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INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS - AFL-CIO

LANDMARKS OF LABOR No. 31

WORKMEN'S COMPENSATION LAW 1908

Workmen's compensation legislation in the United States began in 1902 when Maryland passed an act covering workers in mining, quarrying, steam and street railroads. This act was declared unconstitutional two years later.

It was not until 1908 that the Federal Government put into law an act which represented a start in this field. Artisans, mechanics and laborers were covered by the 1908 act. The law was limited in scope, but it represented a start in workmen's compensation.

President Theodore Roosevelt in a special message of Congress pushing for legislation termed the position of Federal workers "an outrage." The act was broadened and strengthened considerably several years later, but the 1908 law marked a start, even though it was notoriously inadequate to meet the problem.

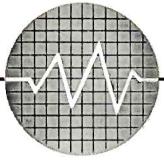
Montana in 1909 was the first state to enact a compulsory workmen's compensation act. As labor celebrates the beginnings of compensation legislation, a strong drive is under way for further improvements.

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The INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS

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TECHNICIAN ENGINEER

VOL. II, NO. I ALBERT O. HARDY, Editor

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Last month the AFL-CIO assembled in Miami Beach, Fla., for its Fourth Constithe cover tutional Convention. Sessions were held at the Americana Hotel. Our January cover shows a view of one of these sessions. Almost 2,000 delegates and guests were in attendance at this crucial gathering of the top men of labor. Action was taken on many vital issues, including some of which are pertinent to the broadcasting industry. (See story 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 1960 figures: November, 1960-127.4; November, 1961-128.3.

COMMENTARY

Dr. Walter Buckingham, director of the School of Industrial Management at Georgia Institute of Technology (Georgia Tech), is considered one of the nation's foremost authorities on automation.

His knowledge of the subject has won the respect of Congress and he is rated as an important consultant to the House-Senate Economic Committee.

A new study by Buckingham (Harper & Brothers, New York, \$4.50), entitled Automation: Its Impact on Business and People, has just been released. In its pages the author deals with the human impact of this science which too frequently is looked upon in the light of cold stark statistics, almost cruelly devoid of the human element.

Significantly, Buckingham notes that the industries

open to heavy automation represent 85 per cent of the union workers in the country, thus placing an imperative challenge on organized labor to organize other segments of our economy.

What are the answers for the economy as a whole?

Buckingham says that "since automation creates new jobs as it destroys old ones, the rate of automation is a critical factor." He says that labor and management must join together to ease the hardship of transition.

"It is the responsibility of the government to guarantee full, steady employment and conditions conducive to economic expansion," he adds.

In other words, without a vast increase in economic growth, automation could mean a rising level of unemployment and misery and hardship for millions.

(PA1)

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MEN AT WORK

Labor takes action on many issues at Miami Convention



George Meany calls the convention to order

AT RIGHT: Mrs. Eleanor Roosevelt thanks delegates for their cancer fund contributions,

BELOW: IBEW President Gordon Freeman with convention sound engineer R. E. Black of Local 349, Miami.



THE delegates and officers of the Fourth Biennial Convention of the AFL-CIO held in Bal Harbour, Fla., possibly disproved the oft-made allegation that the organization has been "dragging its feet" and adopted a forward-looking and encompassing program for the next two years.

Heart of the new action program is a raise in the per capita paid to the AFL-CIO by member organizations and a new three-pronged organizing campaign.

The member unions will pay, beginning in January, an additional two cents per member to a total of seven cents a month. This will mean that the AFL-CIO average annual income from per capita taxes would be raised to \$10,489,000 from \$7,492,000 based on a 1960 membership of 12,487,000 as shown in the financial report rendered by Secretary-Treasurer William F. Schnitzler.

This total may rise even higher if the announced threepronged membership drive campaign is successful. The proposal adopted by the delegates would have the AFL-CIO organizational staff put on new members and initiate new membership drives which have been increasingly left to the international unions. In addition, membership drives by joint efforts of internationals will be encouraged. The third aspect of the new organizing effort designed to organize the unorganized is encouragement to individual internationals to push organization in their jurisdictions.

The big news of the convention, as carried by the daily newspapers, was the agreement which was reached on the problem of solving internal disputes. It is contained in the new Article XXI of the AFL-CIO constitution.

The provisions of the plan were hammered out in a marathon eight-and-a-half hour session of the Executive Council which broke up at 4 a. m. The plan spells out in 22 sections how the machinery for settling disputes will work. The AFL-CIO president is authorized to establish a panel of mediators from within the labor movement and a panel of impartial umpires "composed of prominent and respected persons." The dispute goes first to mediation, but the president may shorten or eliminate the mediation process if he sees fit and refer the case directly to an umpire.

An appeal from an umpire's decision must be filed within five days after it is handed down. Such an appeal is made to a standing subcommittee of the Executive Council. Such a subcommittee can either affirm or reverse the decision of the umpire or it can refuse to act and refer the appeal to the whole Executive Council. In any event, the decision of the subcommittee or the whole Executive Council is final and binding. There is no appeal to the convention. Failure of any international to abide by the decision will result in it being liable to exclusion of all services of the Federation and several other sanctions detailed in the new article of the constitution, which can be amended by subsequent conventions.

The new disputes plan is revolutionary in the sense that it is the first instance where International Unions have voluntarily surrendered a portion of their previously-held autonomy including the right of an appeal to the convention.

The convention acted on nearly 200 policy resolutions covering a broad range of aspects of national and international affairs. The convention acted in favor of a broader and more militant civil rights program, invited expelled internationals to seek re-affiliation after they had satisfied the federation they are in compliance with federation standards, policies and laws; declared for shorter hours and higher pay; inaugurated a getout-the-vote campaign; backed a program of increased foreign trade; assailed extreme right-wing radicalism; pledged continuance of the fight against "right-to-work" laws; approved a broader organizational effort for farm workers; gave top priority to legislative efforts to achieve health care for the aged under social security; urged broad federal standards for state unemployment insurance systems and urged Congress to enact a system of federal aid to education. These were only a few of the major actions of the 950 delegates.

Other actions were of particular interest to IBEW members in the communications industry.

The AFL-CIO convention approved a resolution which calls on the Executive Council to take all appropriate action to bring about an amendment to the Communications Act of 1934 which will make it possible for employee organizations to take a greater part in hearings before the Federal Communications Commission.

The resolution pointed out that the FCC has not consistently held that the interests of the employees of broadcasting companies are important in the public interest and that, therefore, representatives of the employees have not been able to testify in hearings as a "party in interest."

The AFL-CIO Executive Council was charged with the responsibility of calling to the attention of Congress the need for a revision of Section 309(d) of the Act so labor unions which represent employees of a licensee or permittee of the Commission shall have the right to appear as parties in interest in proceedings before the Commission. The resolution also called for a revision of the Act which would provide that, as a condition of approval of any proposed action requested by the Commission, the Commission shall require that there shall be fair and equitable treatment of the employees involved, which shall include but not be limited to the protection of the employment, wage scales, seniority and fringe benefits of the employees involved, the protection of which rights shall be deemed to be in the public interest.

The action was contained in the convention's approval of Resolution No. 55, page 63 of Resolutions Book No. 1, on the final day of the convention.

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Station and newsreel cameramen over the events.



A view of the IBEW delegation in the convention hall.

Delegates to the convention passed a resolution which put the convention on record as commending the Federal Communications Commission current inquiry into the eligibility of General Electric and Westinghouse Electric for the renewal of their television and broadcasting licenses. The resolution also urged the FFC to broaden the scope of its investigation to see if the two firms have not used their licenses to spread anti-union propaganda and to prejudice public sentiment against their own organized employees and the labor movement.

The resolution pointed out that Westinghouse and General Electric were convicted of criminal conspiracy in an anti-trust action. The resolution questioned whether convicted applicants were to be considered fit and proper custodians of licenses to broadcast.

If the FCC should find that the allegations are true, it was urged by the resolution to refuse renewal of the licenses, since they would clearly be not in the public interest.

By action of the convention, the Executive Council was empowered to do all in its power to see to it that the policies favored by the resolution are carried out. Action was taken on the last day of the convention on Resolution No. 80, page 15 of Resolutions Book No. 2.



President Kennedy Speaks To Labor and Industry

... gets a polite reception from NAM, but rousing welcome from AFL-CIO

O^N successive days, last month, President Kennedy addressed the phalanxes of industry and labor on his economic program. He made a strong impression before both audiences, though the labor response was far more enthusiastic.

First, he spoke to 2,300 of the nation's top industrialists at a luncheon in New York City sponsored by the National Association of Manufacturers, composed mostly of his opponents.

There, he concentrated on a presentation of his proposed new foreign trade program, which contemplates mutual lowering of tariff barriers among nations of the "free world" so as to encourage a great increase in international trade. The President got restrained applause from this audience, but newsmen reported that many of the businessmen present were friendly to his trade program.

OVATION FROM LABOR

The picture was different when President Kennedy flew the next day to Miami Beach, Fla., where he addressed 900 delegates and 2,300 visitors at the biennial convention of the AFL-CIO. There, he ranged over a broader field of subjects and got a far warmer reception. He was greeted with a rousing, standing ovation when he started—and won repeated applause throughout his talk.

Moreover, when he finished, AFL-CIO President George Meany assured him: "We'll cooperate with you 1,000 per cent." The President began his address by praising labor for its aid in the nation's missile program, its active role "in helping to strengthen the free world," its fight against communism, and its support of his legislative program in Congress.

He said labor's voluntary "No Strike" pledge at missile sites was appreciated by the entire nation.

"I can unequivocally state that all phases of our missile program are now ahead of schedule as a result of your unprecedented cooperation," the President told the delegates.

The President said that labor's "tireless support" of his legislative program had helped him get through Congress such measures as minimum wage improvements,

URGES FURTHER STEPS

assistance for distressed areas, an improved water pollution bill, aid to dependent children, temporary jobless benefits and "the best housing bill since 1949."

Delegates applauded when he quickly added: "We are coming back in January and start again."

President Kennedy listed these unfinished goals for the next session of Congress: National unemployment compensation standards, stand-by public works authorizations, Federal aid to education, and medical care under Social Security and Railroad Retirement.

OVATION ON MEDICAL CARE

He drew perhaps his loudest applause on the latter issue when he said: "The time has come when every member of Congress must have the opportunity to vote on this question. I believe they are going to vote it (medical care) through before Congress adjourns in July or August."

President Kennedy then cited the fact that "the American economy has begun to move, and move strongly, out of the lassitudes of recession." He listed these gains between January and now:

- 1. A \$40 billion rise in the gross national product.
- 2. A 10 per cent increase in industrial production.
- 3. Rise in earnings to "an all-time high."
- 4. A decline in the rate of joblessness to 6.1 per cent, compared to 6.8 or more, which prevailed for the past year.

He stressed, however, that full recovery has not yet been achieved; that "too many men and women have been standing idle in the shadow of unused plants at the very time our national goals are unfulfilled."

The NLRB Rules on 'Hot Cargo'

Contract clauses requiring employers to give preference in contracting out work to firms having agreements with the same union were outlawed in a National Labor Relations Board decision broadening the "hot cargo" clause ban set up in the Landrum-Griffin Act.

The Board specifically did not decide on the legality of all contract clauses which aim "to preserve the jobs and job rights of the employes in the unit covered by the contract" that is, when such clauses simply forbid "contracting-out."

The decision was based on 1959 Landrum-Griffin Act provisions prohibiting any contract clause in which an employer agrees to refuse to handle the goods of another employer or to stop doing business with him.

"We see no meaningful distinction," the Board said, "between a contract which prohibits an employer from handling products produced by a non-union firm and a contract which causes an employer to cease subcontracting work to a non-union firm." Also, he called for these additional steps:

- 1. A broad program "to train and retrain unemployed, or under-employed workers in new skills and new positions."
- 2. Incentives to industry to modernize and become more competitive.
- 3. Additions to "our arsenal of built-in stabilizers in the event of a recession," including stand-by authority to local communities on needed public work.
- 4. "Expansion of our job opportunities at home by expanding our trade with the world."

The rest of his speech was devoted to his trade program, which he said is aimed at enlarging America's exports and creating more jobs.

TRADE PROGRAM

To this end, he said, "management must intensify efforts to increase efficiency and stabilize or reduce unit costs and prices." Labor must "keep overall wage movements in line with increases in productivity." And the Federal government "must launch a new effort to scale down the barriers to our selling abroad."

The President conceded that some industries, workers and communities would be hurt by increased import competition, and for these, he said, he would again propose to Congress a program of adjustment assistance to offset whatever real injury they might suffer.

He warned that a stronger economy, the halting of further communist expansion, our ability to maintain defense forces overseas and U. S. jobs depend upon an expanded trade. He said: "Either we export goods or we export jobs."

The issue rose in a complicated dispute between an automotive trimmers' association in St. Louis and the Teamsters which resulted in Machinists Dist. 9 invoking a clause in its contract with a separate auto dealers' association providing that when work is sent out, "preference must be given to such shop or subcontractors approved or having contracts with Dist. 9."

The union won a mediation panel decision that the clause was binding on all members of the dealers' association, and the trimmers' association filed charges of violation of the "hot cargo" ban.

The Board ordered IAM Dist. 9 to cease and desist from enforcing the clause and from entering into or enforcing any other contract under which members of the dealers' association "cease or refrain, or agree to cease or refrain, from handling, using, selling, transporting or otherwise dealing in any of the products of any other employer, or from doing business with any other person."



The magic of the picture tube changes the lives of people the world over in little more than a decade.

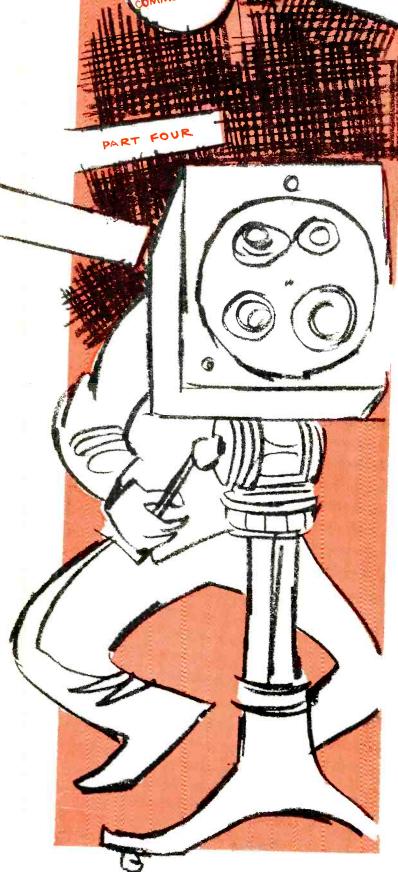
SYNOPSIS: In previous articles, the beginnings of communication were retraced, starting with the evolution of an understandable language and progressing through increasingly speedy physical transport of messages, through visual signalling, and finally through telegraphy and telephony to radio. In each of these instances, increased technologies brought added blessings to mankind and brought new industries into existence. The latest refinement of communication has been directed primarily at the entertainment world; frequencymodulation radio and television.

TELEVISION, that multi-billion-dollar industry which has so changed the customs and living habits of people the world over, had a portion of its beginning as far back as 1834 when a German experimenter, Paul Nipkow, patented a scanning wheel device for the purpose of transmitting pictures by wire. In the United States, C. Francis Jenkins began a study of the subject about 1890. Two Frenchmen named Rignoux and Fournier conducted "television experiments" right after the turn of the century and, as word concerning the interest in sending pictures by wire (or wireless) began to filter through the world's laboratories, Marconi predicted "visible telephone" in 1915.

But the exigencies of World War I interposed themselves and the energy which had been pointing to television went, instead, into the development of improved radio communications so military operations could be carried out with more dispatch.

One man stands out above all others in the latterday development and refinement of radio transmission: Edwin Howard Armstrong. In 1912, while still studying electrical engineering as an undergraduate at Columbia University, he devised the regenerative radio circuit. In his system, a portion of the output of an amplifier is fed back into the amplifier's input so that, passing through it time and time again, amplification is achieved which had been impossible before.

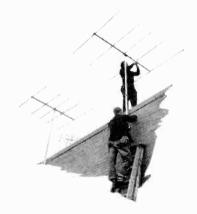
A few years later, as a major in the U. S. Army Signal Corps in France, Armstrong developed the super-



heterodyne receiving system. The first such receivers were black-box monsters of awe-inspiring proportions. They had two, three, four or even more big dials. You tuned in the first dial, then the second, and so on, to the accompaniment of agonized and ear-piercing squeals. Not only you could hear them; your neighbor's "superhet" also picked the pig-like squeals out of the air. For a time there was talk about outlawing "superhet" sets but electronic improvements came along and silenced the squeals before the lawgivers moved in.

Armstrong also devised the super-regenerative circuit in 1920 which made two-way radio installations such as police and fire systems feasible. After these improvements in AM broadcasting technology, Armstrong devoted himself to the development of FM radio. A patent on FM had been issued in 1902 and the principle of modulating radio signals according to the frequency of the signal's oscillation rather than the amplitude of the oscillation had been known even before that.

Armstrong, dissatisfied with the amount of static and interference on AM, began FM experimental work in the late 1920's and, by 1933, moved into the Empire State Building in collaboration with RCA. RCA decided to concentrate on television experimentation, Armstrong



split with the firm and moved to Alpine, New Jersey, across the Hudson from uptown New York. There he established W2XMN, which started FM broadcasting on 42.8 megacycles in 1938.

FM was just what was needed for static-free, distortion-free television broadcasting. In May, 1940, the Federal Communications Commission authorized commercial operation of 40 FM stations. Thirty-five channels were assigned, 200 kc wide between 43 and 50 mc. With television the FCC was not so generous; it refused to authorize TV broadcasts on a commercial basis until the fiercely-competitive industry should be able to agree on standards for the fledgling industry. Commercial FM broadcasting began on January 1, 1941, on 35 channels and 5 more were reserved for non-commercial educational FM usage.

There has been considerable controversy about which radio station first "began radio broadcasting." Most



ABOVE: One of the big variety shows in the early days of television was Ed Sullivan's "Toast of the Town." Sullivan is still going strong in his Sunday night prime-time spot.

CENTER BELOW: Moble units have brought new horizons to television audiences. The picture below shows IBEW #echnicians of KRON-TV, San Francisco, inside a mobile unit.

AT BOTTOM: "I Remember Mama" was one of the last "live" shows originating in New York City at the time when most athers were moving to Hollywood, California, and film.





of the controversy is between KDKA, Pittsburgh, and WBZ, Springfield, Mass., and WWJ, Detroit. KDKA claims to have begun regular radio broadcasts first (though non-licensed) but the FCC says that records of the Department of Commerce (which supervised radio at that time), indicate that the first license was issued to WBZ.

There cannot be any such discussion as regards FM broadcasting; the FCC granted construction permits to 15 FM stations simultaneously on Oct. 31, 1940. By the end of the year 25 had been issued. The first commercial FM station licensed by the FCC was WSM-FM, Nashville, Tenn., licensed on May 29, 1941, which operated until 1951.

The stations were identified at first by letters-andnumeral calls but in 1943 the present all-letter designation was adopted.

When World War II erupted, all new radio construction was discontinued but 40 pre-war FM stations continued to serve about 400,000 set-owners. In 1945, the FCC moved the FM spectrum up to the 88 to 108 mc now in use in order to avoid skywave interference in the 42-50 mc band and increased the number of channels to 100, of which 20 were reserved for educational use.

Nobody had even coined the word "high-fidelity" in 1938 when Armstrong was developing FM. He invited a group of newspapermen to his Alpine station, had them face a wall, and he poured water from one glass tumbler to the other. A second or two later the pioneer station broadcast the same sound (very hard to reproduce) and Armstrong successfully challenged the newspapermen to tell the difference between the real thing and the sound as reproduced by FM radio.

Many years later, in 1953, Armstrong developed a method of multiplexing FM signals. This has now led to FM stereo broadcasting and subsidiary communications channels.

Armstrong's life probably would make a top-notch movie if the unhappy ending could be handled by fastidious Hollywood producers. His father, in the publishing business, one day brought home to the knee-pants Armstrong a book on Marconi's life. This sparked his interest in electronics, led him into his lifework and to his many inventions. He bought RCA stock and at one time held more of it than any other individual. He became a millionaire and married the secretary of RCA Board Chairman David Sarnoff. Later his honeymoon with RCA came to a screaming halt when he sued the firm, NBC, and others, alleging patent infringements. He received many honors from the U. S., including the Army's Medal of Honor, the Medal of Honor of the Institute of Radio Engineers, the Egleston Medal of Columbia University, the ASME Holley Medal, the Franklin Medal of the Franklin Institute and others. He was made a chevalier of the Legion of Honor by France.

In late 1953 and early 1954, Armstrong's preoccu-

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pation with his pending litigation caused him marital difficulties. His wife moved out of their 13th-story apartment in New York. On Friday, June 29, 1954, Armstrong was notified that his wife was going to court to seek separate maintenance because he had grossly neglected her while working around-the-clock on the preparation of his case. It appeared that the pressure became too great, and on Monday, February 1, 1954, he committed suicide.

Electronics experts "playing around" with components during World WAR II are largely credited with the development of high-fidelity broadcasting anl transcription techniques. After World War II ended, there was a frantic scramble for the consumer market afforded by radio and phonograph buyers. Makers who had previously specialized on cheapness started coming up with improved devices capable of better sound reproduction. As far as radio is concerned, FM is absolutely necessary for such "high fidelity."

FM's broad spectrum and interference-free transmission was applicable to TV broadcasting, too. In 1923 Dr. V. K. Zworykin applied for a patent on the iconoscope and, in 1925, Jenkins demonstrated a mechanical TV apparatus. There were experiments by Alexanderson, Farnsworth, and Baird during 1926 and 1927. A picture of President Harding had been sent from Washington to Philadelphia in 1923 by Jenkins TV lab. An experimental TV program was sent by wire between New York and Washington by the Bell Telephone Laboratories in 1927 in which Herbert Hoover, then Secretary of Commerce, participated. In 1928 the same laboratories televised outdoor programs. Also in 1928, WGY, Schenectady, experimentally broadcast the first TV drama. Large-screen TV was demonstrated by RCA at a New York theater in 1930.

There were 17 experimental TV stations operating in 1937, including a mobile station. The first U. S. President on all-electronic TV was Franklin D. Roosevelt as he opened the New York World's Fair in 1939. In 1940 the Democratic and Republican conventions were televised, the first large-scale field pickups on a regular schedule.

Several different systems of TV were initially in use, requiring different types of receivers. On April 30, 1941, after previous FCC hearings had caused the industry to adopt standardization, the FCC authorized commercial TV operations to begin on July 1 of that year. The first grant of authority looking to commercial authorization was issued to WNBT, New York, on June 17, 1941. By May, 1942, 10 commercial TV stations were on the air and six of these continued to provide service during World War II.

After the end of hostilities, the TV business boomed. Ultra-high frequencies (UHF) were added to the VHF frequencies by FCC authorization in 1949. Color TV experienced the same diversity of methods that blackand-white had had; there was the spinning wheel system



ABOVE: A decade ago RCA and CBS were at loggerheads over TV color systems. LEFT: Nanette Fabray stars in an RCA field test of its compatible system. RIGHT, a scene from "The Trial of Peter Zenger," a CBS Studio One production.

CENTER BELOW: TV brought the big and colorful political conventions into the nation's living rooms.

AT BOTTOM: Television has proved its usefulness as a teaching medium. Here, Navy men learn navigation.





January, 1962

which rotated filters containing the primary colors in front of the picture tube. This was ruled out and, after some unsuccessful litigation initiated by RCA, a compatible system whereby color broadcasts were receivable as black-and-white on black-and-white sets was authorized in 1953.

TV network operations began in 1944 between WNBT, New York; WRGB, Schenectady, and WPTZ, Philadelphia. Regular coaxial cable TV relay service was inaugurated between Washington and New York in 1946. In 1947, a microwave relay link extended this to Boston. A midwestern relay system, opened in 1948, was joined with the eastern system in 1949. The first link in the transcontinental relay system was opened between New York and Chicago in 1950 and was extended to San Francisco in 1951.

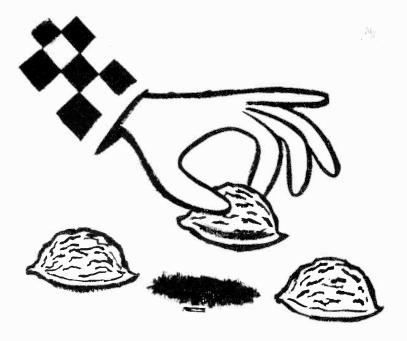
Educational FM broadcasting never did catch on as well as expected but educational TV has seen some startling developments. The first non-commercial educational grant of TV operation was made by the FCC to the Kansas State College of Agriculture at Manhattan on July 23, 1952. However, the first station to go on the air with programs was KUHT in Houston, Texas, which began operations on May 25, 1953. The first station to receive a license as an educational station was WCET, Cincinnati, Ohio, March 11, 1955. Since the early beginnings, the number has grown until there are now 62 educational TV stations in operation. WCET is now one of several stations producing taped educational TV broadcasts which are carried aloft in an airplane and telecast to students in six states.

As of today controversies rage over whether television is "a vast wasteland," whether areas served by both UHF and VHF should be deintermixed and whether the networks control their own programs or if they are controlled by independent producers, advertising agencies and sponsors. To a great extent, these are matters to be resolved by an informed public, the FCC, and even the Federal courts.

Radio, too, is under fire from many directions. Payola, raucus programming, and over-commercialization are subjects being explored by the FCC, the FTC and many citizens' committees. The fact is that we are still living in an era of "growing pains," and the broadcasting industry will continue to serve the nation well in a wider field, with a rich variety of services, for many tastes.

BELOW: The audiences were big and enthusiastic when Arthur Godfrey staged his "Talent Scouts" show.





The Eternal Shell Game: Overcharged customer, overpaid stockholder, poorly treated worker

Business Failings Blamed on Habit

American business is in trouble, says James Finney Lincoln, because it overcharges the consumer, overpays the stockholder and steadfastly fails to treat the hourly worker as a human being.

Lincoln has been stirring up the business community for years with his criticism of its methods and ethics. His latest polemic, "A New Approach to Industrial Economics" (Devin-Adair, \$3.50), is not likely to make it feel any more comfortable, particularly inasmuch as this indictment of industry is written by an eminently successful industrialist.

Actually, Lincoln's "new approach" is not really new; it is based on the Golden Rule. He argues that management is largely based on custom and that present custom has failed. A creature of habit, American business is being outdistanced by foreign competition.

What, then, is American business doing wrong?

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Lincoln claims business has shortchanged the consumer. "We let hired 'experts' concoct our relations with him and try to delude him about our products. We charge him all we can get out of him. . . . Industrialists try to eliminate competition by patents, tariffs and so-call 'fair' trade laws. . . . The customer is exploited in spite of the fact that his continuous buying is completely necessary if industry is to continue to exist."

Secondly, management treats the worker as an enemy, Lincoln says, "A wage-earner very rarely has management to thank for an advance in income or status. He gets such gains from the labor union that compels management to grant them." The result is labor-management strife, strikes economic waste and workers well below their peak efficiency because they feel they have no stake in the enterprise.

Stockholders, Lincoln claims, are generally treated with too much consideration. "The usual absentee stockholder contributes nothing to the efficiency of the operation. He buys a stock today and sells it tomorrow.

Technician-Engineer

By FRANK C. PORTER Staff Reporter The Washington Post

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He often does not even know what the company makes. Why should he be rewarded by large dividends?"

The vigorous 78-year-old minister's son and one-time star fullback at Ohio State finds the answer in the Golden Rule: "As ye would that others would do to you ye even so do to them."

As head of a business founded by his brother, Lincoln Electric Co., of Cleveland, the author initiated an advisory board of elected representatives from each department which has been meeting twice monthly since 1914. He inaugurated paid life insurance for all employes in 1915, pay geared to the cost of living index in 1923, a stock purchase plan in 1925, and a profit-sharing plan which has paid out more than \$100 million to employes since 1934.

Doubters will find the results spelled out in a statistical appendix which shows Lincoln Electric now sells its welders for 20 per cent less than in 1934, its welding electrodes for 10 per cent less. This despite a nearly five-fold increase in labor rates, a four-fold rise in copper prices, and a three-fold jump in steel prices. Profits as a percentage of sales have remained practically constant.

Meanwhile, productivity per worker measured in sales dollars has risen from \$21,897 annually in 1945 to \$46,152 in 1959 against an increase from \$9,134 to \$22,075 for all manufacturing. And employe compensation at Lincoln, including fringe benefits, bonuses, et al., rose to an average of \$10,467 in 1959 compared with \$5,648 in all manufacturing.

CONVENTION VISITORS





ARNE GEIJER President, ICFTU

CLAUDE BARTLETT Delegate, British TUC

The Fourth Constitutional Convention at Miami Beach had some distinguished foreign visitors and fraternal delegates from unions in other lands. There were some 115 union leaders and labor specialists from Latin America, Africa, Asia, the Middle East, and Europe.

The President of the International Confederation of Free Trade Unions, Arne Geijer of Sweden, praised the AFL-ClO's emphasis on foreign affairs in its overall program and called for added support of foreign labor unions.

British TUC Fraternal Delegate Claude Bartlett discussed the national health service in Great Britain and called it so tremendous a success that "any politician bold enough to advocate its abandonment would be committing political suicide."

BERT LITTLEFIELD PASSES

Bertram H. Littlefield, 52, vice president of Local Union 1212, died of a heart attack on December 25, 1961. Brother Bert was an "A" member of the IBEW since March, 1943, and was employed by CBS as maintenance supervisor of Liederkranz Hall at the time of his death.

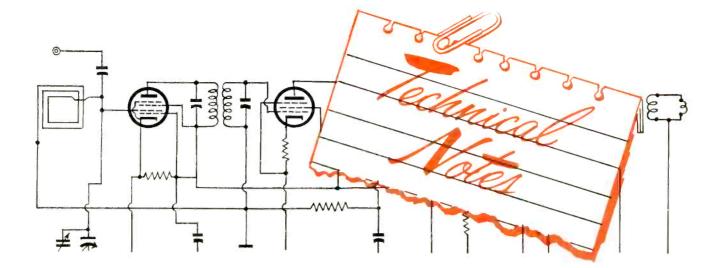
Brother Littlefield suffered a mild coronary on December 4 and his fatal attack on December 21. Funeral services were held on December 28 in Pearl River, New York.

His long service to Local 1212 and the IBEW began in 1945 when he was elected to the examining board of the local union. In 1947 he was elected vice president and, except for a break in his service from 1950 to 1953, held that post continuously.

He is survived by his parents, his wife and two children. To them and to his many friends and coworkers, heartfelt sympathy and deep regret at the passing of a long-faithful servant.

COMMENT ON FOREIGN AID

"We are determined that the funds provided by the American taxpayer shall be used, not to enrich the few, but to improve the lot of the many. . . The crucial necessity is that aid shall be used effectively by governments willing to make economic and social reforms, so that it will benefit not only a few, but the people as a whole."—Adlai E. Stevenson, U. S. delegate to the United Nations, on July 10.



AIRBORNE E-T-V STEADIES

The flying television "schoolhouse" is slowly but surely changing the way of life for thousands of students and teachers in the Midwest.

Airborne ETV is being tested by the Midwest Program on Airborne Television Instruction during the present school year with such favorable response that steps are well under way to establish the system on a permanent basis.

The initial experiment, still in progress, is a twoyear project, a year to prepare and a year to operate on the air. Technical problems with the aircraft, however, delayed the start of the lesson programs until last fall.

The signal is not perfect, but very good, those involved in the midwest test report. Reception problems appear to stem more often from the quality of the local school installation rather than from any flaw in the airborne transmission. The engineers still are trying to identify phenomena that cause a light bar effect to sift through the picture, but it is much less pronounced now than it was originally.

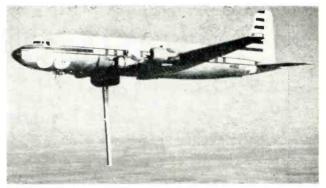
Apart from the fringe areas, the only other spot that causes some tricky reception problems is that within a 30-mile radius beneath the plane. Most all antenna installations must be carefully oriented to the plane so as to avoid out-of-phase reception of secondary reflective signals. The majority of installations are master antenna systems which translate the uhf signals into vhf for reception in the classroom on regular vhf sets. In some cases uhf sets pick up the telecast directly.

The effective coverage radius is 200 miles, encompassing an area of six states and including cities such as Chicago, Detroit and Louisville. The pivot point is Montpelier, Ind., northeast of Indianapolis and south of Fort Wayne. The aircraft circles at 23,000 feet. Transmission on chs. 72 and 76 makes it possible for two lesson programs to be aired simultaneously. The program material is on video tape. It is produced and recorded at the MPATI studios at Purdue University in Indiana. The DC6 planes also base there (one plane is a standby) and are owned by MPATI.

The planes were outfitted by Westinghouse Broadcasting Co. One of the problems overcome was kinks in the hydraulic gyroscope system, which keeps the 24foot transmitting antenna pointed straight to the ground regardless of the angle of the plane. Another was a proper protective enclosure for the power generator, which had to be tucked into the tail section where critical aircraft control gear could be damaged should the generator fly apart unprotected.

MPATI associates are amused that they must continually explain that the teachers seen on tv really aren't cramped up in the plane all day long waiting their turn in some tiny aerial studio. Popular belief just doesn't seem to comprehend that the plane is full of electronic gear instead.

At present, it's estimated that some 500,000 elementary and high school pupils in the coverage area are actively participating in classroom sessions through the television teaching program. The plane transmits five



The necessity of keeping the antenna pointed straight down, regardless of the plane's angle, is one of the technical problems of the airborne ETV system. Kinks in the hydraulic gyroscope system is said to have been the cause.

hours a day Monday through Thursday. MPATI reports the area includes a total of 7 million students, including college level, who could be served if curricula, receiving gear and program material were available.

Eventually the MPATI system could transmit six lesson programs simultaneously from a single plane, although it is possible that at that time the video tape playback units would be on the ground instead of in the plane and the signal relayed up to the aircraft for re-transmission. Other long-range possibilities include splitting each 6-mc channel into 3-mc channels. CBS Labs. Inc. is under contract to explore this area, but MPATI isn't pushing it now.

CLOSED-CIRCUIT THERAPY

Closed-circuit television is a valuable new tool for both doctors and patients on psychiatric wards, the experience of the Veterans Administration hospital in Oklahoma City would indicate.

"After six months of experience with television, we are firmly convinced of its usefulness, especially for training and research purposes," Dr. Jay T. Shurley, chief of psychiatry, said.

During this experimental period, patients' group psychotherapy sessions were telecast over a closed circuit within the hospital. Participation of patients was optional but none refused. They were told that doctors and nurses might be watching the sessions on other television screens.

"Although at first, the TV camera seemed to inhibit some patients in discussing their problems, some were hams from the start and the others soon became accustomed to it," the psychiatrist reported.

Viewing of the televised sessions was limited to selected hospital personnel who were expected to be able to use understanding gained from the sessions to improve treatment, Dr. Shurley emphasized.

The application of closed-circuit television to psychiatry has many possibilities which were not explored during the experiments at Oklahoma City, he said.

"One interesting problem is the family relationship with the recently hospitalized patient," Dr. Shurley pointed out. "The separation of the patient from his family often results in stress for both. Perhaps family interviews, in which the patient sees and talks with his family via closed-circuit television, might provide a hastening of the healing process during the early phase of illness."

UHF IN A TUNNEL?

Engineering crewmen putting out test signals from FCC's Empire State Building UHF transmitter had their tempers and technical skill challenged by a radiophone message from a viewer who claimed he had picked up UHF transmission inside Hudson tunnel with a batterypowered Sony receiver!

55 DAYS HATH SEPTEMBER

Technicians who go along on the pioneer space flights (aw, c'mon fellas . . . don't be chicken!) will have a lot to get used to and the Martian Business Managers will be kept busier than a stuttering Cape Canaveral countdown specialist.

It all stems from the time differential. Early visitors to Mars will find several things different (women, hopefully, will be not vastly dissimilar from our local products), not the least of which are the day-lengths.

The Martian day is 2.7 per cent longer than ours. Naturally, we're not going to have our cherished $37\frac{1}{2}$ hour week stretched out to 39,525 hours...

There are 687 earth days in one Martian year. We're going to have to consider what effect this will have on seniority, vacations, holidays, and such.

If, to make matters simple, the first arrivals on Mars split their year into 12 months, the old jingle would run like this:

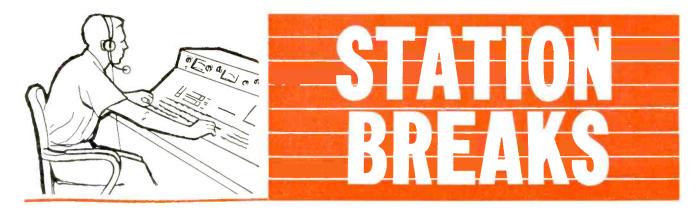
"Fifty-five days hath September, March, June, and December and all the rest have 56."

This makes it considerably longer from payday to payday and nobody can say if a white shirt will stay clean any longer.

SIAMESE-TWIN TRANSISTORS



Nanita Greene inspects the cap and internal structure of a valuable addition to RCA's family of transistors. Dubbed the "Siamese-Twin," it incorporates revolutionary design and construction principles in which it combines two identical transistors capable of boosting ten-fold the voltage of a standard car battery. Two transistors formerly were required to achieve the same performance.



INTER-AMERICAN FEDERATION

Formation of a new confederation to strengthen the bonds among entertainment unions in North and South America and advance the cause of democratic trade unionism was announced during the AFL-CIO convention at Miami, Fla.

Eleven U. S. unions played a leading part in the formation of the organization known as the Inter-American Confederation of Entertainment Unions.

The confederation was launched last May at a conference in Costa Rica, arranged by the U. S. unions and their counterparts in Mexico and Costa Rica and the International Confederation of Free Trade Unions. Fifteen nations were represented.

A draft constitution was prepared and has now been accepted by the U. S. unions. Acceptances are being received from other unions that were in attendance at San Jose. The first convention of this Inter-American Federation is tentatively planned for next June.

U. S. unions in the Federation are the Musicians, Theatrical Stage Employees, IBEW, Broadcasting Employees and Technicians, Associated Actors and Artists, Screen Actors Guild, Screen Extras Guild, American Guild of Variety Artists, American Guild of Musical Artists, Actors Equity Association and Association of Theatrical Press Agents and Managers. (A report of the founding Congress of the organization can be found in the June, 1961, issue of TECHNICIAN-ENGINEER).

OUR MAILING LIST

Members are not automatically put on the TECHNICIAN-ENGINEER mailing list. Local union recording secretaries should keep the TECHNICIAN-ENGINEER office advised of additions and changes. If you are not receiving your copy of the magazine and want to do so, all you need do is write us. If you move, let us know about it. A postcard will do. The mailing address is: Editor, TECHNICIAN-ENGINEER, 1200 Fifteenth Street, N. W., Washington, D. C.

NEWS & PICTURES NEEDED

The TECHNICIAN-ENGINEER can use pictures and stories of your local union and its activities. Send such material to the address indicated in the item above.

RADIOS FOR REHABILITATION

Local 11 of the International Brotherhood of Electrical Workers Los Angeles, Calif., has made a gift of eight radios to Federal Pre-Release Guidance Center, a national pilot project for the rehabilitation of youthful offenders. Local 11, which has more than 10,000 members, has a youth service program started several years ago.

IBEW WITHDRAWS FROM IUD

Effective December 31, 1961, the International Brotherhood of Electrical Workers formally notified the Industrial Union Department of the AFL-CIO, that it was discontinuing affiliation with that body.



Technician-Engineer

www.americanradiohistory.com