aid large unions in reporting finances under the Labor-Management Reporting and Disclosure Act, Secretary of Labor Arthur J. Goldberg announced this month.

"A new four-page financial report form replaces the former eight-page form which the larger unions are required to use in reporting to the Department of Labor," the Secretary said.

Approximately 20 per cent of the over 52,000 reporting unions in the United States are required to use the Form LM-2. The rest may use a one-page "short" Form (LM-3).

Unions that must use the LM-2 Financial Report Form are:

- (1) those whose total receipts, regardless of source and without any exceptions, were \$30,000 or over in the 12-month period covered by the report; and
- (2) those that were in trusteeship at the end of their fiscal year.

The format and content of the new LM-2, officially called "Labor Organization Annual Report Form LM-2 (Revised)," were worked out by the Bureau of Labor-Management Reports. It comes in booklet form, with extra copies and instructions included.

Information formerly required to be reported separately on the LM-1a—amendments to labor organization information report—is now included on the new financial form.

Revised LM-2 booklets are being mailed to unions whose fiscal years ended recently. Those unions which have not yet filed on the old form for the last fiscal year are urged to file the new form as soon as possible.

The new reporting form was announced in the *Federal Register* of April 18, 1962 and is effective immediately.

The Voice of Sanity

We've just about had it on these traveling road shows on anti-communism, where anti-everything is preached. And judging from an article by J. Edward Hoover, the head of the FBI has also had it.

"Today far too many self-styled experts on communism are plying the highways of America giving erroneous and distorted information," Mr. Hoover wrote in a recent article published in the *American Bar Association Journal*.

"We must be very careful with our facts and not brand as Communists any individual whose opinion may be different from our own," Mr. Hoover stated. "Freedom of dissent is a great heritage of America which we must treasure."

To which we say, Amen and goodbye Dr. Schwarz, Robert Welch, Dean Manion et al.

Incidentally, Dr. Schwarz's five-day anti-Communist "school" in Los Angeles last August grossed \$311,253, of which \$214,757 was net profit.

—*The Ohio AFL-CIO News*

Americans are rightly burned up over Russia's failure to pay her share of supporting the United Nations . . . This is how union members feel about "free riders" who are willing to accept the benefits of a union but unwilling to help support a union by paying dues.



The Mystery of the Missing Workers

THERE are a good many hundred thousand—perhaps even a million—of “missing” American workers who ought to be showing up in employment statistics but aren’t.

Nobody knows for sure who they are and what has happened to them, but they are important because the answer to the mystery of where they are might very well make today’s high unemployment figures even higher than they are.

So “peculiar,” as Secretary of Labor Arthur J. Goldberg has put it, is this situation that the Secretary has ordered the Bureau of Labor Statistics to study it and report back to him.

By every possible statistical criterion, the available American work force ought to show an average yearly growth during the present period of more than 1,000,000 workers a year. Yet it isn’t. It hasn’t been keeping up with expectations and right now it is virtually standing still despite the evidence of the post-war “population explosion” that we see everywhere around us.

The so-called “labor force” count is based on a sampling of men and women able and willing to work who are actively looking for a job. If they’re not looking—no matter what the reason—they’re not counted. As a result they do not show up in the jobless figures.

The phenomenon of a national work force that is not keeping up with population growth first became evident in 1957. It was in complete contradiction of what had been happening in previous years when the work force more than kept pace with the statistical projections.

In 1957, the work force at 70,700,000 was just about what had been projected by the statisticians and then began falling below their projections.

In 1958, the projected work force was 71,500,00. It actually was 71,300,000 for a deficit of 200,000.

In 1959, the deficit was even greater, 600,000. The work force had been expected to be 72,500,000. It actually was 71,900,000.

In 1960, the deficit was again the same with the projection showing a labor force of 73,100,000, while the actual labor force was 73,000,000.

In 1961, the deficit was larger. The projected labor force was 74,900,000. The actual one was 74,200,000 for a deficit of 700,000.

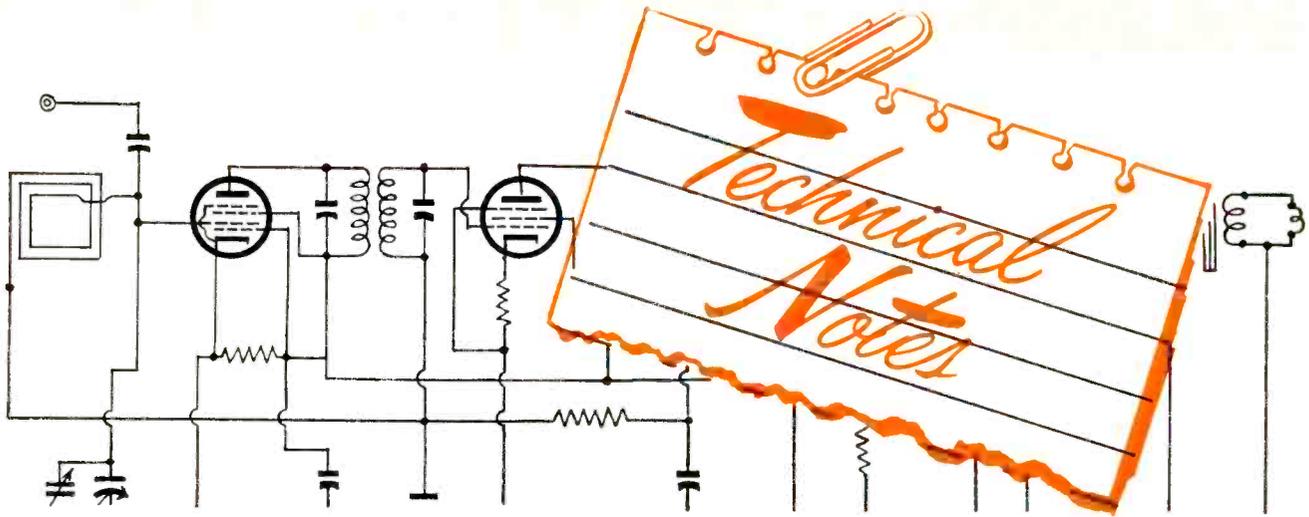
In 1962...? The projection calls for a work force of 76,000,000. Yet there are no signs that the actual figure will be anywhere near it, even though the labor force may go up a million or more.

While admitting that a great deal more needs to be known about what is happening to the labor force than we know at present, Secretary Goldberg has offered a number of suggestions. These include an increase in the armed forces which has taken about 300,000 men out of the work force; the inability of men and women over 65 to find jobs during the 1959-60 recession which caused them to leave the labor market; the withdrawal from the labor market of married women and young farm workers who find it difficult to get jobs. Thus unemployment would appear to be feeding upon itself.

Labor economists who have been watching the phenomenon of the failure of the actual work force to grow in keeping with the population, agree that all these factors undoubtedly contribute to the mystery. They feel that the situation is confirmation of their claims that our economy is not growing fast enough and needs an added boost.

They feel, too, that the “missing” workers who are not being counted for one reason or another, represent an important hole in our jobless statistics. If they were added to the final count it would seriously increase the already high unemployment level. Sooner or later these “missing” workers will be forced to look for jobs and flood the already overcrowded labor market.

The results of Secretary Goldberg’s study of the situation, therefore, are being eagerly awaited. (PAI)



FRENCH UNVEIL NEW PRODUCTS

The International Electronic Components Show, recently held in Paris, brought forth a number of new developments of great interest. A Variavolt transformer, for instance, capable of up to 2 Kva. provides stepless voltage variations from 0 to 200, 300 or 500 volts, and without brushes. If you're old enough to remember the variometer, you now have the idea. The wholly insulated secondary is mounted on a rotor and controlled by a knob. Spring-loaded, the rotor-secondary delivers a voltage dependent upon its angle in the primary field of flux.

It was said that two manufacturers were ready to display their implosion-proof picture tubes but that current French safety regulations require protective glass in front of picture tubes. So the tubes were not shown, allegedly because the news of their availability would encourage this year's set buyers to wait a little longer for the new tube. One French company uses a fused steel coating which extends back from the tube face and checks the spread of fissures if the glass cracks.

WORLDWIDE DIAL TELEPHONES

Worldwide television and dial telephones may be realized through current experiments with communications satellites.

With satellites, serving as reflectors, an American may someday find it possible to tune in on a Japanese or Iranian television program, and pick up his telephone to dial a friend in Timbuktu as easily as his neighbor next door. Transoceanic telephone costs may drop to a fraction of what they now are.

Already the United States Air Force has begun experimenting with an extremely odd communications system consisting of 350 million tiny copper fibers, each less than an inch long and one third the thickness of a human hair. The "needles," each of which is a tiny satellite, would orbit about 2,100 miles above the earth's surface.

Theoretically, a radio wave hitting a needle would be scattered, or reflected in different directions. The reflected wave could be picked up on earth at a point far removed from its sending station.

The copper filaments went aloft in a Midas missile-alarm satellite, whose infrared eye can detect the heat of a missile being launched.

Before the launching, many astronomers feared the needles might interfere with observation of the skies.

After careful study, however, the Space Science Board of the National Academy of Sciences concluded that the project would be extremely unlikely with optical or radio astronomy. It said, "The belt (of fibers) will be barely detectable even by astronomers with advance information and upon the taking of special efforts for detection." The President's Science Advisory Committee said interference with radio astronomy would take 100,000 times more copper filaments than the Air Force planned to put up.

It is expected that the needles will be slowly pushed into the earth's atmosphere by the sun's radiation. There they will burn up, and, within four to eight years, virtually all will disappear. But while aloft, they can be used to evaluate the potentialities of this type of communications system. Similar studies are being made of other communications satellites, such as the Echo balloon.

The idea of using satellites for communication was suggested by Arthur C. Clarke, a British science writer, as early as 1945. In 1958 Walter E. Morrow, Jr., of the Massachusetts Institute of Technology's Lincoln Laboratory, and Harold Meyer, formerly of Thompson Ramo Wooldridge, Incorporated, outlined a design for a needle satellite. The belt of fine wires, each a half radio wavelength long, would encircle the earth like the rings of Saturn.

The Lincoln Laboratory undertook the project for the Air Force Systems Command. The experiment was named Project West Ford in honor of Westford, Massachusetts, where MIT has a radio antenna.

VACUUM-LESS TUBE IMMINENT

International Telephone and Telegraph is reported to be working on a tube for use in space vehicles, which furnishes food for speculation. Did it ever occur to you that a vacuum tube is probably unnecessary if it operates so far out in space that it is in a vacuum? Engineers are experimenting with a tube which has no envelope—and no vacuum. (“Hand me another cathode, Charlie. I’ll plug it in and replace this worn-out one.”)

WINDMILL ANTENNA

The steady thump of the electric pump sounds a growing dirge for the windmill. In rural America, where 97 out of every hundred farms now have electric power, the familiar skinny steel towers with whirring fans are disappearing or being turned into TV-antenna towers, the National Geographic Society says.

SILVER IS WONDER METAL

Silver glows today with new luster as the most versatile and useful precious metal. Its uses range from electric toasters to guided missiles.

Long treasured as a monetary standard, silver now is primarily an industrial metal, the National Geographic Society says. Consumption of silver has increased so sharply in the past few years that it has outstripped production. Heavy demand has depleted stockpiles.

Experts believe, however, that secondary supplies, such as demonetized coins and worn tableware, will prevent any serious shortage of silver for business.

The United States Treasury recently stopped selling so-called free silver—metal not required as a monetary reserve—because its stock was rapidly dwindling. The Treasury has dipped into its free silver to mint coins to meet the demand created by vending machines.

The special properties of silver give it many applications. It is a superb electrical conductor and highly resistant to corrosion. Except for gold, silver is the most plastic metal. One gram of pure silver can be drawn into a wire a mile long.

The photographic industry is the largest single commercial consumer of silver. Compounds that turn dark on exposure to light are used in photographic film and sensitized paper. One of these compounds, silver iodide, also is employed to seed clouds in artificial rainmaking.

Silver solders and brazing alloys are increasingly important. The solders make watertight, noncorrosive, flexible joints for refrigeration and air-conditioning units. The alloys withstand the high temperatures generated in jet engines and space vehicles.

Pure silver forms durable bearings for aircraft engines and diesel locomotives. Each main bearing on a diesel engine contains about six ounces of silver.

Storage batteries with silver-zinc and silver-cadmium

cells afford high electrical output with minimum size and weight. They enhance the performances of jet aircraft, guided missiles, submarines, portable television cameras, and scientific instruments.

The process of wiring electrical circuits for many portable radios and television sets has been immensely simplified by stamping the wiring pattern on panels with silver ink. The printed circuits replace a maze of wires.

Large amounts of silver go into electrical contacts and switches. Silver-coated ceramics, mica, and glass are used in electronic devices.

In medicine, silver compounds serve as antiseptics, astringents, and caustics. Silver is ideal for surgical wires and plates to replace bone.

Silver in various forms sterilizes water, plates scientific equipment, fills teeth, backs mirrors, acts as a catalyst in the manufacture of fertilizers, and destroys warts.

Manufacture of tableware, jewelry, and other luxury articles continues to absorb a substantial amount of silver.

One curious use of silver probably will not become popular here. In parts of India, the metal is hammered into tissue-thin sheets, wrapped around fruit, and eaten. The silver-eaters believe it helps heart and health.

DUAL VIDEO MONITOR

Dage Division of Thompson Ramo Wooldridge, Michigan City, Ind., has available a dual video monitor for simultaneous display of two pictures. The unit requires 8¾ inches rack space. Useful for picture comparison and studio camera control systems, the dual monitor features two 8-inch screens and independent controls. Dage also has a new 14-inch single video monitor with a resolution of more than 700 lines per inch.

The Bedside Manner

IN WASHINGTON, D. C., a union delegation visiting Democratic Senator Stephen Young, of Ohio, learned that just before their arrival a group of big businessmen had visited the Senator to ask a favor for their industry. It was the first time the big-shots had ever approached the Senator; previously their energy had been devoted to seeking Young’s defeat in elections. Young told his union visitors he couldn’t resist the temptation so after assuring the businessmen he would consider their request he told them this little story:

A prominent doctor was awakened in the wee hours of the morning by his wife who had discovered that a water pipe had broken and flooded the basement. “Call the plumber right away,” she argued, “after all he doesn’t hesitate to call you during the night when someone in his family is sick.” Awakened from a profound sleep, the plumber listened patiently to the doctor’s plea and then replied, “Here’s what you do. Just drop two aspirin tablets into the broken pipe every two hours. If everything isn’t all right by 10 in the morning, then call me at the office.”



STATION BREAKS

MISSILE BASE STRIKE BARRED

International President Gordon M. Freeman of the International Brotherhood of Electrical Workers recently sent the following telegram to all Vice Presidents of the Brotherhood:

"This is with reference to news reports that some IBEW member at a missile base in the Cheyenne, Wyoming, area has been threatening to quit work because of dissatisfaction with the wage rate in a contract under negotiation with his employer.

"The IBEW is standing by its commitment to the Government that there will be no unauthorized strikes or stoppages of this character at our missile bases. Please see that this is made clear to anyone inside or outside of the Brotherhood who raises any question on this report.

"Unfortunately, recent legislation has given some people the idea that they are no longer subject to the discipline of the International Brotherhood and its Constitution. A District Court decision attempting to stay the power of the International Office to deal with an unauthorized strike, shows further how this legislation may be interpreted. Despite these attempts to disrupt the necessary Constitutional discipline of the Brotherhood, your International President is determined that it shall be upheld.

"As the International President I have made a commitment that there shall be no stoppages of the nature reportedly threatened in the news story from Cheyenne. This commitment I intend to keep.

"Please take all steps necessary to see that this vital work goes forward at all missile bases without interruption."

C.L.C. NOTES UNEMPLOYMENT

The 1400 delegates to the convention of the Canadian Labour Congress, which was held in Vancouver, British Columbia recently, were told that "Unemployment has become a national disgrace." Calling for establishment of a national advisory council to seek a solution, CLC President Claude Jodoin went on to say that, "The waste and suffering that has been experienced in this supposedly high-living-standard country have brought

shame on us throughout the world." He said that by adequate planning, full employment and real prosperity can be achieved in Canada.

'ON CAMERA' ISSUE SETTLED

Local 1212, New York City, has announced the settlement of an "on camera" grievance at CBS Television with the payment of a total of \$1161 to the five technical directors affected.

The dispute arose as a result of the appearance of the TDs in the opening shot of the CBS network news shows under a new program format adopted early in the year. The news department refused to consider such an appearance as "on camera," although the CBS contract provides that technicians shall be paid for all showings except accidental ones.

Subsequently, an equipment prop was used to block the TDs from the shot which is taken by a camera situated behind the director—technical director console in the news studio control room.

LAST LAUGH

