

Jody, Susan

Clay T. Whitehead

From: Susan Burgess
Sent: Tuesday, January 08, 2008 11:07 AM
To: tom@cwv.com
Subject: deciphering HP's handwritten notes

*This works!
but Jim only
80% on it.*

Tom,

Below are the annotated paragraphs from Sarnoff's 8/6/26 Saturday Evening Post article and HP's handwritten notes, as far as I can decipher them. I will contact the archives to see if they can read the missing words:

Article: The event at KDKA was the result of amateur experimentation by Frank Conrad, now assistant chief engineer with the Westinghouse Electric and Manufacturing Company. This man's job was also his hobby. He was always tinkering with machinery at the office and he had rigged up a set at home. Every night he broadcast other amateurs who listened in. Finally his audience got so large and enthusiastic that his friends began to say: "Look here, you aren't an amateur any longer. Why don't you take your instrument over to Westinghouse and start a regular broadcasting station."

jam? you
vilified

Note: "Not correct. The attempt I made to establish a service in the face of difficulties ties almost all the listeners were radio amateurs and they resented our interference so our first year was difficult and our success was and some nerve was required to keep the experiment alive." H.P.D. 8/6/26

Article: H.P. Davis "recognized the opportunity for the multiplication of the elementary [radio broadcasting] scheme of 1920 into a national program by strengthening the power of KDKA; thus increasing its range. The problem was: How was a company furnishing such service to receive adequate return for the great investment necessary? Mr. Davis submitted his plans to Gen. Guy Tripp, chairman of the board of directors of the company, and received not only encouragement but official authority to proceed with the development. KDKA, since then, has expanded under General Tripp's guidance and has blazed the trail in many directions, including present-day experiments in short-wave radio-relay transmission and the use of higher power from transmitting stations."

Note: "This is a wrong statement as General Tripp had practically nothing to do with this. I assumed this responsibility personally and pushed the's (diversification?) practically alone and with very little support from our organization." H.P.D.

no due
development

Susan K. Burgess
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Frank's development

I think this works!

Tom,
This handwriting is really hard to read - I'm surprised you/Susan were able to decipher this much!
Hope my comments above help.
Judy
1/9/08

Archives
no; these
1858 Tom

vac tube - unte 19 + 2 today

Checked
for dup

- genes of NBC
- Conrad claims idea to set up station as his
- Daus coming in next day

Westinghouse now
- archives?

Viacom
NBC / GE

Higher res image of ad
Hemes?

Westinghouse
MSS 424

Box 17 Folder 17

HP Daus archives

1100

A.C. Instruments & Apparatus
N. Y. N. W. + N. H. R. Electro-plant -
War Activities
Radio.

December 27, 1930.

Mr. H. P. Davis:

Mr. Conrad has asked me to present him for the reception of the Edison Medal an event which will occur in about a month.

I am now assuming that I will take fifteen or twenty minutes and attempt to show how a boy who started in running a control press has come to be one of the most respected and productive engineers of the Company.

I want to get some of his outstanding characteristics and methods and to present them by anecdote and incident. Probably Conrad himself will tell the story of radio broadcasting and of the short wave. I have suggested that he do this as these topics are those which will be received with a great deal of interest by a great many people.

He has some of his own ideas upon science and the expert and the need of the expert who is normally going to deal more and more with specific things for maintaining a broad perspective and a balanced view.

I suggested that his philosophical observations will be excellent but had best be worked into a few paragraphs along with the other story.

I am hoping very much that you can give me some material particularly which may have specific incidents in it in connection with his early work on which I can draw in making up my story. If you happen to find yourself in a proper mood, possibly you can dictate a few pages. I expect to be back here on Jan. 2 and will be very glad to have some manuscript, and also to have the opportunity of talking over the situation at that time.

Chas. F. Scott.

January 2, 1931.

In my close association with Dr. Frank Conrad on engineering matters in the period 1892 to the present date, five engineering accomplishments of far-reaching merit and largely of a pioneering nature stand out.

I refer to (first) the engineering development of alternating current instruments and small so-called round watt-hour meters, the work on which was done in the late Nineties.

Second, the New York, New Haven and Hartford Railroad electrification of 1907-1910.

Third, the conception and development of low tension automobile ignition and electric lighting and grounded circuit wiring for automobiles.

Fourth, the World War activities 1915-1918, and fifth, the radio development subsequent to 1917.

You personally remember back in the period before 1897 that almost all of the engineering work of the Company other than that having to do with machinery, was handled by the so-called laboratory force. Conrad and I were in the shop end of the activity, and I was at that time struggling with the development of a line of detail apparatus and was using Conrad as my assistant. We were particularly impressed when the alternating current watt-hour meter was first introduced, with the impracticability from a manufacturing and installation

standpoint of the devices that had been brought out and we took it upon ourselves, independent of our regular duties, to develop something which we thought would be much better.

We started with instruments and the final outcome of our work was the so-called long scale open dial alternating instrument, a design which has persisted to date.

The work in connection with this instrument suggested a way to develop a watt-hour meter which would fill the requirements that we thought necessary. My work, as you will remember at the time, was largely executive in general so that the actual engineering work fell upon Mr. Conrad's shoulders, and he deserves great credit in connection with the final result of our work, which, as I see it, was an epochal step in metering devices.

In 1907 we undertook the pioneering development and installation of what was then an entirely new conception as regards motive power current supply distribution and voltage on a trunk line railroad. In this whole installation everything was pioneering and problems of all kinds, especially in distribution, circuit protection and automatic control.. The project was very daring and the problems very great and serious.

As you will remember, I had practically entire charge of this work, from selling to operating, and Conrad was assisting me, in working out the problems introduced in the current supply and automatic control and protection. The solutions of these problems, at which he arrived, were effective and prompt, and many of the methods are standard practice in this kind of an installation today.

Along about 1910 the Company became interested in electrical applications to automobile starting, lighting and wiring. Standard systems at that time used on automobiles consisted of high tension magneto ignition with gas lighting, and where electricity was used, with a battery supply, the automobiles were wired with a wholly insulated, two-wire circuit, both sides being insulated from ground. Conrad conceived the idea of eliminating one of the insulated circuits, using the machine frame itself for one side of the circuit. This greatly simplified wiring, and made only one insulated contact necessary in the lamps and other electrical appliances, greatly improving the reliability. This system is the now accepted and universal standard system. I do not think that Conrad ever got credit for it, but I consider it a very outstanding conception, as proven by the above fact.

While there was nothing especially new in the development of low voltage generators and starting motors for automobiles, yet the entire system was new and the work that he did and which was largely in his charge, led to the introduction and development as standard equipment of low tension ignition electric lighting and electric starting of automobiles - the present accepted standard.

As you know, shortly after the declaration of war in 1914 I became very active in the production of projectiles and other war appliances, and I had Conrad again as my assistant and contact for engineering matters with authorities at Washington. In conjunction with Mr. Aalborg, Conrad and I developed a very ingenious and effective hand grenade, which was adopted by the War Department and would have become a regular weapon if the war had persisted. Conrad's contri-

tribution was a major one.

During the war there was a very considerable amount of radio activity, in which we took a hand, first with the British Government and later with the American Government. Conrad specialized on this work, having charge of the Engineering Department and Research work which we were doing. This led, as you probably know through many account which have appeared in the press in our histories and articles, to the continuing of this activity by the Company at the close of the war, and Conrad's continued interest and contact with it led to the later conception of mass communication in the form of radio broadcasting as a public service.

Since that time Mr. Conrad's greatest engineering activity has been that of radio in which some of his best engineering work has been accomplished.

Especially do I refer to the development of the so-called short waves for long distance transmission of radio signals. He early recognized the importance of these radio channels and through his work proved their value. That it is great is indicated by the fact that it is accepted by all the world communication companies, both in telegraph and telephone work.

As you know, I consider this work his greatest as well as the most valuable contribution that was made to the general communication field.

His work in connection with synchronization of radio stations is of a pioneering nature, and most of the development work that has been done and brought to a successful conclusion has been under his direction.

He also conceived and has developed an alternative method of broadcasting in the so-called modulated radio frequency method which offers very great possibilities in the future development of telephonic communication, although not yet introduced in a practical way.

Dr. Conrad has had a very close connection with the development of all kinds of apparatus having to do with radio transmission and reception, and many of the standard features embodied in apparatus of this kind was conceived and developed by him.

Dr. Conrad, as we all know, has a very comprehensive grasp in all lines of mechanical and electrical theory, and has the very unusual ability to apply his theory and bring out developments of a thoroughly practical character. In all my experience with engineering work and engineers, he stands alone for breadth of knowledge, practical judgment and clearness of thinking and assurance of execution of matters pertaining to engineering.

H. P. Davis

Edison Medal is Presented to Dr. Frank Conrad

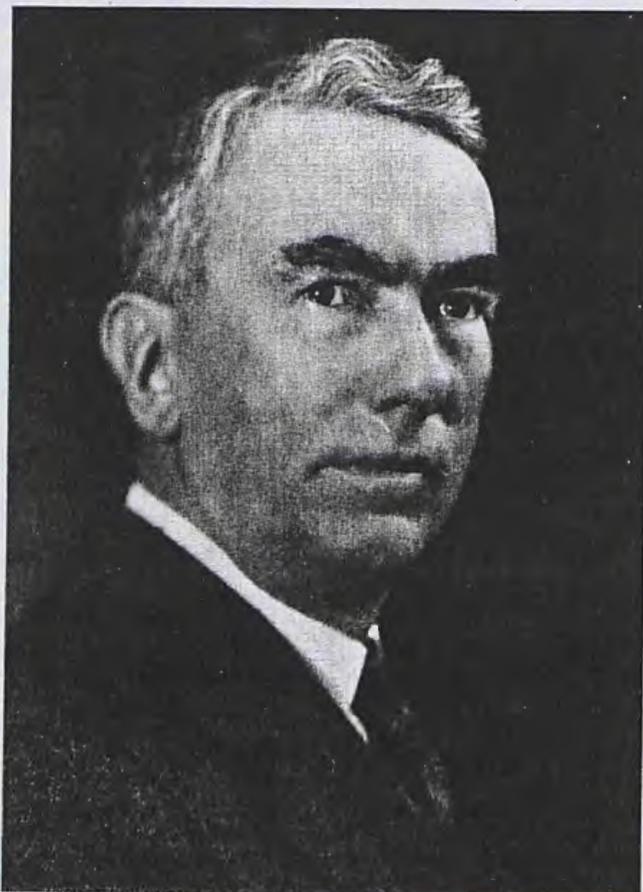
THIS twentieth award of the Edison Medal is unique in that the man so honored left school a year before he might have entered high school—whereas all prior recipients had attended an institution of higher learning. At sixteen he got a job running a drill press, making parts for Shallenberger ampere-hour meters.

Just what differentiated this particular machine tool operator from the scores of others, and enabled him to meet the competition of engineering graduates? Many of his achievements have determined the course of electrical practice; untold numbers of them have had an important influence thereon. A few incidents from his early life may serve to explain his career.

Frank's father was a railroad mechanic. He had sound ideas about developing boys, for he saw to it his boy had something to do when not at school, by providing simple tools and a place to use them. Here Frank learned ways of connecting battery cells together and experimented with coils and improvised parts. Elementary science was absorbed from popular magazines; and out of it all Frank realized that things do not happen haphazardly, but in accordance with definite laws. Thus he learned his physics by observation and by seeking to find the underlying law.

And so the boy brought with him to the engineering laboratory a simple faith in nature's methods which the formal text book did not give, and a natural curiosity and initiative which the drudgery of school had not yet suppressed.

Soon after Frank began to work on the drill press a significant incident occurred. He observed others who were working on arc lamps. He realized their difficulties and devised an improvement. These are im-



portant steps—observation, analysis, invention. He made a sketch and showed it to Mr. Philip Lange, then head of the department where instruments and control apparatus were made. The scheme itself was of no great importance, but the incident resulted in Frank being taken into Mr. Lange's laboratory.

Shortly afterwards Mr. Lange went to Europe for several months and left Frank "to look after the place". The routine work was light, apparatus was at hand, and as Frank puts it he "learned a lot". He found out, for example, why volts should not be

measured with an ammeter, he made the personal acquaintance of choke coils, transformers and condensers, and tried about everything he could think of with the circuits and apparatus.

A snapshot at this time is given by Frank N. Waterman, who was in charge of arc lamp development in 1891. "Frank Conrad was an exceedingly bright youngster. He had an exceptionally inquiring mind, he was highly resourceful and failure tended to intrigue him and excite his curiosity rather than to discourage him."

For many years he made a definite impression on the engineering with which he was associated. When the detail engineering was taken over by Mr. H. P. Davis, Frank was general assistant. Davis and Conrad working together made many fundamental improvements in both indicating instruments and watt-hour meters.

His connection with radio began about 1914. First he made himself a crystal set to receive the Arlington time signals. Then he learned the code. His company took part in war activities and he was assigned to radio problems and was in consultation in Washing-

remove the main shaft, tilting it as it is withdrawn up through the lower bracket so as to require minimum vertical lift. During this procedure, the lower bracket is undisturbed. If it is necessary to remove the water-wheel parts, the lower bracket can be withdrawn up through the stator frame.

For ventilating purposes, the machine is totally enclosed. The cooling air is brought in through duct work from the down stream wall of the power house and enters the machine at the top. Ventilating fans on the rotor drive the air radially outwards into pressure chambers surrounding the top and bottom winding end turns. From these pressure chambers, the air flows through the air gap and out through ventilating ducts in the armature core into the stator frame. An enclosing ring surrounding the stator frame collects this discharged air and leads it into the hollow pilasters on the down stream wall of the power house which serve as exhaust chimneys for the discharged cooling air. A damper arrangement makes it possible to divert the discharged air into the station during cold weather for station heating purposes. The only part of the machine projecting above the air intake housing is the pilot exciter.

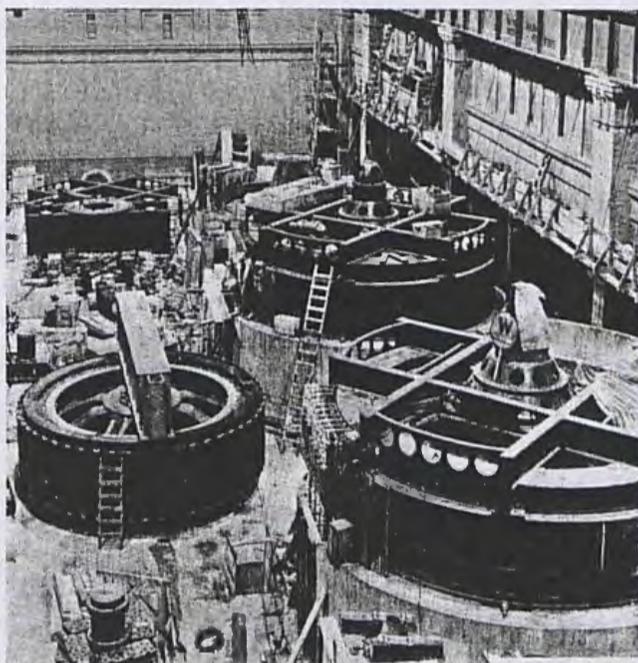
Fire protection on the machine is taken care of by a perforated brass pipe at the top and bottom of the stator from which the armature end windings can be sprayed with water when these pipes are connected to a water supply. In order to prevent accidental flooding of the machine, the flexible hose used for connecting the water supply to the fire extinguisher piping terminals is normally kept disconnected and in a glass case which must be broken before the connection can be made.

Tests

All four machines were completely assembled in the factory and given overspeed tests plus the usual resistance, phase-balance, and dielectric tests. In addition, the first machine was given complete efficiency and temperature tests. Making overspeed tests on these machines in the factory was a very considerable undertaking in view of their great size and weight and also in view of the necessity of supplying an extra guide bearing to simulate the upper guide bearing of the water wheel runner. It was found, however, that a comparatively light bearing for this purpose was adequate to make the machine run with good mechanical stability. An idea of the size of these machines as handled on the test floor can be obtained from the following figures:

Height	290 in.
Diameter	315 in.

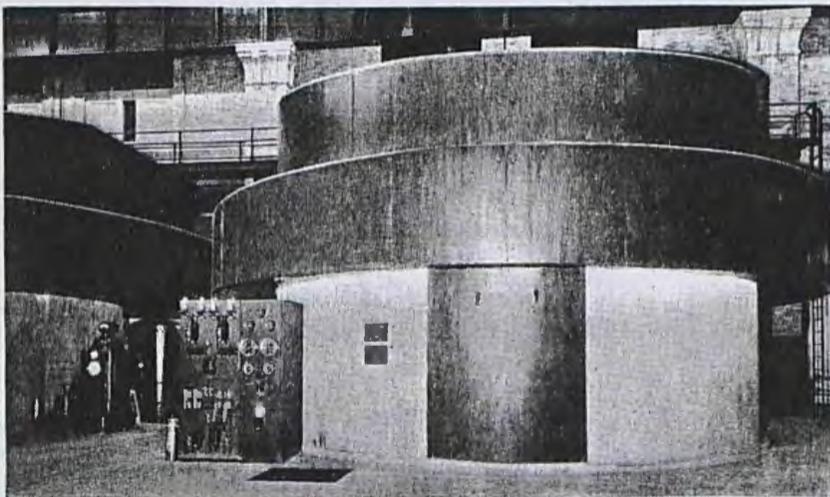
Total weight as erected for factory test
822 000 lbs.



This shows three of the machines partially assembled

Each generator constituted an eighteen carload shipment. The machines were received at intervals of approximately 32 days, and erected and put into operation in a total of 139 days. When it is considered that each stator was in two parts and the rotor rim had to be stacked in the field, this is indicative of fast and efficient handling and assembling operations.

This creditable performance was necessary to allow the generator erection to keep pace with the unflagging construction schedule, and was made possible by the cooperation between the plant construction and generator erection crews. For example, the construction crew would unload and set on the power-house floor an eighteen carload shipment in only three days, which was of material assistance to the erectors. The efficiency with which the whole project was managed made it possible to have all machines running on September 30, and to meet the schedule date of October 1, when power contracts called for the full output to be available to the Boston area.



The generators are totally-enclosed by the ventilating housing

ton. Among other achievements was a 1000 cycle, 200 volt self-exciting airplane generator weighing 11 pounds (much less than the French equivalent) encased with the radio equipment and driven by a propeller.

Following the war the company sought to utilize its radio acquisitions and experience. Frank had an experimental station at his home.

The problem was to perfect apparatus for communication between the company's factories in different states. During these tests his victrola

was heard by neighboring amateurs, who liked it better than code, so he fixed certain evenings for gramophones. Presently the studio was moved from garage to house and there were musical groups who were the local radio artists—predecessors of Damrosch and 'n' Andy. An advertisement in a Pittsburgh paper urging the radio fans to buy apparatus and listen to Frank Conrad's concerts, attracted attention by its commercial suggestion. Broadcasting evolved from an amateur plaything into a commercial enterprise when KDKA, announcing Harding's election in 1920, became the pioneer in creating the Radio Age.

A fellow radio expert comments on Conrad's faculty for getting into things he knows little about.

He takes nothing for granted—a characteristic of the true investigator. For instance, the accepted formula shows that absorption makes the short wave prohibitive.

But Frank noticed that static interference seemed to be less with the short waves and he noted a peculiar thing; with the short waves the harmonic (which by the formula should be weaker) was sometimes stronger than the fundamental. He found these short waves useful in communicating with Boston. Extended tests followed; the

results were so outstanding that presently a short-wave sending station supplemented KDKA for long-distance transmission of program for local rebroadcasting.

Nor has his more recent radio work been limited to short waves. A radio official says:—

"His work in connection with synchronization of radio stations is of a pioneering nature, and most of the development work that has been done and brought to a successful conclusion has been under his direction. He also conceived and has developed an alternative method of broadcasting in the so-called frequency modulation method which offers great possibilities in the future development of telephonic communication, although not yet introduced in a practical way."

Response of Dr. Conrad in Accepting the Medal

Our present civilization can be said to be a product of a comparatively few developments, of which the important ones are printing, the railroad, the telephone, the automobile, and in the last few years radio. Each of these has moulded the lives of people and changed the destiny of nations.

The prime function of all these developments has been that of association and interchange of goods and ideas. This is the one great instinct which has made possible a civilization wherein the individual may have the benefit of the sum total of the knowledge of his fellow beings.

Radio broadcasting is unique among these developments because, though it was scarcely visualized prior to the present century, its possibilities were capable of rapid application to human need because all the resources of electrical science were behind it. It has the unique distinction that it was launched as a fully developed art. In the first year of broadcasting we had available all the artifices of the present day. It required no new conceptions to make possible its success. We have made advances in technique, but they have been of a comparatively minor nature, and the devices which were used in the first year of broadcasting would no

doubt be, for all practical purposes, satisfactory today.

One of the factors which made it possible for science to have ready nearly all the tools required for an entirely new art was the World War. The military necessities of war time not only furnished the incentive for a further development of devices which would enable a ship in distress to call for help, but also what is even more important, furnished the necessary financial support of this work.

At the close of the War, we found ourselves in possession of the products of many research agencies, although there was no apparent use to which these products could be put. I personally experienced somewhat this situation, in that I had facilities and equipment to carry on this art of radio communication, but no incentive to do it other than the natural fascination of working with a new tool. It is probable that by demonstrating to some of my friends the possibilities of this new subject we awakened to the fact that radio's field of usefulness was not between any two restricted points but that it extended over the widest possible range. Radio broadcasting, a new art, so came into being.

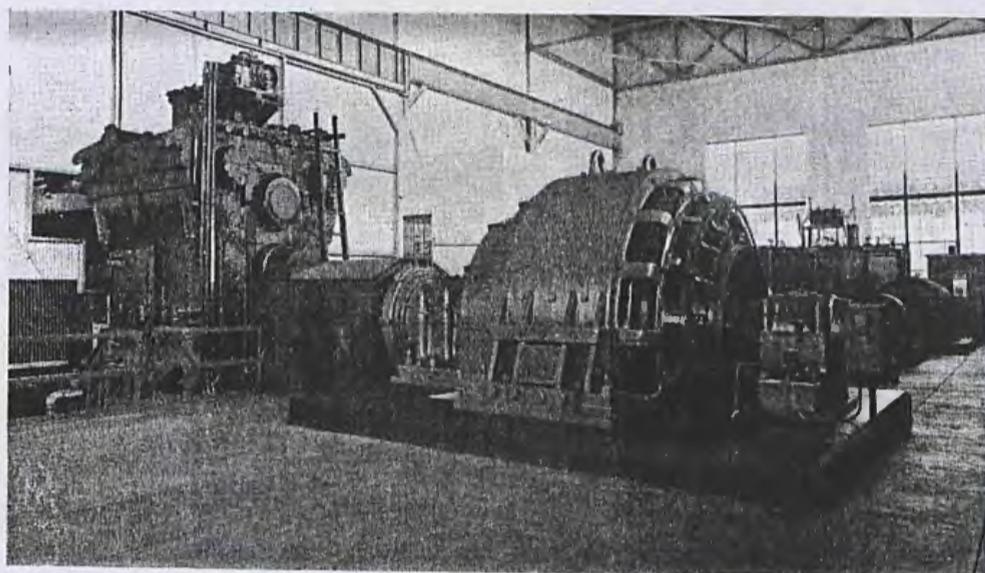
We should, of course, expect that any new development will progress relatively faster than those that came in an earlier day, as the new development has the advantage of utilizing an accumulated store of

(Continued on page 156)

The twentieth Edison Medal was presented to Dr. Frank Conrad, Assistant Chief Engineer of The Westinghouse Co. on Jan. 28. The speech of presentation by C. F. Scott of Yale Univ., and the speech of acceptance are given here in condensed form

An Electrified Steel Mill

The Alabama City Plant of the Gulf States Steel Co. has many distinctly new electrical features



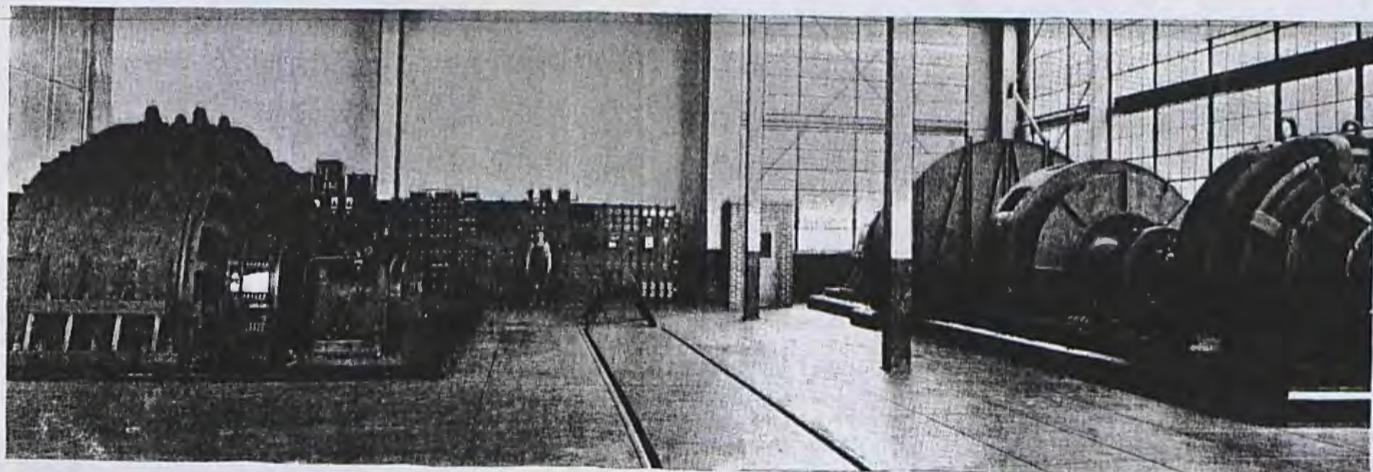
The 48 in. universal plate mill is driven by a 4000 hp, adjustable-speed motor. This is the first steel plate mill to be equipped with automatic screw-down.

IMPROVEMENTS completed last year in the Alabama City plant of the Gulf States Steel Co. make this one of the most modern steel mills in the country. This was the second extensive improvement program completed at this plant, the first being in 1928 when 9500 hp of synchronous and direct-current motors were installed for the electrification of a Garrett rod mill. This program also included a new 15 000 kv-a power plant, a 10 000 kv-a substation for purchased power and a new 6600 volt, 60 cycle plant distribution system. These changes materially improved the conditions for the production of wire and wire products and merchant mill sections, which at that time constituted the

R. H. WRIGHT
*Steel Mill Engineer,
Westinghouse Electric & Mfg. Co.*

principal output of the plant. The 1930 program included the replacement of the one existing engine-driven mill, a 36 inch reversing blooming mill, with a new motor-driven, 40 inch mill, and the installation of a 48 inch, three-high universal plate mill, a sheet mill and an increase in substation capacity of 10 000 kv-a. The electrical equipment is of the latest design, and incorporates a number of features which have not been used before and has been installed in accordance with the most modern practice.

The original steam-driven blooming mill was designed primarily to roll 18.5 in. by 20.5 in., 6500 lb. ingots down to 4 in. by 4 in. blooms for the rod mill. The new 40 in. mill is designed to roll 4 in. by 4 in. and larger billets for the rod and merchant mills and slabs for the new plate mill. This is a wider range of product than a 40 in. mill is usually required to handle so the mill has been specially designed to facilitate rapid rolling of 4 in. by 4 in. blooms without sacrificing



A 7000 hp, adjustable-speed, direct-current reversing motor, capable of developing 19 000 horsepower momentarily, drives the 40 in. blooming mill. The 6000 kw flywheel motor-generator set at the right supplies the power

ALS G4121

Box 2

ff 25

Dr. Frank Conrad

Permalif

H. P. Davis, 1868-1931, Papers, 1915-1944

DAVID SARNOFF

PRESIDENT
RADIO CORPORATION
OF AMERICA

WOOLWORTH BUILDING
233 BROADWAY
NEW YORK CITY

Why is the Radio Industry in the Red?

--0--

from "Electronics" - April 1931

WHY IS THE RADIO

Despite gross volume of \$500,000,000 last year, few manufacturers made net profit unless also in other lines outside of radio

A CAREFUL survey of the 155 firms in the set manufacturing field by the editors of *Electronics* reveals the appalling fact that with but two or three exceptions these firms did not make a profit on their radio business during the past year, if we exclude the concerns having other operations outside of radio. In a number of instances where other lines of manufacturing were carried on, profitable operations were reported for the year, but in these cases it would be impossible to analyze fairly the loadings of administration and overhead expense, hence the true picture of their radio situation, taken alone, would be difficult to ascertain.

Looked at in any way, from a net-profit standpoint, the situation in which radio manufacturers find themselves is a serious one. It is the subject of discussion wherever radio men meet, and the many angles it assumes have been threshed over in countless arguments and conferences. Many different philosophies of underlying causes and suggested avenues of escape into improved conditions for 1931, have been formulated by radio leaders, and these views have been called upon in drafting up this summary now before the reader.

Let us put down the various causes which radio men and economic students have assigned for the predicament in which radio finds itself. These are, (above):

1. The general economic depression.
2. Overproduction of radio sets.
3. The licensing situation.
4. The coming of the midget.
5. Failure of distribution machinery.
6. Apathy toward broadcasting.
7. The approach of saturation.

Obviously the background for the present radio business situation is furnished by the general economic slump, with its effect on employment, buying power and general business activity.

Overproduction is still a besetting problem in radio manufacturing, even though executives have cut their active production period to a few months or weeks. Radio is carrying the load of a factory capacity *ten or twelve times any production* the trade can possibly absorb. Plants can be operated only a short period out of the year, operators have to be trained for weeks, work at full production only a short time, and are then laid off.

Certainly the whole production situation in radio should be thoroughly reorganized to put the industry on a sound basis.

Licensing agreements, patent structure

Critics of the present licensing agreements within the radio industry, declare that these licenses are a principal cause of manufacturers making no profits. While royalty payments range from $7\frac{1}{2}$ per cent of gross sales to as high as a total of 12 per cent for additional royalties paid other licensing groups, this amount, it is pointed out, comes from licensees in competition with the same products manufactured by the patent-holding companies. This, in addition to strong competition from newcomers to the field producing equipment on more favorable licensing terms, has resulted in an unsatisfactory arrangement within the industry as a whole, it is asserted.

The situation is made even more unbalanced because some manufacturing groups, it is charged, do not pay the same royalty or any royalty to certain patent-holding groups.

Licensees at present are also restricted to radio equipment for home use. Prevention of initiative in developing markets for amplifiers and associated equipment in the industrial and other fields is thus a serious check on diversification of products and markets badly needed, according to the complaint.

Licensees are also restricted from the export field. Here, individual initiative in obtaining outlets for radio equipment abroad is eliminated. The benefit of present foreign patent-pool agreements, which is the basis of this restriction, based upon possible competition from imports, is more than offset by the loss in continuous production that a healthy export outlet would help maintain. American manufacturers can more than hold their

SOME "WAYS OUT" FOR THE RADIO INDUSTRY IN 1931

Statistical control of production.

More uniform factory production throughout year.

Purchase of ready-made parts where economic.

Diversification of production outside radio.

Price schedules that compensate all factors in the merchandising chain.

Opening up new territories by increase of broadcast power and "synchronizing."

Promotion of public appreciation for broadcasting.

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INDUSTRY IN THE RED?

own in competition with foreign radio apparatus.

For a good share of the 1931 situation sans profits, undoubtedly the coming of the midget is to blame. The public was ready to purchase such sets and the radio engineer was equipped to design them long before radio sales departments would admit the "midget idea" was more than a passing fancy on the part of the public. Meanwhile some eighty new manufacturers broke into the radio field using the midget as an entering wedge. Other older makers considered midgets only as a preliminary step to selling console models. In some cases the midgets were so priced that they offered only doubtful profits to their makers. So between large consoles that did not sell, and midgets that sold without profit, there was little chance for these manufacturers to make money during 1930.

Another charge frequently brought up is that the distribution machinery broke down and failed to move the merchandise. Certainly the figures show that the number of receivers sold did not dip so much below 1929—only 14 per cent. But dollar volume fell off fully 45 per cent. Evidently the distribution machinery was not adapted to the new kind of load which the latter half of 1930 threw on it. If that distribution machine is to function in the future it must be overhauled and reshaped to handle an even larger volume in number of units while the unit value of the sets reduces

half or less of preceding prices per individual sets. Probably the public is more sensible of the general up of causes which fall under the head of "apathy toward broadcasting" than to any other of those here discussed, outside of the general business situation. There is no question that members of the public are too len nowadays heard to express themselves as "fed up radio," and as rebellious against "too much advertising on the air." Great features come and go on the radio programs, yet make all too little impression on the radio audience which seems sated with the feast of shows it has enjoyed during recent years, all without cost. While many small broadcasting stations have been grossly guilty of the charge of a continuous advertising barrage, there is evidence in plenty that the great stations and great networks have held their advertising hours well in hand, and that the percentage of advertising, compared with total hours of service on the air, is only a few per cent.

In some quarters there is a feeling that with half of the homes of the North American continent now equipped with radio sets, saturation is approaching, and that from now on, with the cream off the radio-sales situation, radio merchandising will find a rocky road ahead. This viewpoint overlooks the vast small-town

and rural market, where home-electrification is rapidly coming, paving the way for more radio-set sales. It also overlooks the great amount of new territory which can be opened up with increases in broadcasting service made possible by new developments in the broadcasting art.

Statistical control of production

But it will not do merely to conduct an autopsy on 1930's misfortunes and miscarriages. The mishaps of the season that is behind us can be analyzed to good account only if we can learn how to apply these lessons to the season ahead. What are the constructive purposes which should animate the radio industry and trade during 1931?

The whole problem of production should be carefully studied, and reduced to dependable statistical information which can serve as a basis for adjusting factory schedules in the light of definite knowledge. An industry which has information about itself can intelligently control its processes, can avoid the pitfalls of excess manufacture, and can escape the later penalties of "dumping," price-cuts and general demoralization of manufacturer, jobber and retailer.

A way must be found out of the present schedule of intense production peaks during a few weeks out of the year, followed by long shutdowns when the plant lies idle and workers are laid off. Factory programs must be

set out so that economical manufacture can be produced without excessive overhead of factory capacity (capacity now many times that needed if production were spread out more nearly over the entire year). In some cases this may mean a complete rearrangement of factory processes, perhaps eliminating long production lines and regrouping the same operations into smaller units which can be more carefully supervised, and rapidly checked against errors and faults. In the opinions of some production managers, marked savings would be made in this way.

An allied situation is that of purchasing parts and accessories "outside," from makers specializing in these items, rather than attempting to manufacture within the factory parts which can be produced better and more cheaply by specialists. A full discussion of the present trend toward purchase of integral parts, and away from complete manufacture, appears on later pages of this issue.

Diversification into lines outside radio

It is significant that better operating returns are invariably reported by radio manufacturers having outside non-radio lines than by concerns doing an exclusive radio business, with all of radio's seasonal winter demand and

THE SOURCES OF "RED INK" IN RADIO'S 1930 LEDGER?

1. The general economic depression.
2. Overproduction of radio sets.
3. The licensing situation, patents, etc.
4. The coming of "the midget idea."
5. Inadequacy of distribution machinery.
6. Public apathy toward broadcasting.
7. The approach of receiver saturation.

summer slack. The combination business has a chance to operate at a more *even* load-factor throughout the year, and overhead can be spread over more than the single radio department. Outlets and distribution connections developed in one line can often be utilized in another. And the lesson of diversification—whether with electric refrigerators and appliances, automobile accessories, or entertainment devices—can be applied to advantage all the way down the distribution trail, through wholesalers and distributors, to the retail dealers. For to the last-named retail merchants, such widening of merchandise lines becomes practically a necessity if sufficient volume is to be built up to create a profitable business.

Price schedules that produce compensation for all

Much complaint has been heard concerning price schedules, particularly on some of the newer sets. Starting out with long discounts to the dealer, these have usually been sacrificed early in the game, and the resulting net price structure has left few resting places for profits for wholesaler or dealer. List prices have in too many cases been mere fictions.

In tubes, the nominal factory-cost multiplier has been eight and ten times, instead of the common four times in corresponding fields, but such list prices so figured have lasted as such only until the first mail-order catalog could be printed.

Much could be written on the subject of price schedules, but when all is said and done, *radio merchandise must be so priced and discounts so set up that every factor in the merchandising chain that performs a distribution function will get paid for it.*

Opening up new territories for radio sales

Fear has been expressed that radio is approaching saturation. This may be true in certain cities and populous areas, where, it can be admitted, the ratio of sets to homes exceeds 60 per cent. But there are still tremendous territories—taking in thousands of small towns, villages and settlements, and millions of farms—which are yet unserved by even one or two good programs of sufficient field strength to make radio listening a pleasure and the purchase of radio sets desirable.

High-power broadcasting for all clear-channel stations when granted by the Federal Radio Commission, will

greatly improve radio reception over present unserved areas, and open up new territories for selling radio sets. Past experience has shown that when power of stations has been increased, local sales of sets has invariably mounted. General adoption of "synchronizing" or operation of many stations on the same channel, now the subject of important experiments, is bound to multiply the usefulness of existing channels and greatly increase the areas served, with consequent increased demand for sets.

Little attempt has been made as yet to merchandise the "two-or-more-set" idea. Lack of originality of set design, and lack of ingenuity in sales efforts on the part of dealers are contributory factors to lack of as wide sales as desired.

Reclaiming public interest in broadcasting

The old original thrill of listening to radio broadcasting is in some respects passing. The public must now be stimulated to turn to the wonderful things on its receiving-set dials. Features of world-wide interest and counted cost are too often missed, because insufficient notice or attention is given.

The theatrical business has long appropriated a percentage of its gross to publicity and to advertising offerings. Radio has already learned much showman from the stage and the movies; perhaps its next next lesson is in the fine art of ballyhoo—simply "shooing public in" to witness the *free wonders inside the*. This is a service which must be undertaken by all concerned—broadcasters, manufacturers, jobbers and dealers.

The picture of the radio industry and its trouble dilemmas, is a complex one. The radio problem has many sides, and can be attacked from many angles. Some of radio's outstanding difficulties have been discussed in the foregoing. No single situation or solution offers the answer sought for. The industry's task in pulling out of the present situation and back to "business normalcy," and then into the manifest destiny of the radio art, will be:

- (1) A matter of "clearing the interference away," at many points along the line, and
- (2) Getting the now widely separated branches of radio broadcasting and the radio industry and trade to realize their common needs and pull together to the common prosperity of all.

ENGINEERING, DISTRIBUTION, AND PROFITS

RADIO engineering has advanced at an unprecedented rate. The dramatic progress in the efficiency of production of radio receivers has far outstripped the efficiency of distribution. Until the radio executive can find means of coordinating engineering and distribution so that supply and demand may be closer together there can be little hope of profit for most radio companies.

H. B. RICHMOND,

General Radio Company,

Past-President, Radio Manufacturers Association.

ADDRESS

by

DAVID SARNOFF

Executive Vice President,
Radio Corporation of America

Mr. Toastmaster, members of the Veteran Employees' Association of the Westinghouse Electric & Manufacturing Company, ladies and gentlemen:

To you who are veterans in the service of a great industrial institution that has contributed much to the advancement of the electrical and mechanical arts, I need not apologize for a brief glance backward. We must do it, on occasion, to maintain our sense of direction. We should do it, for the pleasure that true service brings. I say "we" because I feel that I have some claim to your comradeship.

I know that the chief qualification of membership in your own organization is at least twenty years service under the Westinghouse banner. Which reminds me that I too have served a twenty-year apprenticeship to the latest of the electrical arts which you have helped to develop. Nevertheless, I am chastened by the fact that the experience of many of you in the electrical industry as a whole greatly transcends mine; that you have had the satisfaction of service that has been fully realized; and that your contributions to the upbuilding of our industrial life have been in many directions.

When your organization was formed in 1914 there were 314

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Jan date 1929

employees who had been on the company's rolls for twenty years. Since that time your total membership has grown to 3,630, of whom 65 have been with the Company more than forty years, and at least 1500 for more than a quarter of a century.

This record in itself is a tribute to the Westinghouse Electric & Manufacturing Company, its splendid organization and the conditions under which you work; but more than that, it is a tribute to the industry to which you have dedicated your lives.

There must be - and there is - something more than economic necessity that holds such a group as yours together, year after year, in this age of restless movement. For want of a better term one might call that intangible factor the R o m a n c e of S e r - v i c e. There are many definitions of service. Some have been overworked and some have become threadbare. Where the word "service" covers a multitude of claims, possibly no definition is adequate. We do know, however, that the only true measure of service is accomplishment.

"They also serve", we are told, "who only stand and wait". No task is too humble for the accomplishment of a worthwhile end. But it is not given to all of us to see the full realization of our service during the course of twenty or thirty years. Many workers in other fields have failed to gain their due meed of recognition despite the service of a lifetime. Many men are but cogs in our vast industrial machinery. Many industries only serve indirectly the public demand which creates them.

But to those who serve the electrical arts service has taken on a new significance -- a deeper meaning. Your service is not a narrow allegiance to a "job", but a vital force that reaches out and touches the lives of all mankind. Your service is not

completed when you have built an electrical or mechanical plant; your real service begins there. When you have erected a broadcasting station you have but supplied the instrumentality for a greater and broader service. When you have built a power plant you have only taken the first step towards the distribution of electrical power to hundreds or to thousands.

This may be true, to a more limited extent, of the work of the butcher, the baker and the candlestick-maker. But the fact remains that service to the electrical arts is of a more dynamic character.

During the two or three decades covered by the existence of your organization you have had the satisfaction of observing a wonderful panorama of progress in the electrical industry.

You have seen the rise of electrical illumination until today the turn of a switch can flood with light the remotest home in the land. The power that pulses through our great wire systems has advanced enormously our productive capacity. A great network of electrical transportation now covers the country. In city, in town, in village and kitchen, electricity has come to free us from the slavery of the labor drudge.

The great significance of these facts was graphically brought home some years ago by a distinguished leader of research in the electrical industry. Conceive a situation, he told us, where every dynamo in the United States suddenly ceased to function. What would happen in these communities now served by electric light and power? For a space, until substitutes were brought into use, utter darkness would cover our streets. Urban transportation would be largely at a standstill; a few motor cars and buses might crawl along guided by pale beams of light. The desolation of darkness would

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shroud millions of homes. At once the vast network of telephone communications that ties together millions of homes would become silent and dead. The voice of the broadcasting stations would be stifled, and hundreds of thousands of homes now resonant with the sound of music and speech would find their sets suddenly dulled to stillness. In thousands of factories and shops the hum of machinery would cease. The failure of automatic and other signal devices would isolate one city from another, by stopping steam railway transportation. Vast confusion and fear would reign in hospitals, in public places and upon our streets.

True, if such a catastrophe continued we would soon have to adjust ourselves to other forms of light, heat and power. But what a recession this would represent in comfort, in convenience, in productivity, in efficiency. You who are veterans in the service of the Westinghouse Electric and Manufacturing Company have seen the rise and development of the electrical arts. You have helped to create the many services that have flowed from them. Few could wish for greater fulfillment.

But figures speak louder than words in describing the progress of the electrical industry in the United States.

Twenty years ago there were 2,000,000 customers for electric light and power in this country. Assuming an average of five persons to each household, ten million people were enjoying in a limited way the benefits of electricity.

Today electricity is serving 19,000,000 homes and approximately 95,000,000 people in this country. Sixty-seven percent of all the homes in the United States are now electrified.

In the last twenty years electricity has revolutionized industry. In 1909 only 18 per cent of America's shops and factories were using electric power. Today 75 per cent of all industry in the United

States is electrified.

Each worker has at his command today the power of three and a half electrical horses, whereas in 1909 he had only .73 of one horse power. Motors in industry today deliver 30,000,000 horse power to the work bench and machine, while in 1909 their total production was 3,500,000.

Twenty years ago there were 466 miles of electrified railway track in the United States. Today we have 4,049 miles of railway track electrified, with projects already under way which will increase this total to more than 6,000 miles.

Twenty years ago there were 41,712,239 incandescent lamps in service in the United States. Today American homes, stores and offices are lighted by 350,000,000 lamps, and it is estimated that a continuous production of 1,000,000 lamps each day is necessary to keep pace with the demand.

The total annual sales of electrical energy twenty years ago amounted to \$175,000,000. Last year the nation's bill for electric current was \$1,754,000,000. In many fields of electrical development in the United States an increase of approximately 1,000 per cent has been experienced in the last twenty years' span.

And now we come to a phase of electrical progress that cannot be expressed in comparative figures.

Electricity has made itself indispensable in the modern home. It has freed the American woman of the worry and drudgery of housework through those ingenious labor-saving devices, the vacuum cleaner, the washing machine, the electric iron. It has given her more time to devote to her children, and pursuits of the mind.

Through a multitude of uses in shop and factory electricity has made the American workman more efficient. It has increased his

earning power, shortened his working day and given him more time for his home, for his garden, for recreation and for cultural development.

Perhaps it is in the latest phase of electrical service, possibly in the most extraordinary achievement of the Twentieth Century -- Radio Broadcasting -- that your own contribution has been greatest.

It was the vision of H. P. Davis that led the Westinghouse Electric and Manufacturing Company to pioneer in the field of broadcasting service. His efforts were encouraged and assisted to fulfillment by the genius of Westinghouse engineers, and by your good friend and my good friend, the late General Guy Tripp, and by E. M. Herr, president of the Westinghouse Electric and Manufacturing Company. The service then conceived, I believe, marks an epoch in cultural development, the possibilities of which are still to be fully demonstrated.

Twenty years ago last Wednesday night (January 23, 1909) a radio station on Nantucket Island in the State of Massachusetts, received the old call of distress, "C Q D", from Jack Binna, wireless operator on the steamship Republic. The message, telling of a collision at sea and human lives in peril, was relayed to ship and shore, and the following day the entire civilized world watched the dramatic race against time and thrilled to the story of the rescue.

Just as that historic event in January, 1909 dramatized for the public mind the service of radio marine communication, so again on November 2, 1920 nation-wide attention was sharply focussed on another phase of radio projection through space - announcement of the late Warren G. Harding's election as President of the United States broadcast from your own station, KBKA.

You well know what followed that eventful night. The world awoke to the realization of another miracle -- direct communication

by the human voice from a single source to a thousand, or a million, listeners-in.

History has no parallel for the development of radio broadcasting as a service to the public, or for the phenomenal growth in the manufacture and distribution of radio equipment as an industrial achievement. Beginning with a start so humble that it found no separate classification in the roll-call of industries, the radio industry ⁱⁿ little more than a decade has developed a business volume in excess of \$600,000,000 annually. The radio jobber and the radio dealer are new and important units in our merchandising system. The retailer who sells radio equipment has taken a permanent lease on Main Street, and the world is his customer. In eight years more than 40,000,000 people in the United States have become radio listeners, and radio receiving sets are in over 10,000,000 homes.

This is much more than an industrial achievement. It is more than a scientific achievement. It is a great public achievement as well. There are many reasons why the general public might have listened to radio with scepticism in the days of crude developmental effort -- days of not so long ago. We all remember the cry, "Get a Horse!", hurled at the unfortunate motorist foundered at the roadside. It required the pageantry of an emperor's visit to the Chicago exposition to arouse any interest in the "toy" -- or telephone -- invented by Alexander Graham Bell. People lined the tracks and laughed at the puffing and ponderous efforts of the first steam locomotives. They called the first steamboat "Fulton's Folly".

Certainly the farm-boy who looked at his first giraffe at the circus and exclaimed, "Shucks! There ain't no such animal", had much more reason to be sceptical of radio -- of sounds borne to him

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through mysterious space, on the invisible wings of the radio waves.

And yet what are the facts? The demonstration of broadcasting upon a regularly organized scale made by Station KDKA found an audience of eager listeners. The phenomena of radio communication inspired an army of amateurs, who, on the air, in the laboratory and in the old family garret, proceeded to contribute what they might to the art. Every development in radio transmission and reception has been quickly recognized by an intelligent public opinion. In fact, so great has been the faith with which radio has been accepted, that public expectation sometimes outruns the immediate possibilities of the art.

Thus it is that the radio industry, encouraged by the needs of public service, has grown and prospered, and that broadcasting, developed by wide public interest, is constantly enlarging its reach and scope. Radio has developed a democracy of musical appreciation. Broadcasting has destroyed the incongruity of a musical program introduced and sponsored by a merchandising message. The listening public has been quick to appreciate that the quality of a program rendered by a great artist of the operatic or concert stage is not influenced by whether it is supported by subscribers of the Metropolitan, or by an automobile manufacturer, seeking good will for his product.

Radio has quickened whatever it has touched. It has a common basis with the phonograph industry in the reproduction of music and speech and their distribution in the home. Its contribution to that industry has been electrical recording, electrical reproduction of records, and acoustical developments of a new art.

Within the last two years radio has crossed the threshold of the motion picture industry. It has brought sound to the screen,

the scenes and sights of the world reproduced on much larger screens and in natural colors -- three-dimensional or stereoscopic projection, if you please, which with color and speech would make the fleeting visions on the screen palpitate with the reality and expression of life -- new educational and cultural services which such great facilities are bound to call into being: all these, I am confident, will be the fruits of your services.

The measure of great service is not what a man can do with his own hands or his own mind for the fulfillment of an immediate end. It is what he can do to multiply himself a hundred, a thousand or a million-fold, in the expression of his power, his influence or his genius. In this lie the great opportunities offered by the electrical arts. And in this lies your justification for a lifetime of service.

I say "we" because I feel that I have some claim to your consideration.

I have that the qualification of membership in your organization is a matter of some importance to me. I have served a long time in the electrical arts and I have been fortunate in being able to contribute to the progress of the industry. I have been able to do this because of the facilities which you have provided. I have been able to do this because of the cooperation which you have given me. I have been able to do this because of the encouragement which you have given me. I have been able to do this because of the confidence which you have placed in me. I have been able to do this because of the respect which you have shown for me. I have been able to do this because of the honor which you have done me. I have been able to do this because of the love which you have shown for me. I have been able to do this because of the friendship which you have shown for me. I have been able to do this because of the respect which you have shown for me. I have been able to do this because of the honor which you have done me. I have been able to do this because of the love which you have shown for me. I have been able to do this because of the friendship which you have shown for me.

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Vision Of Broadcasting Pioneers Changes Destiny Of Radio

FOR the vision and industry that unfolded the great broadcast development, we must thank the officials of the Westinghouse Electric and Manufacturing Company. They first perceived, and translated into practical accomplishment their belief, that radio was not primarily an agency for telegraphic communication between two points. The phenomenon that radio waves traveled equally in all directions long seemed a barrier to progress. Through the conception of H. P. Davis and his associates, this hitherto supposed limitation of radio was transformed into its greatest opportunity for service.

It appears simple as we look on it after ten years of improvement and development to identify radio as an agency for widespread publicity, but how many in 1919 and 1920, had any vision of the great radio audience that exists today? Yet it was the conviction of these pioneers that a revolution in the method of conveying information and entertainment to great masses really could be wrought.

We are indebted for something more to these broadcasting pioneers. It was they who dedicated this new art to the public service. The first broadcast from the station that became KDKA, which was erected after experimental and test work had demonstrated a public interest in broadcasting, was the national election returns of 1920. Thereafter KDKA broadcast the first church service ever to go on the air. It gave the first broadcast of a theatrical program, the first broadcast of tennis matches, the first play-by-play account of a baseball game. Radio has progressed because it has given the public something of real worth and real entertainment value. It would have failed had it been devoted even in those early days to private advantage or selfish power.

Statement by David Sarnoff on the Tenth Anniversary of the opening of the First American radio broadcast station at East Pittsburgh, Pa.

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Port Arthur District: E. D. Coburn, Manager, West End 7th Street, Port Arthur

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AI5 64:21

David Sarnoff

Box 2

ff 29

H. P. Davis, 1868-1931, Papers, 1915-1944

marked copy

History of Broadcasting

*Miss Morse
from
Robt Garland
March 4th 1935*

By
HON. JAMES FRANCIS BURKE
General Counsel,
Republican National Committee

An Address Delivered
at the
TENTH ANNIVERSARY DINNER
given to
Pioneer Radio Broadcasting Station
KDKA
by

Pittsburgh Chamber of Commerce
Pittsburgh, Penna. November 3, 1930

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HISTORY OF BROADCASTING*

Address of
Honorable James Francis Burke
General Counsel,
Republican National Committee

There may be a million gatherings in the world, tonight, but not one of them celebrates an event of greater significance to the human race than the one in whose pleasures you and I are permitted to share at this moment.

The distinguished character of the gathering itself is significant of the importance of the tribute we pay to those who have given to the world one of the most important contributions in the history of science.

From the hour the first sunbeam lighted up the morning of creation until this moment, no invention that ever sprang from the brain of man is destined to have a greater influence on the universe than radio development, and above all its features, broadcasting stands alone.

Nothing equals the range of its energy; nothing equals the number of human beings it has brought under the spell of its influence; and nothing equals the knowledge and pleasure it has distributed among God's children over every part of the globe.

When we realize that those who are being tossed about on ships, as they ride over stormy seas; that those who dwell amid Arctic snows, as well as those who sit about their shacks in the jungles of the tropics, or in the ancient pagodas of far away Cathway,—are all within the range of the messages and the melodies that these little microphones send winging over the world—we stand between admiration and bewilderment in the presence of the magic influence of radio.

To those who have brought KDKA and the broadcasting system which it developed as no other in the world, to their present position of power and prestige in the realms of radio com-

*Address delivered at a banquet commemorating Radio's Tenth Anniversary, Wm. Penn Hotel, Pittsburgh, Pa., November 3, 1930.

munication, the world owes a debt of gratitude which no single generation can ever repay.

TOO EARLY TO APPRECIATE

The importance of their achievements will increase as the years advance and their significance impresses itself upon the minds of men.

Such events are like Mont Blanc among the Alps: When we stand at her base we lose sight of her majestic proportions, but as we wander away towards the banks of Geneva and look back, we gaze with increased wonder and admiration as she stands there undiminished and alone, towering above all others in all her grandeur and all her glory.

And so it is with many of the great events, discoveries, inventions, and outstanding characters in history.

It is not until time has elapsed and the philosopher is given an opportunity to study them in the impartial light of history, that full justice is accorded them.

Their accomplishments are new proof of the fact that it is not for us to limit the degree of knowledge which Providence has made it possible for man to attain in any department of human activity.

Every obstacle he overcomes, every invention that springs from his brain, and every instrument his hand designs is added proof that the mighty procession of human progress that began before we were born will continue after we have faded into dust.

Tonight's event proves that the voice of science is penetrating space and the voice of truth is penetrating the minds and the hearts of men everywhere.

The gentle voice of men whispered here is heard around the world.

What a graceful way radio has of doing things.

By the turn of a dial we are invited into a million American homes today.

As long as we are entertaining or instructive, we remain. The moment we become dull or stupid, or other matters demand attention, the dial turns again and we are silently and unobtrusively ushered out without our knowing it or without our being the least offended. That is radio.

Although ten years is but a moment in the span of the centuries, the world stands transfixed in the presence of the mighty progress a single decade can bring about in the world of science and the habits of a people.

With all that the genius of other nations has produced, nothing compares with the results of American inventors and promoters in this new science and industry.

Our record is one that staggers leaders of thought everywhere.

The fearless thrusting aside of industrial tradition in many ways has been responsible for our abounding progress and economic success.

The watchword of America is "tomorrow". We do not rest upon the past, except as an experience to experiment with and improve upon as we travel onward.

Tradition is cherished as long as it plays an uplifting or profitable part in the communal life of the people, but the moment methods become obsolete as a result of new processes and new inventions, the old ones are discarded and a new era is inaugurated. Our policy is not to rest on traditional experience, because it stifles initiative and encourages stagnation.

Tonight's event is important because while it marks the triumph of individual inventors, it is more significant still because it celebrates the results of those inventions when coupled with the genius of those whom God blessed with the faculty of peering into the future and adapting them to the highest purposes of humanity.

PIONEERS IN PROGRESS

So far as KDKA is concerned, its roster includes the names of those whom history will write on her tablet of fame.

Frank Conrad will be there. E. M. Herr will be there. J. C. McQuiston will be there. Guy E. Tripp will be there. And like Abou Ben Adem, the name of Harry P. Davis, the father of broadcasting, will be there to lead all the rest.

And when the fascinating story of man's greatest triumphs and developments that have captured the imagination and won the gratitude of the world is written, it will include Owen D. Young, M. H. Aylesworth, David Sarnoff, E. M. Herr, and Andrew W. Robertson, who graces this Board tonight.

Here I may be pardoned for a reference to certain events in radio history with which I had the pleasure of being identified in its early days. I mention them now because of their relationship to Western Pennsylvania and some of her leading citizens. To those who recall them they will never lose their dramatic interest.

The night the Steamship "Republic" was sinking in midocean and Jack Binns sent his famous S. O. S. signal of distress wandering over the waves in search of help, which resulted in the rescue of every human being on board as the ship went down, radio wrote the first great story of practical achievement, in the saving of life on the high seas in the hour of peril.

FIRST RADIO LAW

When the rescued passengers landed in New York harbor, four Pittsburghers were among them. They were Mr. and Mrs. James R. Mellon, and Mr. and Mrs. Reuben Miller, Sr. Immediately they telegraphed me at Washington the following impressive message:

"We were enabled to return to American shores today because our lives were saved by the radio. Our experience convinces us that no ship should be permitted to carry passengers from an American port that is not equipped with radio appliances for use in the hour of danger. We urge you to bring about legislation to effect this purpose, and the whole world will be with you in your effort".

I was Whip of the House of Representatives at the time and within twenty-four hours I had introduced and prepared the legislation in compliance with their suggestion.

I secured its passage through the House but was confronted with serious opposition in the Senate, when I finally appealed to President Roosevelt for a special message to Congress, with the final result that my bill was the first piece of legislation affecting radio ever enacted by any parliamentary body in the world.

GIVEN AND WALKER

We would be remiss in our obligation to those who have gone before if, as memory explores the days of pioneering in radio development, we omitted the name of Thomas Hartley Given, who backed his faith by investing a fabulous fortune in order to bring aerial communication within the reach of his fellowmen.

Western Pennsylvania should be proud of the fact that he, in conjunction with Hay Walker,

Jr., invested more millions in radio development than any other two human beings of their time.

It was the daring enterprise and the courageous investments of such pioneers that first made it possible to radiate messages from the hills of Scotland to the heights of Arlington above the nation's capital.

But their pathway was not one of roses. Legal controversies and other obstacles confronted him at almost every step.

After years of litigation and millions of dollars of investments, Hart Given and Hay Walker, Jr., won their final patent victory in the United States Court in December, 1916.

Immediately Mr. Given and I went to New York and conferred with representatives of other radio interests who were planning to extend radio over South America and other parts of the world.

Negotiations were set in motion and Given and Walker had visions of uncounted millions of profits as a result of their long struggle for success.

EFFECT OF WORLD WAR

Just then a startling event happened. At eleven minutes past one o'clock, on the sixth day of April, 1917, President Wilson signed the Declaration of War against Germany, and immediately every radio station and radio apparatus in use in this country was taken over by the government.

What followed?

Radio development as a private enterprise gave way to radio development as one of the most important agencies of government ever developed in a great military emergency.

With characteristic patriotism and unselfishness, every radio inventor and every radio interest in America placed their investments and their instrumentalities at the disposal of the government.

What followed the war is another story.

Given and Walker had lost their great opportunity because of the delay and the remarkable development of radio inventions and appliances which marked the progress of the War.

They had to build anew, but built against fearful odds.

All the inventions of all the geniuses in the army and navy and private life greatly impaired the Given properties and patents.

good stuff



In order to determine the relationship of all parties and the extent to which they had sacrificed their properties to the use of the government, I induced the Secretary of War, the Secretary of the Navy and the Attorney General to establish the Board of Radio experts which spent two years hearing the story of virtually all the geniuses in the radio world.

It was during those hearings that I had the pleasure of first meeting David Sarnoff, who sits at my side tonight.

UNSELFISH SACRIFICE

As the record stands tonight, no more formidable and unselfish contribution to the American government in the World War is to be found than that of the leaders of the radio world headed by Given and Walker, whose individual investment headed all others up to that time.

But broadcasting was still to be developed, although Fessenden transmitted a meager program by wireless telephone on Christmas Eve, 1906.

During the war the Westinghouse Company, at the instance of British government, and on its own account, developed many radio appliances and set up two of the first stations for transmitting radio messages. One was at East Pittsburgh in charge of Harry P. Davis, and the other in the home of Dr. Conrad, several miles away.

While Davis and Conrad were racking their brains to improve their instruments and discover a source of earnings, Mr. Davis read a Pittsburgh department store advertisement offering for sale radio receivers which could be used to receive the programs which Dr. Conrad in the meantime had begun to send out from his home at regular intervals.

This advertisement revealed to them the first possibility of realizing the dream of their lifetime.

BIRTH OF BROADCASTING

Broadcasting was to become a reality.

It was to be born and baptised in 1920 and Harry P. Davis was to be its daddy.

FIRST NEWS BROADCAST

The Broadcasting station at East Pittsburgh was established.

At the same time that public spirited citizen, Arthur E. Braun, who had been associated with

Mr. Given in his early enterprises, having become publisher of the Pittsburgh Post and Sun, immediately undertook to develop broadcasting news announcements, and on November 2, 1920, ten years ago last night, the first news broadcast in the world reached the people through the Pittsburgh Post returns of the Harding Presidential election, which were telephoned to East Pittsburgh and broadcast from KDKA.

Within a year the Westinghouse Company had established WBZ at Springfield, Massachusetts, WJZ at Newark, New Jersey, and KYW at Chicago, Illinois.

Since then what a transformation has been wrought.

I can recall, as though it were yesterday, wending my way through a quarter of a mile of machinery and going up in a freight elevator to the cabin that represented a railroad caboose on the roof of the Westinghouse works at East Pittsburgh, to broadcast my first radio address; and later going to the little canvas-lined room of the Pittsburgh Post on Wood Street, to broadcast the memorial tribute which I was asked to deliver the night following President Harding's death.

FIRST INTERNATIONAL GREETING

On the night of December 31, 1923, New Year's Eve, KDKA transmitted to Manchester, England, the first international message in the form of a New Year's greeting from America to the people of England. That message was re-broadcast on the entire system of the British Broadcasting Company.

Meantime, broadcasting was improving by the hour.

By December, 1924, KDKA had transmitted a short-wave program to South Africa and Australia.

Tonight its messages are capable of encircling the globe.

At one stage of its development, what I conceived to be a brilliant scheme came to me, one by which all radio sets would be furnished a key that would enable them to tune in on any one of the four large broadcasting stations by paying \$1.00 a year for the service.

I discussed the matter with Professor Kintner and other experts in the radio world.

British !! ?

MY DREAM SHATTERED

Like Mulberry Sellers, I saw a million radios paying a million dollars a year for broadcasting service.

Sellers had a wash for sore eyes at \$1.00 a bottle, and as he declared, "millions of people have sore eyes; there must be millions in it".

But we afterwards discovered that once a radio message went out there was no way to prevent anyone from picking it up, so my millions never materialized. My dream was shattered.

But radio went on its way conquering the world.

FIRST RELIGIOUS BROADCAST

To the City of Pittsburgh the world owes the further distinction of broadcasting the first banquet, as well as the first religious service in the world's history.

On January 2, 1921, from Calvary Episcopal Church, Dr. Van Etten broadcast the first sermon predicated on a text chosen by our distinguished townsman, Robert Garland, father of daylight saving in Pittsburgh.

"Canst Thou send forth the lightnings that they may go and say unto Thee, 'here we are?'"

From Job

How pre-eminently it also fits our picture tonight to recall that from the Duquesne Club in this city the first banquet speech was broadcast in the form of an appeal for relief for the starving women and children of Europe.

That address was delivered on the evening of January 15, 1921 by that disciple of good deeds, that friend of humanity who occupies the White House tonight,—Herbert Hoover.

FROM A PIGMY TO A GIANT

The growth of radio power and precision is illustrated by the fact that the original transmitting appliances before which I stood weighed about 500 pounds, while the apparatus at KDKA tonight weighs 328,000 pounds.

The power used in the original station was one-half a kilowatt, while that used tonight is multiplied 3,000 times.

The first radio appliance transmitter and its accessories covered the space of a single table. Tonight it covers ten thousand square feet of space.

KDKA's first audience comprised less than one hundred people. Tonight fifty million people listen in simultaneously to broadcasting programs.

Yes, my friends, the dream of yesterday has become today's astounding reality. The dwarf has become a giant.

The voice of man that once reached only those in our immediate presence has penetrated and annihilated unheard of distances.

From lip to ear, from ship to ship, from State to State, from nation to nation, it falls upon the eager ears of millions on its journey around the world.

What does it all portend?

The answer is simple. Every agency that brings the world closer together, that increases knowledge, that multiplies and refines our pleasures and our pastimes, that drives ignorance, superstition, darkness and human hatreds from the great highway of humanity as it travels down the years, marks the improvement of today over the seven thousand years of yesterday.

RADIO ENLIGHTENING THE WORLD

An Address

By

Rev. S. Parkes Cadman, D.D., LL. D.

Radio Minister

of

The Federal Council of the Churches
of Christ in America

Delivered

on the Tenth Anniversary of the

FIRST BROADCAST

OF CHURCH SERVICES

Syria Mosque - - - - Pittsburgh, Penna.

Sunday, January 4, 1931

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RADIO ENLIGHTENING THE WORLD

Rev. S. Parkes Cadman, D.D., LL. D.
Radio Minister
of
The Federal Council of the Churches
of Christ in America

8

I.

I suppose that everyone who is not so incurably pessimistic as to contend with Schopenhaur that our existence here is but a useless disturbance of the repose of nothing, will assume that the world *can* be enlightened. Certainly the evidences of its material progress are too palpable to be denied. Man's mastery over his environment proceeds apace. Scientific knowledge is entitled to a high place as one of the chief factors for the betterment of humanity. But no improvements in physical well being can be regarded as satisfactory "unless they are balanced by a corresponding elevation in man's intellectual and ethical realm." If the religious ministries of Radio whose beginnings we commemorate are fulfilling their real mission, they convince millions of "listeners in" that "man shall not live by bread alone, but by every word that proceedeth out of the mouth of God." (St. Matthew iv:4). Our spirits tentacles bind us to the messages transmitted through viewless space by means of this miraculous instrumentality. Those messages inform us that for man the stars revolve, the air stirs, the wind blows, the morning dawns, the evening shadows fall. Through all he sees, and infinitely more he cannot see, runs the spinal cord of an ascertainable purpose. By his conceptions of things visible his soul feeds on things invisible. This modern marvel of audition demonstrates the truth that though in comparison with more magnificent arrays of matter, man appears to be an insignificant and fortuitous atom, the invincible ramparts of his being conceal a creative force which brings the farthest orbs of heaven within his visioned dominion.

▲
A church service was broadcast for the first time in history on January 2, 1921, when the services of the Calvary Church, Pittsburgh, Penna., conducted by Rev. E. J. van Etten, D. D., Pastor, were transmitted over Westinghouse Station KDKA, Pioneer Broadcasting Station of the World.
▼

It is notable that when on January the second, 1921, the daring experiment of broadcasting religious services was inaugurated in the Calvary Episcopal Church, of this great city, the task of "Enlightening the World" seemed well nigh hopeless. And if we are, as I believe, more competent to discharge it now than we were then, who can determine the obligation which this nation or even the world owes to my reverend brother, Dr. E. J. van Etten, our first Radio minister in the United States; and also to his esteemed colleagues, in the launching of so beneficent an enterprise? A decade ago the peoples of the earth were still morally paralyzed by the cataclysmic shock of the great War. Scholars and philosophers who wrote and acted as though history was written in terms of physical force occupied the front of the stage. The distinctions of morality and wisdom were declared to be nothing more than by-products of the chemistries of the body. Those qualities which lift man forever above the brute were confounded with his flesh and blood existence. The purely economic factor was hailed as the governing force of social movements; and one major nation, Russia, committed itself wholesale to this materialistic theory. At that hour, when our spiritual fortunes were at a low ebb, the Radio was consecrated to its noblest undertaking as a religious institution by these devoted servants of the public good whom we honor today.

Since then it has announced in the divers tones of Jew, Catholic and Protestant that the individual deludes himself who dreams that the non-personal can produce the personal, or the non-moral the moral. It has pricked the glistening bubbles of fiction which portrayed a social or political Utopia as the sole paradise worthy of human effort. It has showed by meditation, prayer, worship and praise that no Atlantis of a merely temporal kind can end man's aspirations, or appease his hunger for "the things of the Spirit". However skilfully imagined, these blissful abodes of fancy cannot silence the soul's imperative questionings, nor solve its hardest problems, nor engage its superior functions. The unsectarian Radio, acting in support of pulpits of all creeds and denominations, has helped to clarify the moral and spiritual ideals of the Republic. It has given them a larger set-

ting. It has elucidated the secret of all religions by stressing the justice and the love of the everlasting God. It has dwelt upon the fact that through His creative will every human creature is the possessor of potential infinitudes, by virtue of which man finds a limit of moral development only to be inspired to surpass it.

The first aid Radio thus rendered a decade ago has been amply vindicated. Recent scientific investigations have struck new notes of uncertainty, modesty and wonder in the presence of the marvels of the universe. Seldom, if ever, has there been a more rapid retreat from mechanistic and materialistic ideas of yesterday than the one we now witness. The Radio may have no share in the honors paid to the discoveries of Einstein, Eddington, Millikan, and other contemporary princes of science. But it has popularized the results of their research, prepared the soil for the sowers of vital seed, and persuaded numberless multitudes that the ethereal realm beyond the range of sense is life's glorious quest and compensation. Those who would dissipate their fears, ease their doubts, stay the lashings of a violated conscience, and overcome the irrational impulses of the lower selfhood, have had to return to religion. Why not, since we are all by nature religious, and can no more help being so than we can help being social or political in our make up?

II.

Again, the general indorsement of religious Radio has exceeded the most sanguine expectations of its pioneers. Not a few thoughtful persons to whom God's honor is dear regarded its initiation with apprehension. They anticipated that the broadcasting of different ideas about religion would excite the fruitless controversy which has so often thwarted spiritual culture. But until now the outcome has crowned the work. Children of Israel and of Christianity unite here to render homage to "the Giver of every good and perfect gift", who carries on the majority of His purposes by the method of evolution. The labors of science and the aspirations of faith here meet together, for the cultivation of love of the Eternal Father, love of the whole Brotherhood of Man, love of the family, and love of the nation. One catches

now and then in this glad chorus of fraternal feeling the harsh dissonance of that shallow cynicism which has invaded and poisoned "the sanctities" of domestic and public life. On the other hand, there is something inspiring in the persistence of faith, hope and love in our kind. These divine elements have survived, despite their contact with the world's bloodstained ways. The recent Christmastide revealed their invincible hold afresh. It was religious Radio's harvest season. Then and there the discordant expressions of the soured minority which has trusted in the wrong things and the wrong leaders were silenced. Men and women shadowed by life's somber realities once more became as little children. Many found the simple trust and loyalty they supposed they had lost forever. Upon many more who had never experienced these graces they came as a heavenly benediction. Seldom has the Kingdom of God, of Christ, of the Prophets and the Apostles, been more visible to the hearts of millions than it was during that Day of days; the Christmas of 1930. The all prevailing sway of neighborly benevolence testified to a belief in God, and in the saving virtues of humanity, beyond the reach of the scorner or the cynic.

The broadcasting of unsectarian religious services promoted this constructive benevolence in the citizenship of Canada and the United States. The entire northern continent felt the healthy stir of daily and weekly addresses of a definitely spiritual kind. Millions have been made to realize that while religion has manifold forms, it has but One Eternal Voice; the Voice of justice, love and sacrificial service. Since almost every second home in a vast expanse of territory is linked with Broadcasting Stations, the significance of such a ministry can scarcely be exaggerated. A single utterance, on occasions of high import, can find its response in myriads of souls. Here the influence of masters of the microphone becomes immeasurable. They command the attention of the heedless as well as the heedful, and ask for the verdict of saints and sinners alike. The amenities of hope, courage and fortitude are injected into life's lowliest routines. No human lot is so obscure that it cannot be illuminated. The sick, the sad, the isolated, the lonely, the desolate; the tired housewife, the discouraged

farmer, the factory operative in the pauses of his toil, the prodigal distant from his home center, the coastguardsman patrolling the storm torn beach, the lighthouse keeper in his ceaseless vigil, the sailor on the Seven Seas; share with their fellow men and women of scholastic centers and metropolitan areas the choicest music, the thoughts and the words of God's anointed servants in song or speech.

The people themselves are present in realistic intensity at spiritual ceremonials and functions which shape a nation's destiny. Severe problems are solved, vexing questions answered, formidable difficulties removed. The light that never was on sea or land before now flashes across the oceans, hills and valleys. No longer is it necessary for unprivileged minds, whether old or young, to grope in darkness through tangles of misrepresentation and suppression, or to misconceive Jew and Christian, confounding God's friends with His foes. To be sure, interpretations of religion which necessarily expound its central values may not suit the hide bound creedalist who loves his dogmatic system more than he loves God's Brotherhood on earth. But such interpretations are hailed by the majority with unspeakable relief and grateful appreciation. Ignorance and prejudice have gone down before them like a bowed wall and a tottering fence. The splendid Theism of Israel, the historic witness of Catholicism, the reverence of Anglicanism, the liberalizing strength of Protestantism, blend in a symphonic harmony upon the Radio as they never blended before its appearance.

III.

If religion has found a deeper and more lasting hold on the nation, no less has its increased range tended toward man's social consolidation. Radio laughs at the geographical boundaries which blind nationalism adores. It describes the larger circles which take in all tongues and kindreds. It has become the pathfinder for international comity and cooperation, and in discharging this office, it sounds the death knell of tribalism. On the first day of 1931 it sped its salutations around the globe. The best brains of Great Britain, France, Germany and Italy were hopeful for the world's future at the stroke of midnight last Wednesday. We are the

key nation of the race for the time being. The inescapable responsibilities of international peace and good will are driven home on the commonalty of our Republic. With them, rather than State officials and diplomats, rest the paramount issues of the world's security and tranquility, and that it shall become less anarchistic and more lawful for their children.

Since Democracy is the ruling formula of the period, broadcasting provides for the first time the educational facilities which bestow upon public opinion a monarchy armed with moralized intelligence. Facists and Communists alike are fiercely arrayed against Democracy. Its lovers frequently defend or praise it apologetically. The fear which has "a thousand eyes to plague its beating heart" haunts some of its staunchest admirers. If there is one duty more imperative than another it is that the Radio preacher shall tell his unseen hearers what Democracy is as an ideal, and how it can be realized in practice. Its root meaning is "an organized society in which everyone is treated politically, socially, and religiously as a free, equal and reasonable individual." Hitherto we have acted as if freedom to be this would take care of itself, provided a man or woman occasionally made a cross on a ballot. Is it any wonder so many citizens have not had the opportunity of implementing their citizenship because they do not know the questions submitted to them for rational settlement?

Now, under the simple letters of the Radio's lanes of transmission, is concealed a gigantic instrument that I have ventured to describe as an *Institution*, the measureless capacities of which have scarcely begun. It is immensely popular, independent of the Press, so available that the Arctic Circles, the Tropical and the Temperate Zones can use it, and every cabin in the heart of Africa or South America can be attached to it. With these tremendous advantages, the obligations of those who employ them run collaterally, and must be discharged if we would vindicate our type of civilization before mankind. Alien types cannot be suppressed by force. The only method for their extinction is that of argument and persuasion. For Radio makes us kinsfolk of mankind. Its magic strains convey either good or evil, truth or lies, love or hate, peace or war. Moscow already speaks to

Calcutta, and will be heard here in the near future. Mussolini seized its means last Thursday to tell the Western peoples that he was for order and law between nations as well as within them.

Therefore, those who control the microphone wield a power which may have to be further regulated. "It is the creative power of a programme for folly or wisdom, superstition or knowledge, barbarism or culture; or else for the "no man's land" between these respective conditions in which too many of us are content to linger." We cannot forbid the discussion of controversial subjects. We cannot bar the door against what Russia dreams or India demands. Silence on their aspirations is impossible. Timidity is a fatal policy. If we have, as we believe, the ripest, wisest results of religion, and of rule and government, we should not cease our labors until the light which breaks on us has broken everywhere. The dull, boring utterances of shifty politics and interested propaganda must lose their charm, if they ever had it. They betray Democracy, and the failures we lament in it are traceable to their lack of faith in genuine Democracy. "Safety first," is an excellent slogan for pedestrians and motorists, but it is despicable in professed advocates of justice and righteousness. They have to regard their loins and relight their lamps, remembering that the world has shrunk to the dimensions of one audience chamber since the "spread net of speeded intercourse" was spun about it.

I took my time on New Year's night from Big Ben in Westminster, London. I have heard with you the solemn ratification of international treaties made in once far distant capitals. The words of Britain's King Emperor and of our President encircle the earth at the velocity of light. Social and cultural life for the first time has a living pulse behind it which beats everywhere. I wonder what a supernal visitor would define as the chief need of the nations occupying this tiny planet, as he surveyed their armed frontiers, and what is worse, their truculent divisions, their conflicting interests, and their militant tendencies. Would he not tell us that unless they are to perish, these nations must have an integrating element?

This is exactly what the Radio furnishes. It can achieve desirable results which neither philosophic reflection nor the printed page have achieved. It can index the outlook of the race which statesmen have to apprehend. It can familiarize the public at large with the work of Church and State. It can be so detached, impartial and judicial that all classes and all shades of opinion shall trust its deliverances. It can cry aloud and spare not against entrenched iniquities. It can usher in the nobler race which shall yet arise, with the baptism of a greater humanitarianism fresh upon it, and the flame of a higher freedom in its vision.

Let us be of good courage and play the man in this religious ministry of the Radio. It has given us an earnest of its future. Those who manage it have evinced a generous and sympathetic temper. They ardently desire the larger works of Broadcasting in spiritual things. They insist that sectarian feuds have no place in universal transmissions.

Nor do I doubt for a moment that in this great and marvelous gift of God, vouchsafed through His servants of the scientific realm, we are drawing nearer to the oneness of man; the oneness He has purposed, and concerning which He has never left Himself without a witness. For the Radio is a token, that "earnest struggling and disrupted humanity shall finally become One Family, moved by One Spirit and forever bearing One Name."

History of Broadcasting

By
HON. JAMES FRANCIS BURKE
General Counsel,
Republican National Committee

An Address Delivered
at the
TENTH ANNIVERSARY DINNER
given to
Pioneer Radio Broadcasting Station
KDKA
by
Pittsburgh Chamber of Commerce
Pittsburgh, Penna. November 3, 1930

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HISTORY OF BROADCASTING*

Address of

Honorable James Francis Burke
General Counsel,
Republican National Committee

There may be a million gatherings in the world, tonight, but not one of them celebrates an event of greater significance to the human race than the one in whose pleasures you and I are permitted to share at this moment.

The distinguished character of the gathering itself is significant of the importance of the tribute we pay to those who have given to the world one of the most important contributions in the history of science.

From the hour the first sunbeam lighted up the morning of creation until this moment, no invention that ever sprang from the brain of man is destined to have a greater influence on the universe than radio development, and above all its features, broadcasting stands alone.

Nothing equals the range of its energy; nothing equals the number of human beings it has brought under the spell of its influence; and nothing equals the knowledge and pleasure it has distributed among God's children over every part of the globe.

When we realize that those who are being tossed about on ships, as they ride over stormy seas; that those who dwell amid Arctic snows, as well as those who sit about their shacks in the jungles of the tropics, or in the ancient pagodas of far away Cathway,—are all within the range of the messages and the melodies that these little microphones send winging over the world—we stand between admiration and bewilderment in the presence of the magic influence of radio.

To those who have brought KDKA and the broadcasting system which it developed as no other in the world, to their present position of power and prestige in the realms of radio com-

*Address delivered at a banquet commemorating Radio's Tenth Anniversary, Wm. Penn Hotel, Pittsburgh, Pa., November 3, 1930.

munication, the world owes a debt of gratitude which no single generation can ever repay.

TOO EARLY TO APPRECIATE

The importance of their achievements will increase as the years advance and their significance impresses itself upon the minds of men.

Such events are like Mont Blanc among the Alps. When we stand at her base we lose sight of her majestic proportions, but as we wander away towards the banks of Geneva and look back, we gaze with increased wonder and admiration as she stands there undiminished and alone, towering above all others in all her grandeur and all her glory.

And so it is with many of the great events, discoveries, inventions, and outstanding characters in history.

It is not until time has elapsed and the philosopher is given an opportunity to study them in the impartial light of history, that full justice is accorded them.

Their accomplishments are new proof of the fact that it is not for us to limit the degree of knowledge which Providence has made it possible for man to attain in any department of human activity.

Every obstacle he overcomes, every invention that springs from his brain, and every instrument his hand designs is added proof that the mighty procession of human progress that began before we were born will continue after we have faded into dust.

Tonight's event proves that the voice of science is penetrating space and the voice of truth is penetrating the minds and the hearts of men everywhere.

The gentle voice of men whispered here is heard around the world.

What a graceful way radio has of doing things.

By the turn of a dial we are invited into a million American homes today.

As long as we are entertaining or instructive, we remain. The moment we become dull or stupid, or other matters demand attention, the dial turns again and we are silently and unobtrusively ushered out without our knowing it or without our being the least offended. That is radio.

Although ten years is but a moment in the span of the centuries, the world stands transfixed in the presence of the mighty progress a single decade can bring about in the world of science and the habits of a people.

With all that the genius of other nations has produced, nothing compares with the results of American inventors and promoters in this new science and industry.

Our record is one that staggers leaders of thought everywhere.

The fearless thrusting aside of industrial tradition in many ways has been responsible for our abounding progress and economic success.

The watchword of America is "tomorrow". We do not rest upon the past, except as an experience to experiment with and improve upon as we travel onward.

Tradition is cherished as long as it plays an uplifting or profitable part in the communal life of the people, but the moment methods become obsolete as a result of new processes and new inventions, the old ones are discarded and a new era is inaugurated. Our policy is not to rest on traditional experience, because it stifles initiative and encourages stagnation.

Tonight's event is important because while it marks the triumph of individual inventors, it is more significant still because it celebrates the results of those inventions when coupled with the genius of those whom God blessed with the faculty of peering into the future and adapting them to the highest purposes of humanity.

PIONEERS IN PROGRESS

So far as KDKA is concerned, its roster includes the names of those whom history will write on her tablet of fame.

Frank Conrad will be there. E. M. Herr will be there. J. C. McQuiston will be there. Guy E. Tripp will be there. And like Abou Ben Adem, the name of Harry P. Davis, the father of broadcasting, will be there to lead all the rest.

And when the fascinating story of man's greatest triumphs and developments that have captured the imagination and won the gratitude of the world is written, it will include Owen D. Young, M. H. Aylesworth, David Sarnoff, E. M. Herr, and Andrew W. Robertson, who graces this Board tonight.

Here I may be pardoned for a reference to certain events in radio history with which I had the pleasure of being identified in its early days. I mention them now because of their relationship to Western Pennsylvania and some of her leading citizens. To those who recall them they will never lose their dramatic interest.

The night the Steamship "Republic" was sinking in midocean and Jack Binns sent his famous S. O. S. signal of distress wandering over the waves in search of help, which resulted in the rescue of every human being on board as the ship went down, radio wrote the first great story of practical achievement, in the saving of life on the high seas in the hour of peril.

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Negotiations were set in motion and Given and Walker had visions of uncounted millions of profits as a result of their long struggle for success.

EFFECT OF WORLD WAR

Just then a startling event happened. At eleven minutes past one o'clock, on the sixth day of April, 1917, President Wilson signed the Declaration of War against Germany, and immediately every radio station and radio apparatus in use in this country was taken over by the government.

What followed?

Radio development as a private enterprise gave way to radio development as one of the most important agencies of government ever developed in a great military emergency.

With characteristic patriotism and unselfishness, every radio inventor and every radio interest in America placed their investments and their instrumentalities at the disposal of the government.

What followed the war is another story.

Given and Walker had lost their great opportunity because of the delay and the remarkable development of radio inventions and appliances which marked the progress of the War.

They had to build anew, but built against fearful odds.

All the inventions of all the geniuses in the army and navy and private life greatly impaired the Given properties and patents.

In order to determine the relationship of all parties and the extent to which they had sacrificed their properties to the use of the government, I induced the Secretary of War, the Secretary of the Navy and the Attorney General to establish the Board of Radio experts which spent two years hearing the story of virtually all the geniuses in the radio world.

It was during those hearings that I had the pleasure of first meeting David Sarnoff, who sits at my side tonight.

UNSELFISH SACRIFICE

As the record stands tonight, no more formidable and unselfish contribution to the American government in the World War is to be found than that of the leaders of the radio world headed by Given and Walker, whose individual investment headed all others up to that time.

But broadcasting was still to be developed, although Fessenden transmitted a meager program by wireless telephone on Christmas Eve, 1906.

During the war the Westinghouse Company, at the instance of British government, and on its own account, developed many radio appliances and set up two of the first stations for transmitting radio messages. One was at East Pittsburgh in charge of Harry P. Davis, and the other in the home of Dr. Conrad, several miles away.

While Davis and Conrad were racking their brains to improve their instruments and discover a source of earnings, Mr. Davis read a Pittsburgh department store advertisement offering for sale radio receivers which could be used to receive the programs which Dr. Conrad in the meantime had begun to send out from his home at regular intervals.

This advertisement revealed to them the first possibility of realizing the dream of their lifetime.

BIRTH OF BROADCASTING

Broadcasting was to become a reality.

It was to be born and baptised in 1920 and Harry P. Davis was to be its daddy.

FIRST NEWS BROADCAST

The Broadcasting station at East Pittsburgh was established.

At the same time that public spirited citizen, Arthur E. Braun, who had been associated with

Mr. Given in his early enterprises, having become publisher of the Pittsburgh Post and Sun, immediately undertook to develop broadcasting news announcements, and on November 2, 1920, ten years ago last night, the first news broadcast in the world reached the people through the Pittsburgh Post returns of the Harding Presidential election, which were telephoned to East Pittsburgh and broadcast from KDKA.

Within a year the Westinghouse Company had established WBZ at Springfield, Massachusetts, WJZ at Newark, New Jersey; and KYW at Chicago, Illinois.

Since then what a transformation has been wrought.

I can recall, as though it were yesterday, wending my way through a quarter of a mile of machinery and going up in a freight elevator to the cabin that represented a railroad caboose on the roof of the Westinghouse works at East Pittsburgh, to broadcast my first radio address; and later going to the little canvas-lined room of the Pittsburgh Post on Wood Street, to broadcast the memorial tribute which I was asked to deliver the night following President Harding's death.

FIRST INTERNATIONAL GREETING

On the night of December 31, 1923, New Year's Eve, KDKA transmitted to Manchester, England, the first international message in the form of a New Year's greeting from America to the people of England. That message was re-broadcast on the entire system of the British Broadcasting Company.

Meantime, broadcasting was improving by the hour.

By December, 1924, KDKA had transmitted a short-wave program to South Africa and Australia.

Tonight its messages are capable of encircling the globe.

At one stage of its development, what I conceived to be a brilliant scheme came to me, one by which all radio sets would be furnished a key that would enable them to tune in on any one of the four large broadcasting stations by paying \$1.00 a year for the service.

I discussed the matter with Professor Kintner and other experts in the radio world.

MY DREAM SHATTERED

Like Mulberry Sellers, I saw a million radios paying a million dollars a year for broadcasting service.

Sellers had a wash for sore eyes at \$1.00 a bottle, and as he declared, "millions of people have sore eyes; there must be millions in it".

But we afterwards discovered that once a radio message went out there was no way to prevent anyone from picking it up, so my millions never materialized. My dream was shattered.

But radio went on its way conquering the world.

FIRST RELIGIOUS BROADCAST

To the City of Pittsburgh the world owes the further distinction of broadcasting the first banquet, as well as the first religious service in the world's history.

On January 2, 1920, from Calvary Episcopal Church, Dr. Van Etten broadcast the first sermon predicated on a text chosen by our distinguished townsman, Robert Garland, father of daylight saving in Pittsburgh.

"Canst Thou send forth the lightnings that they may go and say unto Thee, 'here we are?'"

How pre-eminently it also fits our picture tonight to recall that from the Duquesne Club in this city the first banquet speech was broadcast in the form of an appeal for relief for the starving women and children of Europe.

That address was delivered on the evening of January 15, 1921 by that disciple of good deeds, that friend of humanity who occupies the White House tonight,—Herbert Hoover.

FROM A PIGMY TO A GIANT

The growth of radio power and precision is illustrated by the fact that the original transmitting appliances before which I stood weighed about 500 pounds, while the apparatus at KDKA tonight weighs 328,000 pounds.

The power used in the original station was one-half a kilowatt, while that used tonight is multiplied 3,000 times.

The first radio appliance transmitter and its accessories covered the space of a single table. Tonight it covers ten thousand square feet of space.

KDKA's first audience comprised less than one hundred people. Tonight fifty million people listen in simultaneously to broadcasting programs.

Yes, my friends, the dream of yesterday has become today's astounding reality. The dwarf has become a giant.

The voice of man that once reached only those in our immediate presence has penetrated and annihilated unheard of distances.

From lip to ear, from ship to ship, from State to State, from nation to nation, it falls upon the eager ears of millions on its journey around the world.

What does it all portend?

The answer is simple. Every agency that brings the world closer together, that increases knowledge, that multiplies and refines our pleasures and our pastimes, that drives ignorance, superstition, darkness and human hatreds from the great highway of humanity as it travels down the years, marks the improvement of today over the seven thousand years of yesterday.

The FEDERAL
RADIO
COMMISSION

By
MAJ. GEN. C. McK. SALTZMAN
U. S. Army, Retired,
Chairman,
Federal Radio Commission.

An Address Delivered
at the
TENTH ANNIVERSARY DINNER
given to
Pioneer Radio Broadcasting Station
KDKA
by
Pittsburgh Chamber of Commerce
Pittsburgh, Penna. November 3, 1930

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THE FEDERAL RADIO COMMISSION*

Major General C. McK. Saltzman,
U. S. Army, Retired,
Chairman, Federal Radio Commission

It is a great pleasure to participate tonight in this celebration of the tenth anniversary of the establishment of KDKA.

Broadcasting stations in the United States today are all on a competitive basis, but despite this competition I know that all broadcasters of stations great and small join in congratulations to KDKA for its achievements.

And I feel that all wish to extend their felicitations to Mr. Davis and Mr. Conrad and Mr. Kintner for their wonderful work in launching a great instrumentality. An instrumentality by which KDKA is today carrying entertainment and education and culture into the homes of millions of our people; an instrumentality which is carrying wonderful programs and international good will to the peoples of other lands; an instrumentality which has so appealed to technical research groups as to bring about a remarkable development in all other forms of radio; an instrumentality that launched a new industry that has produced millions of dollars' worth of a new equipment.

Looking back at it all, the achievements of KDKA present a very pleasing picture—a picture that inspires. However, there is one dark side to it—one dark spot. Let me speak softly. The development of radio broadcasting was responsible for the creation of the Federal Radio Commission.

Let us hope that KDKA is forgiven for that. At any rate, it is certainly true that it made possible a host of difficult and knotty problems for that Commission, for the administration of the use of broadcasting frequencies is a job that no person should select as a pleasing pastime. It is no job for a nervous woman. The perplexities of the problems involved are not confined to our own country. Just a year ago, while at The Hague, I took lunch one day with a high official of a European nation, a nation large enough to have an Army, a Navy, a Parliament and a National debt. I knew that he was in

*Address given at Radio's Tenth Anniversary, Wm. Penn Hotel, Pittsburgh, Pa., Monday, November 3, 1930.

charge of the communication systems of his country and I asked him if the radio broadcasting operations of his country presented any problems. With gesticulations and shrugs of the shoulders, he made the most effective use of the best English words he could gather together to make me understand that radio broadcasting in his country brought to him more problems, worries, perplexities, troubles and loss of sleep than all the telegraph, telephone and other communication services of his country combined. Feeling a brotherly interest, I asked him how many broadcasting stations existed in his country. He said "Three". Imagine the degree of sympathy from a brother radio official from a land having over 600 such stations.

Although we popularly associate KDKA with radio broadcasting, technical men have other thoughts. They think of remarkable results in relay broadcasting reaching far away regions of the globe; they think of advanced research work in the improvement of broadcasting antennae; they think of other research work which is advancing the art.

And as we realize that many new radio projects are just around the corner in the laboratory and wonder at what remarkable and astounding radio developments will be in common use on the twentieth and thirtieth anniversary of this day, we wonder just how much KDKA had in starting this remarkable train of events.

The general public has an idea that the Federal Radio Commission devotes its whole time to radio broadcasting. I wish this were true. But actually, broadcasting is only one of the Radio Commission's large family of children, some of which are unruly, some backward and some requiring much attention.

The Commission also has jurisdiction over the frequencies used by all United States stations sending messages by radio telephone and telegraph in this country and to foreign lands; the frequencies used by our merchant marine; the frequencies used to guide, control and direct our aircraft; the frequencies used by our amateurs; the frequencies used for experimentation, and for a long list of other uses.

Some very grave responsibilities rest upon the Federal Radio Commission in its administration of radio in our country. No other instru-

mentality has such an appeal to our people. Considering it not only from the standpoint of broadcasting, but also from the viewpoint of communication, aviation, marine, and other uses, it has today not only a distinct bearing on Industry and Commerce, pleasure and entertainment and education, but also on the very home life of our people.

Regarding it thus as an important feature in our national life, Congress took great pains to pass legislation regarding its use. Congress imposed procedure, limitations, restrictions, and conditions with a view to safeguarding and regulating its use. The law containing these provisions is a wise one. As the art progresses, changes and amendments will no doubt be made, but as time goes on, it will show the wisdom of the fundamental provisions of the Radio Act of 1927. Congress in this law indicated its views as to the use of this agency by our people. Congress said it should not fall into the hands of a monopoly—that it should not be concentrated or limited to one section of the country—that no special consideration be given to any particular corporation or society or agency, large or small. It is quite evident that Congress desired it to be so used as to be of the greatest good to the greatest number of people.

To bring this about Congress authorized a Commission to carry out its wishes as expressed in the law. And again I say that a very grave responsibility rests on that Commission. It has in its trust a wonderful agency belonging to the people, and our people have a right to demand the most careful, just, and righteous administration of that trust.

How can the Federal Radio Commission fulfill that trust to the people? It, too, must have a Code of Ethics and a standard of practice and procedure built on honesty and justice. The Commission has valuable franchises and privileges to grant. No court in the land need be more circumspect and exacting. More and more, as the days go by, is the Commission confronted with serious problems of engineering and law, but both of these are based on principles established by the Almighty who deals only in Honesty and Justice.

Honesty and Justice. Honesty and Justice to the broadcaster—to the big fellow and the little one—to the corporation that builds the 50 KW

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Honesty and Justice. Honesty and Justice to the broadcaster—to the big fellow and the little one—to the corporation that builds the 50 KW

station and to the fifty watter in the farm belt. Honesty and Justice to the research group spending thousands of dollars in exploring unknown fields of the spectrum for the development of the art, and Honesty and Justice to the amateur experimenting with a home-made hay wire set. Honesty and Justice to the applicant who seeks to establish a new station; Honesty and Justice to the licensee who already has a station on the frequency sought. Above all, Honesty and Justice to the Listening Public—our people—for whom Congress framed the law; Honesty and Justice to all and all in terms of the Radio Act of 1927.

The Golden Rule taught you by your Mother and taught me by my Mother applies to the operation of the Federal Radio Commission as well as to any other body in this land.

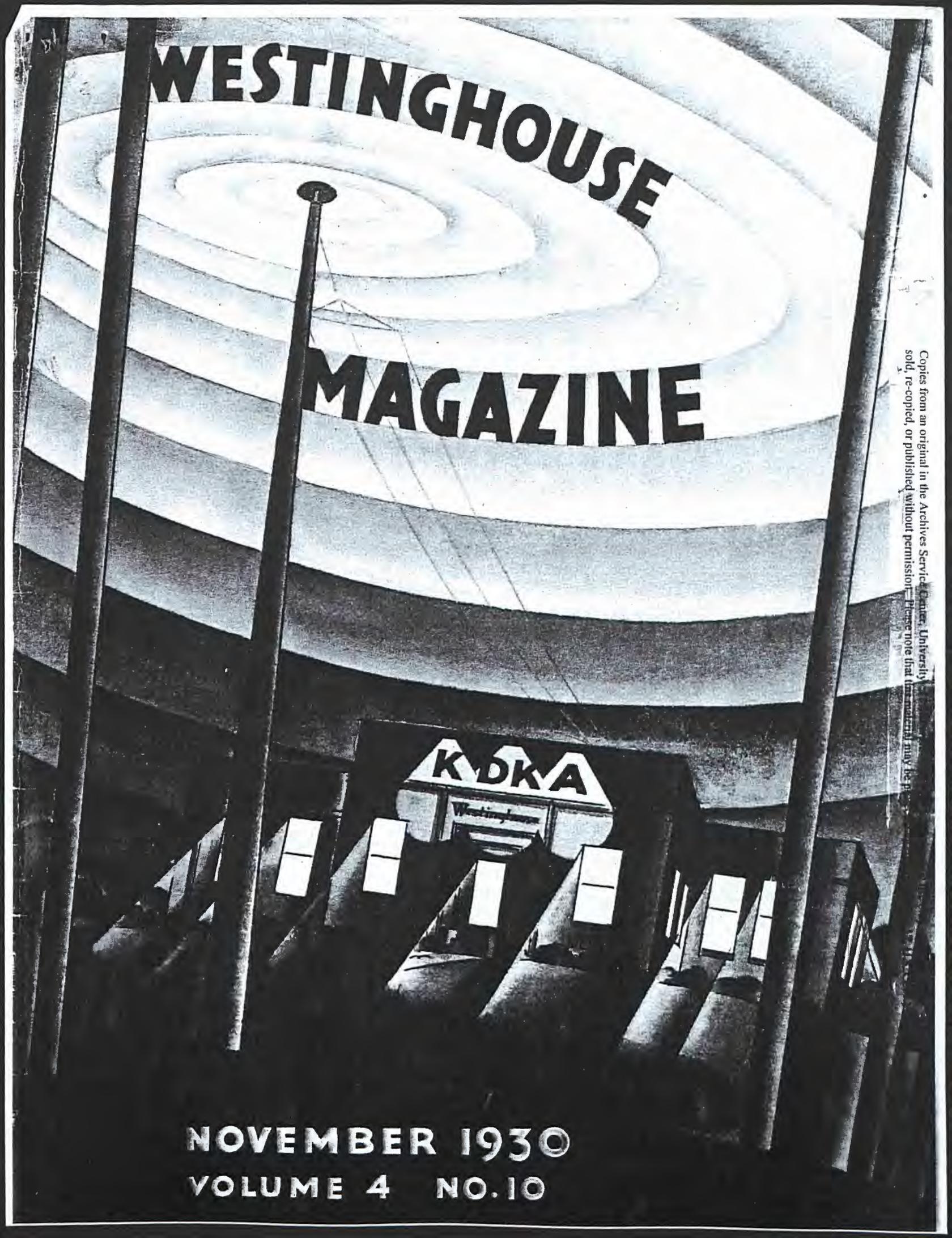
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Broadcasting

H. P. Davis, 1868-1931, Papers, 1915-1944



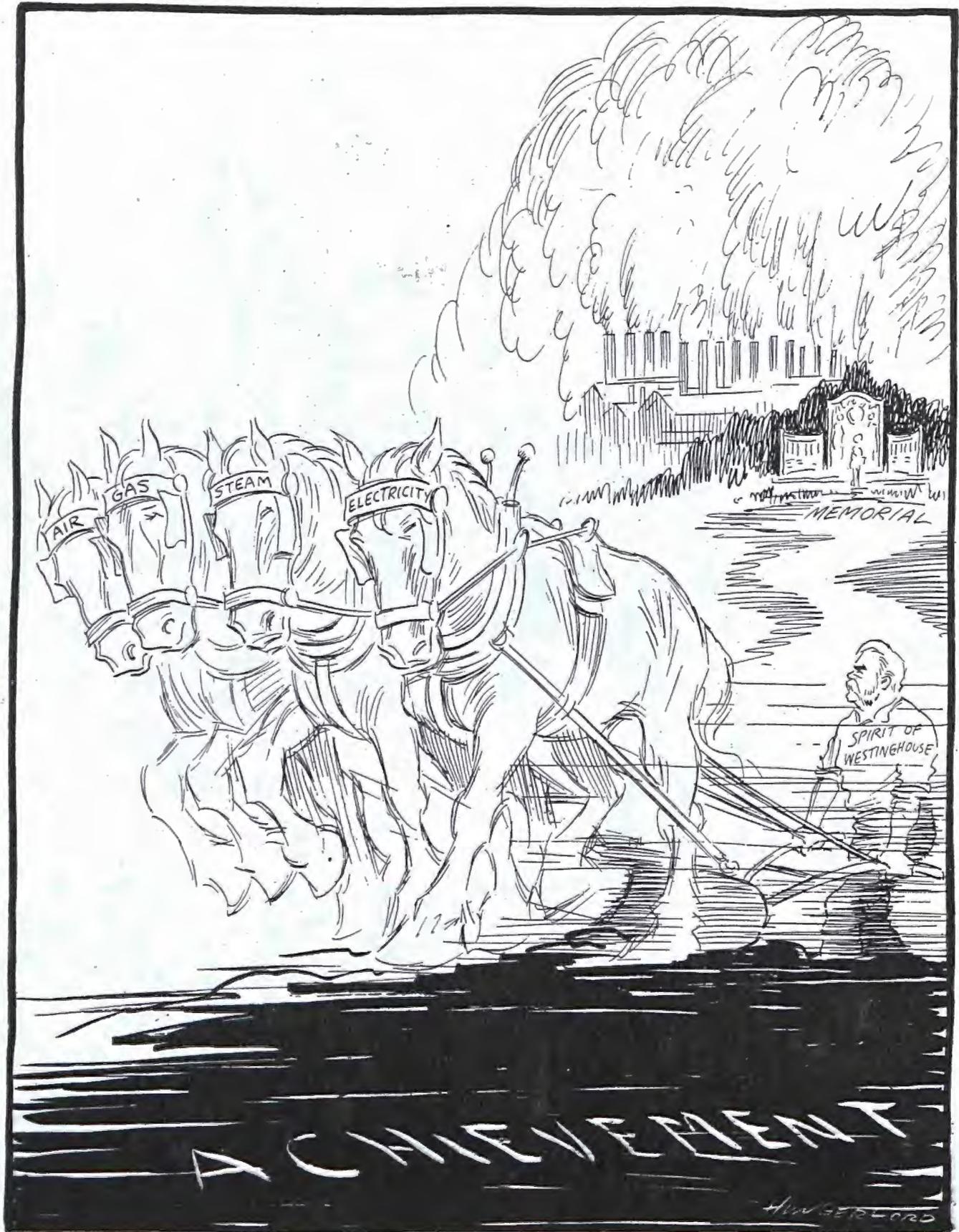
WESTINGHOUSE

MAGAZINE

KDKA

NOVEMBER 1930
VOLUME 4 NO.10

MARCHING ON -- by Hungerford



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H. P. Davis, "Father of Radio Broadcasting", greets Admiral Richard E. Byrd, famed Polar explorer, at a recent KDKA Broadcast.

NOVEMBER 2, 1920 is a memorable date in the annals of pioneering Westinghouse achievements. On that date, ten years ago, Station KDKA transmitted its first program and inaugurated what is now universally recognized as one of the world's greatest public services—radio broadcasting.

Not only did our Company pioneer in the establishment of broadcasting as a public service but it also, in so doing, laid the foundation of today's vast radio industry; an industry, which, in the last decade has transacted business in excess of \$3,500,000,000.

It is just a decade since broadcasting began, yet in that time the industry and service of broadcasting have encompassed the world. We are already envisioning greater accomplishments. Television, which will provide sight, as well as sound, for the service of broadcasting, is already engrossing the attention of the world's finest engineering minds. Radio leaders are already building greater power into the key broadcasting stations of the country; new methods of synchronizing are being perfected for chain broadcasting; and short waves have shown that possibilities exist in this field which, even with great accomplishment in world transmission, again reveal a new vista of radio achievement.

Westinghouse engineers will continue to add to the sum of the world accomplishments. It is their pioneering heritage as is so finely portrayed in the development of radio broadcasting.

H. P. Davis.

Vice-President

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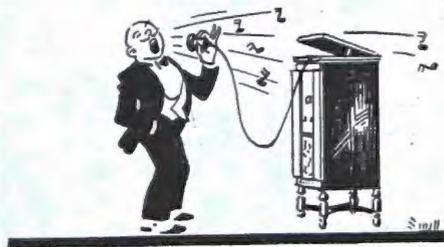
TWO MINUTES ❖ TWO MINUTES ❖ TWO MIN

NO longer need Junior's ability with the violin or little sister's charm in recitation be privileges which only their family may enjoy. The new Westinghouse Radio, WR-7, introduces a home recording apparatus as well as a phonograph.

Special unbreakable records are used in this home recording process and they may be used on both sides. No apparatus other than that included in the WR-7 is necessary to reproduce the music or thought you desire to express. Since the records are unbreakable, they may be mailed safely to friends or relatives in different parts of the country.

"These special records are used both for recording and reproducing," says M. C. Rypinski, Manager of the Radio Department. "The public has already taken up the idea of using these records for holiday greetings. It is very easy to record the best wishes of the season in your own voice on this type of record, as it requires no special preparation."

Not only does the set record individuals directly, but it also records



and reproduces your favorite radio program. "In recording radio programs," says Mr. Rypinski, "the receiver is tuned to the desired program and the switch is turned to 'radio recording'. This operation splits the output of the receiver approximately 93% to the phonograph for recording, and 7% to the loud speaker for monitoring. This recording is made with a special needle in place and a special weight on the pickup head. The same

records are used for radio recording as are used in producing the home recorded record."

A business agreement between Westinghouse and the New Haven Clock Company will supply a product to what has been estimated as a billion dollar market. A line of electric clocks have been produced varying in size and price from the lowly alarm clock, at \$7.50, to the grandfather, at \$75.00.

Attention in the early stages of the combination product will be centered upon the alarm clock. The mechanism is controlled by a self-starting motor, whose accuracy is controlled by the impulses of alternating current from the central power station. The motor is made by Westinghouse and is of the slow speed sub-synchronous type. It makes only two hundred revolutions per minute while competing clocks make 3,600. This slow speed means longer life and less gear reduction and tends to make the clock noiseless.

"Ring the bell and win a 'seegar'; step right up and test your strength." So goes the spiel which is heard throughout the land every year when the country fair season opens. And many a husky lad picks up the big mallet, hits the lever and rattles the bell until it almost dances from its high perch.

This is essentially the theory of the Motor Watchman resettable motor starting switch display which attracted crowds at the recent Southern Textile Exposition in Greenville, South Carolina.

On the display board was a little bell, below that was a vertically placed glass tube and below that the heater unit of the Motor Watchman with the small Spencer Thermostat which snaps the current off when the motor is overloaded. Resting on the Spencer disc was a small ball. A current passing through the heater caused the disc to snap, sending the ball up the tube to ring the bell.

Besides the bell-ringing arrangement, there was a picture of a small motor, below which was the motor starter. The figure of a man dressed as a watchman stood by the motor with his hand on the starter switch. Every time the bell rang he moved his hand to reset the starter. Above the motor was an illuminated interior



view of the starter. The operation of the bell ringing device was continuous, repeating every few seconds.

W. G. Balph, Manager of the Safety Switch Section, and H. S. Gano, engineer, accompanied the exhibit from the Mansfield Works.

The V-5, Uncle Sam's newest and most efficient submarine, is now ready for sea duty in Pacific waters equipped with specially designed Westinghouse electric propelling equipment. This giant submersible is regarded to be the safest undersea craft so far constructed. It is 371 feet in length and has a sixteen foot draft. It accommodates a crew of eighty men and seven officers.

One of the striking improvements in undersea safety is elimination of the storage battery gas peril. In the past when submersibles experienced accidents, the inherent hazards of underwater travel were enhanced by the fear that water would reach the storage batteries causing deadly chlorine gas that would snuff out the lives of the trapped crews in a few moments.

The propelling motors on the V-5 can be disconnected from the shafts and be used to charge the large storage batteries. These batteries are housed in a specially constructed compartment and ventilated so that none of the gases escape through the vessel. Furthermore, there are three escape towers in case the sub should

The Westinghouse Magazine

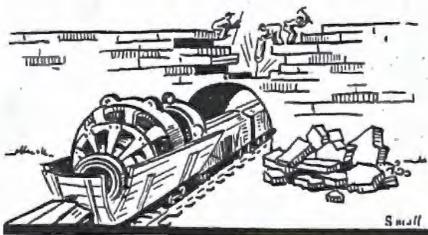
Handwritten note:
 intended for
 Rypinski
 1/10/30

ground. The famous Momsen "lung" is available for every man of the crew so that they can easily be ejected through the hatches and swim to the surface.

The huge size of a recent shipment of marine motors from East Pittsburgh caused unusual concern and difficulty in the successful transportation of the order. In order to obtain the necessary clearances, the load was shipped in a round about way. The cars were sent to Cape Charles, routing them on barges, sending them to Sewells Point, and then to Newport News.

It was also necessary to mark the billing covering the shipment, "Handle with extreme care in yards, around curves and at track centers and crossings. Notify train masters, train dispatchers, train crews, yard masters and others interested."

By sending a special tracer, George Kearney, with the shipment, the



order was delivered to the Dollar Steamship Line at Newport News just three days after it left East Pittsburgh. The men responsible for this order have received special congratulations for their efficiency and speed in the transportation of the shipment.

A catalogue, containing ten carloads of paper, has been published by the Company as the official General Catalogue for 1931-32. This book ranks among the largest single volume editions published in the commercial field.

Besides the ten carloads of paper required, the ink used by the printers, if spread evenly, like asphalt, would cover a street of four hundred and fifty city blocks. The cloth employed in the covers of the catalogue would provide enough material to make ten

"big top" circus tents. The metal in the type used to print this catalogue would, if melted and recast, make 225 cannon balls, similar to those we see decorating our public parks. The binder board used in the covers if taking the place of wall boards, would finish the rooms of sixty six-room houses. Even the cuts of photographs would cover the lobby of a large hotel in a Mosaic tile work.

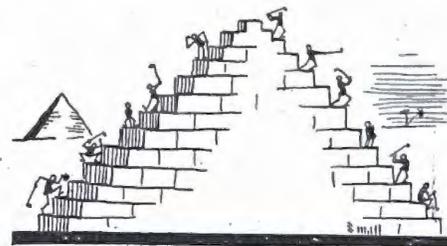
Perhaps most important of all the unusual features in preparing the Westinghouse Catalogue was the fact that at least six hundred people were employed in various capacities. Other departures from the usual in the production of this catalogue are found in the index and the introduction. In the index, which is on heavy blue stock appearing in the center of the book, the articles are listed in such a way that the entire contents may be noted at a glance. The listings are arranged with arrows pointing to those sections of the book in which the corresponding articles may be found. The introduction is printed

A PAGE of quick, concise, short notes about Westinghouse, about Westinghouse people and what they are doing. That is "Two Minutes". Stories that are short, that will keep you posted on the odd, the different, the new things Westinghouse is doing belong in "Two Minutes" Stories will be welcomed from anyone. Mark them "Two Minutes".

in two colors, associating some of the products with the works which manufacture them.

An idea for a future development of one of America's most recent industries has been suggested by a Columbus, Ohio, golf driving range. The new development may, perhaps, be termed "skyscraper golf". No longer does the addict of driving have to stand with his feet planted solidly on terra firma, but he may climb some stairs and drive from the second story. The structure erected at the Columbus driving range is a two-story shed, which enables thirty-two golfers to practice.

Perhaps, someday, if the present trend toward such novel sports continues, three, four, five, and even more storied structures may be employed for this purpose.



Westinghouse floodlights assure ample illumination so that the drivers may easily measure their five and six hundred yard drives as well as those of ten yards.

A special feature of week-end service was demonstrated recently by the Detroit Office. At 12:30 on Saturday afternoon, a call from Grand Rapids, Michigan, was received from "Nick" Carter, ordering one set of rotor coils. They had to be delivered by the following Monday noon.

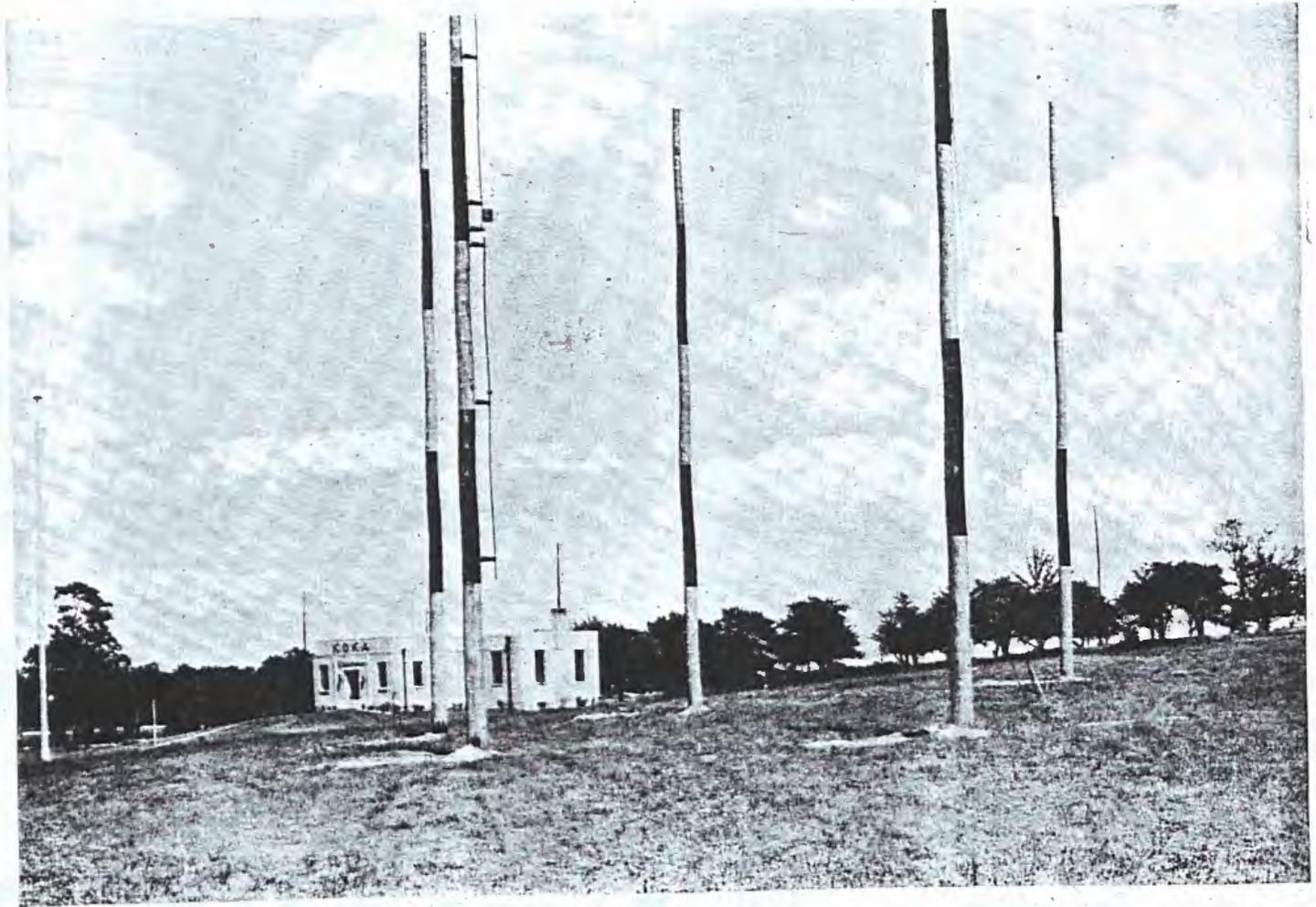
Aside from the difficulty of making up the order without a copy of the electrical specifications or a sample coil, or without being able to try a coil for fit in the rotor itself, was the added obstacle of time and the fact that on Sunday the Works are shut down.

After Carter furnished a complete description over the phone and all the information available had been obtained, a cross section of the rotor was laid out on cardboard and the coil was fitted to the imaginary rotor. A coil man was found working in the shops and the order was completed. By Sunday morning, the coils were on the way to their destination by express and on Monday, were on the rotor.

UTES ❖ TWO MINUTES ❖ TWO MINUTES ❖ TWO MINUTES ❖

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The Pioneer Moves to Saxonburg



THE pioneering and development of radio broadcasting—glorious heritage of Pittsburgh—is partly set forth in the following records of events, which made Pittsburgh, and Station KDKA, the pathfinders of radio broadcasting.

November 2, 1920—The start of radio broadcasting. KDKA transmitted Harding-Cox election returns.

January 2, 1921—KDKA's first church service. Calvary Episcopal Church, Pittsburgh, Pa.

April 11, 1921—KDKA's first sports

The new Saxonburg station of KDKA, which houses the most powerful radio equipment in the world.

event. Boxing contest in Motor Square Garden, Pittsburgh, Pa.

May 9, 1921—KDKA's first theatrical broadcast from stage of Davis Theatre, Pittsburgh, Pa.

August 5, 1921—KDKA's first baseball game broadcast from Forbes Field, Pittsburgh, Pa.

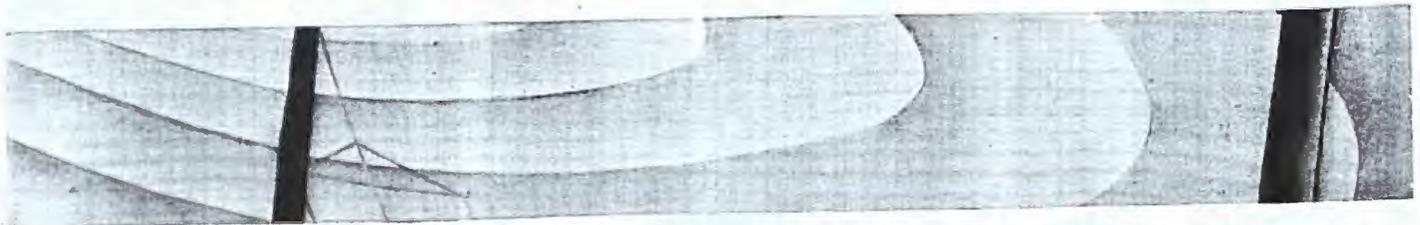
December 31, 1923—KDKA'S first program to Great Britain.

September 11, 1924—KDKA's first program to the Arctic.

December 12, 1924—KDKA's first program to South Africa.

January 26, 1925—KDKA's first program to Australia—The ultimate in transmission, halfway around the world.

October 26, 1928—KDKA's first broadcast to the Antarctic (Admiral Byrd's Expedition.)



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Ten Years on the Air



(Above) Radio notables celebrating the tenth anniversary of Broadcasting at KDKA are: (Back Row, left to right) Amos 'n' Andy, or Freeman F. Gosden and Charles Correll. (Front row, left to right) General Charles McK. Saltzman, H. P. Davis and Merlin H. Aylesworth.

KDKA, the pioneer in radio development, celebrates ten years of successful broadcasting and at the same time announces the completion of a new station.

In large degree this development was accomplished by the voluntary regulation of broadcasting stations which we developed at that time.

In the views expressed as to the promise of radio in that first conference, some perhaps thought that imaginations had run riot. We then discussed with pride the 100,000 receiving sets already in use. But much as we imagined at that time, none of us were so hardy as to prophesy that within eight years there would be receiving sets in half the homes in the United States.

Today the high level of service and the wholesome character of programs should be a proper source of pride to all engaged in it and is a development in our national life of immeasurable importance.

Yours faithfully,
(Signed) HERBERT HOOVER

Many other similar telegrams were received from prominent people who were unable to attend the celebration.

One of the principal addresses was delivered by Major General Charles McKinley Saltzman, chairman of the Federal Radio Commission. General Saltzman retired from active army service in 1928 completing thirty-six years in the regular army, and was chief signal officer at the time of his retirement. He was appointed to the Radio Commission in 1929 and this year he was made chairman of that body.

During his long army service he was twice decorated with the Silver

(Continued on next page)

WESTINGHOUSE radio station KDKA, "the pioneer broadcasting station of the world," received the congratulations of that grateful globe on the occasion of its tenth birthday, Nov. 2, 1930. The anniversary was publicly celebrated at a banquet sponsored by the Pittsburgh Chamber of Commerce and held in the William Penn Hotel, Monday evening, Nov. 3.

Perhaps the feature of the birthday banquet which stimulated the keenest enthusiasm was the personal appearance of Amos 'n' Andy, who presented personal talks and one of their humorous sketches directly to the brilliant and visible audience. This was the first public appearance of the popular radio artists in Pittsburgh and they received a tremendous reception from the hundreds of men and women in the audience.

Not the least interesting feature of the program was the presence of Mrs. Freeman F. Gosden and Mrs. Charles Correll, otherwise, "Mrs. Amos," and "Mrs. Andy."

During the evening the following personal message of greeting and congratulation from President Hoover was read.

My Dear Mr. Davis:

I have been especially interested in your celebration of the tenth anniversary of radio broadcasting.

Never before in all history has a new system of communication made such mighty progress in so short a time. It has come today to the first rank in the diffusion of ideas. It has already begun to modify the character of American life and, fortunately, its tremendous influence is all on the side of progress.

It seems but a short time since, at the request of the then few broadcasting stations, I called the first national conference on radio in 1922. Then we were groping dimly for methods of regulation that by prevention of interference we could enable adequate development of the art.

Ten Years on the Air

(Continued from page 5)

Star Citations for "gallantry in action" in the Spanish-American War, and received the Distinguished Service Medal "for exceptionally meritorious and conspicuous services" in the World War. He has represented his

had the vision to foresee its great possibilities and the faith and courage to carry that vision through to definite realization, the industry has grown to billion-dollar proportions with 50,000,000 participants in the United States alone.

Despite this unprecedented growth in the short period of ten years, leaders

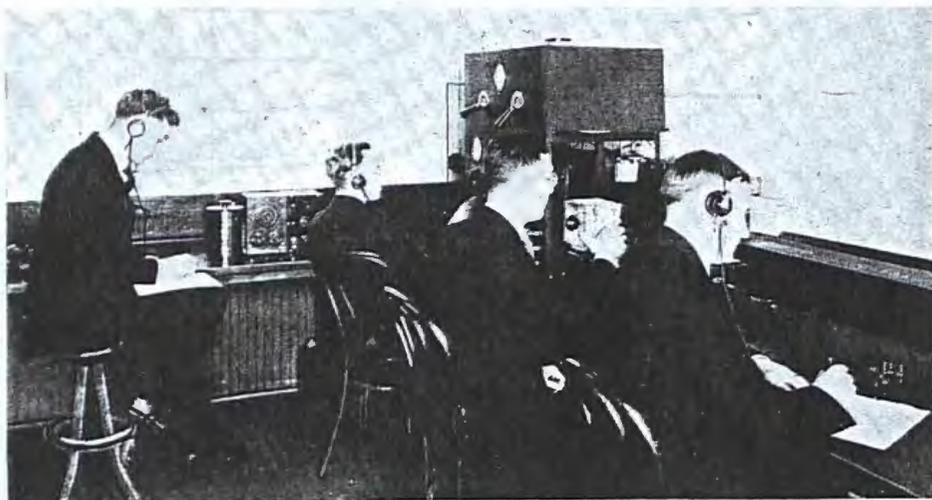
Frank Conrad, Assistant Chief Engineer, whose experiments between 1915 and 1920 played such a vital part in placing Westinghouse in a position of leadership that has never been threatened.

Special mention also was made of the success of J. C. McQuiston, General Advertising Manager, in developing and producing so many of the radio program features of KDKA.

Other interesting details of the program were the reproduction of part of the first boxing-bout broadcast and a description of the first broadcast from a theatrical stage. Several of the early-day entertainers and musical groups participated in the program, as did Rev. van Etten, the original radio minister.

Since the first broadcast in 1920, the pioneer station of the world has not missed a single day on the air. Since that first pre-scheduled program proved so successful, the radio industry has set a new record for progress and development.

According to the Department of Commerce in Washington, there are about 13,500,000 receiving sets in operation in the United States. This indicates the present size of the in-



government as a delegate at a number of national and international radio conferences.

James Francis Burke, Pittsburgh, who has been closely identified with the development, history and progress of radio, was the other speaker on the celebration banquet program. Thomas A. Dunn, vice president of the Chamber of Commerce, presided; Merlin H. Aylesworth, president of the National Broadcasting Company, was the toastmaster; the Rev. Edwin J. van Etten, who broadcast the first church service ever put on the air, uttered the invocation; and musical numbers were presented by the Westinghouse ensemble and chorus under the direction of Zoel Parenteau and Aneurin Bodycombe.

Other entertainment was presented by Chauncey Parsons, tenor; J. Oliver Riehl, now with the National Broadcasting Company in Chicago, and other artists who were identified with early programs broadcast from station KDKA.

When KDKA transmitted its first pre-scheduled program, the result of the Harding-Cox election, Nov. 2, 1920, broadcasting was admittedly a hazardous and expensive experiment. Because executives of Westinghouse

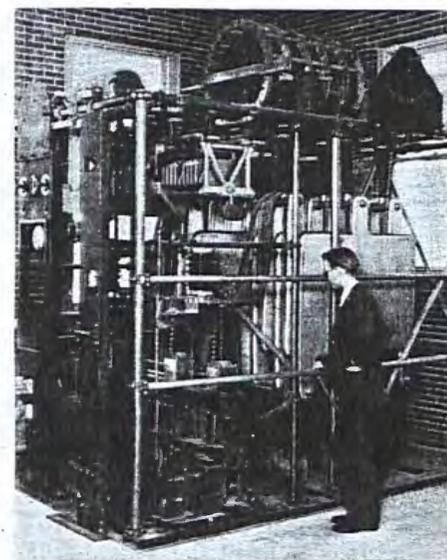
(Above) The original KDKA studio at the time of the first broadcast, employing crude apparatus such as the telephone mouthpiece protruding from the transmitter box which the operator is holding

(Right) In the modern KDKA; it's the 400,000-Watt Transmitter that makes the Westinghouse station the most powerful in the world.

in radio realize that it has not even approached its peak. Consequently, they hesitate to predict the strides of progress that will be taken in the future.

Of special interest in connection with the tenth anniversary of broadcasting was the unique program transmitted by KDKA at 5:30 P.M. Sunday, November 2, 1930. In this presentation, the pioneer station reproduced the first pre-scheduled broadcast ever given for public reception—the returns of the national election of Nov. 2, 1920.

Other achievements of the first two years of broadcasting were recalled and tributes were paid to H. P. Davis, Vice President, whose foresight and vision were largely responsible for the progress radio has made, and to Dr.



dustry. That the growth has been rapid is best shown by the fact that more than 40 years elapsed before this number of homes were equipped with telephones and electric light.

The fact that Westinghouse pioneered in this tremendous movement is a splendid distinction. That the company executives had the courage and

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foresight to spend much time and money on radio when it was just emerging from the stage of an embryonic idea adds another chapter to the long record of Westinghouse achievements.

During the World War, Westinghouse did considerable work in radio, first for the British government, later for the United States. At the end of that conflict, H. P. Davis, who had been directing the war activities of the company, found a large staff of men and considerable expensive equipment on hand. Some use should be made of this equipment and he desired to keep his wartime staff together.

Experimental stations 2WE and



(Above) "The Westinghouse Salute", presenting Hale Anderson, Mary Swanhart, Esther I. Stoops and Alma Schultz, all of East Pittsburgh Works, on the roof of the new station at Saxonburg.

2WM were set up, one in the East Pittsburgh Works, the other in the Wilkinsburg home of Dr. Frank Conrad. Step followed step until it became possible for Dr. Conrad to broadcast entertainment programs from his home each Saturday night. These became so popular with the radio amateurs that one of the Pittsburgh department stores advertised receiving sets that would bring in the Conrad programs.

Seeing this advertisement convinced Mr. Davis that the proper field of radio was unlimited, that it was a medium of mass communication rather than a means of private or confidential messages. So plans were made to broadcast regular programs from the Westinghouse Works instead

of from the Conrad home, and to begin this service with the returns of the national election November 2, 1920.

Church services, sport events, public addresses, concerts, opera, conventions and scores of other broadcasts followed as new pick-up stations were established, and the wave of popularity that greeted radio during 1921 was greater than anything known in the industrial and commercial world.

Westinghouse has prepared for future growth by the construction of the new 400,000-watt transmitter at Saxonburg, a giant station which required the solution of many difficult

engineering problems before it was ready to broadcast the programs originating in the William Penn Hotel studios of KDKA, thirty miles away.

Incidental to the position of KDKA in the community, the country and the world, the commissioners of Allegheny county have changed the name of the highway passing the new transmitter from the Saxonburg Road to, "KDKA Boulevard."

A sixty-pound tube, seventy-two inches in height and having a diameter of eight inches, is used among these at the transmitter. The tube, known as an Aw-220, is distinctly unique in design and embodies the most advanced engineering features. Water passes through a jacket and cools the tube in much the same manner that water placed in the radiator of an automobile cools the motor.

The power consumed by one of these tubes would operate simultaneously four hundred Cozy-Glow heaters or a like number of toasters or flat irons. This power consumption is equivalent to the electrical energy re-

quired to light 1,000 average homes of five or six rooms or the electricity needed to operate two modern street cars.

Enough power to meet the lighting needs of a city of 25,000 inhabitants is generated by the sub-station of the new transmitter. The power is required to operate the new station on maximum power between one and six o'clock in the morning, the hours at which the transmitter will be permitted to function in its maximum energy. The increased output will make KDKA by far the most powerful in the world.

Sixty-two rigid tests were made to find a location which would be adaptable to favorable broadcasting before Saxonburg was definitely selected. These tests were made to determine the proper altitude with no interference from metal construction, free from trees so as to prevent undue interference and ample area for erection of the necessary structures and antennae.

The site at the new transmitter occupies one hundred and thirty acres. The standard wave antenna over which KDKA broadcasts consists of a circular arrangement of poles surrounding about eight acres. The poles are 100 feet above the ground and painted, according to law, black and yellow. Aerial hazard beacons also have been erected to serve as a warning to aviators.

A much smaller space is required for the short wave transmitter of W8XK. It is through the short wave station that programs are sent great distances for reception in far away lands.

An intricate system of control governs the manner in which the station is operated. As a program comes into the Saxonburg Station by wire it passes through an elaborate control panel and an attendant in a glass enclosed booth regulates the volume for satisfactory broadcasting.

With electrical science contributing its most advanced knowledge, KDKA faces a future which will assure the station the same leadership which has been so characteristic of its past.

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News Pictures

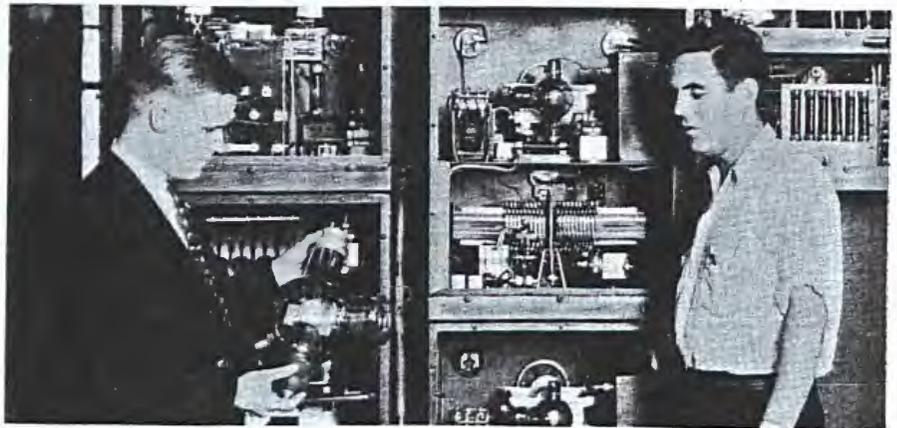


(Left) C. R. Mahaney shows Anna Weaver how closely Micarta panels match natural wood in grain and coloring.



(Right) Secretary of Labor, James J. Davis, starts the new Byers Iron Mill by speaking into a telephone connection with Westinghouse "Voice Control" Mechanism. Westinghouse electric equipment is installed in the new plant.

(Below) F. E. Rutzen and D. Garvey, both of Chicopee Falls, inspect part of the apparatus from the 1 Kw. exciter stage of one of the 20 to 40 Kw. telephone transmitters.

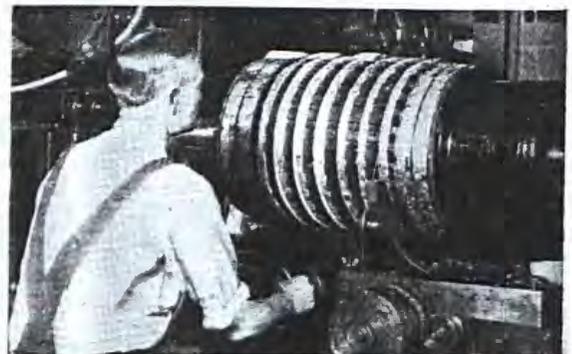


(Left) James D. Callery, on the Westinghouse Board of Directors, starts the machinery of the new Reed Power Plant in Pittsburgh, by passing his hand over a Westinghouse grid glow tube.

(Below) Ed. Downey of East Pittsburgh Works, "banding an armature", an operation that winds almost a thousand feet of wire.



(Left) T. R. Watts, of the Research Laboratory at East Pittsburgh, tests a new instrument which he invented.



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NEWS ...

...of the Month!



Refrigerator Purchase Plan Announced

Company employes who have been reading with interest newspaper advertisements telling of the advantages in owning a Westinghouse refrigerator will soon be able to give the idea a thorough test. For during November, employes will benefit through a generous discount and special terms in the purchase of a Westinghouse refrigerator.

The employe discount during November will be twenty-five per cent and the down payment required for term purchase will be but ten per cent. The balance will be paid in regular instalments which will be deducted from the purchaser's pay.

First announcement of the campaign, which is under the direction of J. McA. Duncan, assistant general sales manager, was made during a meeting in the Westinghouse Club, Wilkensburg, Pa., October 29.

At that meeting members of the Refrigeration Department brought to those in attendance a vivid presentation of the refrigerator, showing them how it will enact the virtues specified the series of advertisements stressing in the economy of quantity buying when supplemented by efficient electrical refrigeration. Various members of the department took turns at telling the story.

The Westinghouse refrigerator is one that has achieved what is believed to be one of the best service records attained. Replacements have been very uncommon and in these few cases it was done without cost to the purchaser. Westinghouse gives a two-year warranty of trouble-free service to each buyer, members of the department explained.

The listeners learned more about the ways of saving through quantity buying and electrical refrigeration from Ralph Gates, sales promotion manager. He also explained the details of the special purchase offer,



One of the models of the new Westinghouse Refrigerator being offered at a special discount in November.

the principal features of which are: the employe discount of twenty-five per cent, and, if desired, a special deferred payment plan. The special offer is to be in effect only in those territories in which the refrigerator is now distributed. Employes residing in those districts have received a letter containing additional information concerning the purchase plan.

Women members of the audience were especially interested by a talk by R. L. Sanner of the sales promotion department on the subject "Why Buy a Westinghouse Refrigerator?" In this he showed the various advantages of the refrigerator to the housewife.

Newark Employee Honored

In the presence of three hundred fellow employes at Newark Works, Thomas Albanese was awarded the President's Medal given by the National Safety Council, for saving the life of a young woman. The presentation was made by H. E. Miller, Works Manager, assisted by Fred M. Rosse-land, secretary-manager of the Newark Safety Council.

Albanese was at home on May 6, when Mrs. Mary Locando was discovered by her mother overcome by illuminating gas. Albanese, who had taken the Newark Safety Council and the American Red Cross courses of instruction in first aid methods, ap-

(Continued on page 11)

News Pictures



(Above) The bowling league at Newark Works recently began the winter season with ten five-man teams.

(Below) At the Rate Department picnic in 1913 were: (top row, left to right) "Doc" Robins, W. England, J. E. Turkington, Charley Grieves, J. M. Cline, C. E. Hayward, and D. F. Gallager; (Bottom row) Jack Kennedy, George Wolfe, Walter Kahler, W. H. Scherer, E. R. Norris, Thomas Shane, and T. A. Oakley.



(Left) G. R. Kepner, Superintendent of Production at South Philadelphia Works, lines up a catch from Delaware Bay.

(Below) Another victorious golf team from East Springfield. They are: (standing, left to right) T. O. Armstrong, P. Dombeck, A. Drummond, S. Shiba, E. C. Gibson, J. Dombeck and E. H. Dayton; kneeling are: N. McLennan and S. Pajak.



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(Continued from page 9)

plied the Schaefer Prone Pressure Method of Resuscitation. His ministrations were successful and the woman was conscious when the am-

generators which produce current for the traction motors.

Measuring seventy-five feet in length and weighing nearly a hundred tons, the car is divided into three

is located in a cabinet just back of the engines.

Outstanding improvements in the new car's mechanical construction include a variable hydraulic governor, which is under the control of the operator. The equipment is so arranged that the air brakes are automatically applied and the engines shut off as soon as the operator releases the controls.

As simple to operate as a street-car, the oil-electric is driven from a seat located close to the right front window. Here, one lever provides both engine throttle and motor control, while another lever close by is the air brake control. For the convenience of the operator, a number of instrument dials are located on a panel to the left of the lookout window. Within easy reach are the sand release lever, the automatic bell valve, and the car's warning whistle cord. Communication between the train conductor and the operator is conducted by means of an air whistle close to the operator's head.

The ceiling of the engine room is finished in grey steel. Heat for the baggage and mail sections is pro-



Participants in the presentation of the medal; (left to right) Capt. Ed. Franz, R. E. Dobbins, Assistant to Works Manager; E. B. Speicher, Thomas Albanese, Fred. M. Rosseland and Dr. William M. Schroeder.

balance arrived. She recovered fully at the hospital.



First "Twin-Six" Oil Electric

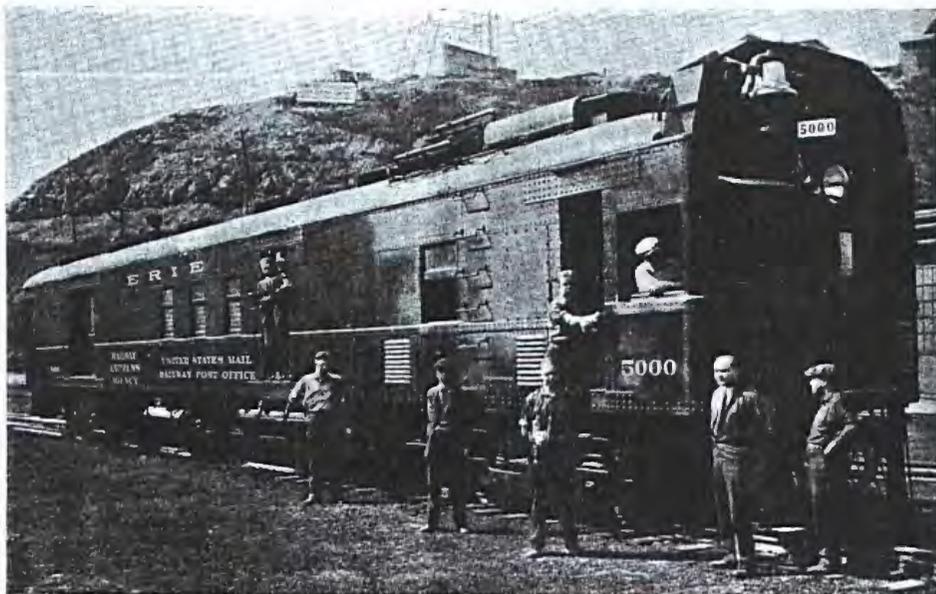
On October 14, the world's first "twin-six" oil-electric rail car, left the East Pittsburgh Works under its own power for Youngstown, Ohio, where it will be placed in service between Youngstown and Dayton by the Erie Railroad.

Able to attain a maximum speed of eighty-five miles an hour and maintain a cruising speed of seventy miles an hour, this rail car presents a formidable challenge to the automobile which has materially cut into the short-haul traffic of numerous railroads. It can maintain a speed of over fifty miles an hour with four 40-ton trailers.

Embodying the latest in combination oil and electric train power, this new car is a distinct departure from the first vehicles of this type in that it has a double Diesel power plant to drive two Westinghouse

sections. The forward section contains the motors and generators; the centre, mail; and the third, baggage.

With a trip capacity of nearly 1,000 miles on one filling of its fuel tanks, this oil-electric car burns fuel-oil which is sprayed into the cylinders of its engines through an atomizer and is ignited by the high compression. The electrical apparatus



Men who equipped and tested the new locomotive are: (left to right) R. H. Proctor, E. J. Bald, W. F. Young, E. C. Kuhns, J. B. Ames, (on ladder) J. W. Ravell, T. McGettigan, O. L. McGogney, and D. Milligan.

vided by a separate car heating unit located in the baggage section. In addition, the engine room may be heated during layover periods.



Personnel Changes

Effective October 23, M. B. Lambert became Assistant to Vice President with headquarters at East Pittsburgh Works. His assignment will pertain to Transportation Industry matters and other Sales Research and Promotion activities.

Mr. Lambert's first connection with the Company came in 1900 when



M. B. Lambert

he was given a two-year apprenticeship course. After completing the work, he entered the Construction or Service Department on railway work. In 1904, he left the Company to go with the Chicago Elevated Railway Company.

Mr. Lambert returned to the Westinghouse employ in 1908. Since that time he has been promoted through the positions to Manager, Equipment Division; Assistant to Manager, Railway Department; and from the latter position to Manager. In 1926 he was made Manager of the Transportation Sales Department.

Among the important promotions for the month of October, Nuttall Works announces three. T. I. Phillips, formerly Superintendent of Metal Stamping at the AB Building, has been appointed Works Manager, succeeding H. A. Houston, who resigned. W. H. Himes, who was in the Mechan-



(Left to right) W. H. Himes, L. R. Botsai and T. I. Phillips were recently promoted to new positions at Nuttall Works.

ical Engineering Department at East Pittsburgh, was promoted to the Manager of the Engineering Department. His appointment followed the resignation of L. F. Burnham. The final appointment was that of L. R. Botsai as Gearing Apparatus Manager, succeeding E. E. Boon, who resigned. Mr. Botsai was formerly Industrial Manager of the Central District.

Harold C. Bates was recently appointed to the position of Works Electrical Engineer, at East Springfield, succeeding J. F. Nye, who resigned. In addition to the regular duties at-



Harold C. Bates

tached to his new position, he will also assume the direction and supervision of the electrical department D-45.

Bates was graduated from Springfield Technical High School in 1924 and one year later entered Worcester Polytechnic Institute. Between his junior and senior years at school, he worked at the East Springfield Works in the production and test departments on radio. He received the B. S. degree from Worcester Polytechnic Institute in 1929 and spent the following year at Chicopee Falls Works, in the test department on radio receiving and transmitting equipment. In June, 1930, he was transferred to East Springfield.

Clerks Attend Game

More than 3,000 members of the East Pittsburgh Clerks' Association witnessed the defeat of the Georgia Tech football team by Carnegie Tech, on Saturday, October 11. The group attended the game in a body, having several sections of the stadium reserved for their use.

Veteran Banquets

East Pittsburgh

Another chapter was closed and a new one was started by the seventeenth annual meeting and dinner of the Veteran Employees' Association in Syria Mosque, Saturday night, October 25, 1930.

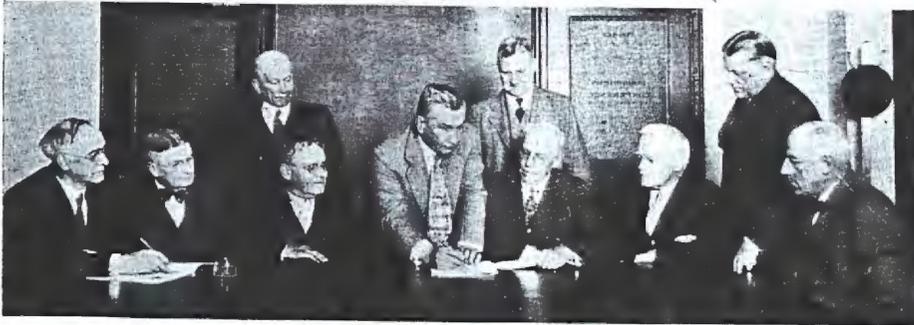
As usual, success marked this affair, approximately 2,000 men and women enjoying the program which closed the old year and introduced T. P. Gaylord as the president who will head the organization for the next twelve months.

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News of the Month

One of the most interesting features of the evening was the presentation of gold buttons, suitably inscribed, to each of the past presidents of the association.

David George, retiring president, presided, introduced William L. Heiston as toastmaster. Arthur Lipp-



The general committee which planned the seventeenth annual dinner of the Westinghouse Veteran Employees' Association in Syria Mosque, Oct. 25, 1930. From the left, they are C. Hays Long, secretary; Harry Lautenschlaeger; T. J. Vastine (standing), David George, president; L. E. Schumacher; John Frazier (standing), T. P. Gaylord, chairman of the committee; A. Taylor, S. P. Arner and A. S. Duncan. Members of the committee not in the picture are Grant Kerr and W. W. Rodgers.

mann, author-lecturer, of New York, delivered the principal address. Dr. George C. Fisher invoked the divine blessing on the gathering. Musical numbers were presented by the Westinghouse Band, under the direction of T. J. Vastine.

A. W. Robertson and F. A. Merrick were on the program for short talks of greeting.

In addition to the dinner and the formal program, there were a number of entertaining vaudeville acts, by way of diversion, and the address of Mr. Lippmann was a combination of amusing, pertinent and impertinent comments on business and the world in general.

South Philadelphia

The ninth annual banquet of the Veteran Employees' Association of the South Philadelphia Works was

held Saturday evening, October 11. About two hundred veterans attended the dinner and participated in the election of officers for the ensuing year.

Guests of the South Philadelphia chapter at the banquet were: A. W. Robertson, J. E. Barkle, R. B.

Mildon, A. D. Hunt, A. Voysey, A. C. Fulton, S. S. Stine, G. H. Cox, A. B. Reavis, H. H. Bates and R. R. Gerhart. Officers elected that night were: T. A. Ackleson, president; H. H. Beck, vice president; W. J. Boston, secretary; and E. D. Tepper, treasurer.



Officers of the South Philadelphia Veterans' Association are: (standing, left to right) J. E. Sullivan, Trustee; J. M. Blair, Trustee; W. J. Boston, Secretary; (sitting, left to right) E. D. Tepper, Treasurer; T. L. Ackleson, President; H. R. Beck, Vice President. John Fredette, Trustee, is not in the picture.

Musical Comedy at the Club

Plans for the production of the "Golden Trail", the Westinghouse Club musical comedy extravaganza, are taking form rapidly. Try-outs have been held and all principal characters have been selected. The show will be presented at the Westinghouse Club on November 13 and 14.

Some of those directing the progress of the show are: C. W. Huffine, general manager; O. W. Grosskopf, musical director; L. J. Bray, dramatic coach; and J. S. Bowman, director of dancing.

Purchasing Agents Visit East Pittsburgh

More than one hundred and fifty industrial buyers, delegates to a district convention of the Purchasing Agents Association in Pittsburgh, visited the East Pittsburgh Works on October 16. After a tour through the Works, the delegates were given a

banquet at the Westinghouse Restaurant.

Special demonstrations of different apparatus was offered to the visitors, including the new automatic parking garage, electric arc welding, and other features. At the banquet in the evening the abilities of the "electric eye"

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(Continued from page 13)

and the "electric ear" as well as other novel demonstrations were presented.

During the banquet, T. J. Pace, Director of Sales, addressed the visiting purchasing agents, and C. G. Bunnell, Purchasing Agent for the Company, served as toastmaster. Later in the evening, boxing matches were offered as entertainment.

Retired Veterans Honored

East Pittsburgh

During the noon hour on September 26, a large group of fellow-workman gathered in section T-40 at the East Pittsburgh Works to honor Thomas Curley who retired from active service. Dan O'Leary, a friend and fellow-workman of many years standing, presented the retiring veteran with a purse, the gift of his friends in the section.

After working for both the American Tool and Machine Company and the Chicago, Milwaukee and St. Paul Railroad, Thomas Curley became a Westinghouse employe in 1897. His first position was that of inspector in the Brush Holder Department. When the work was moved to T-40, he continued in the same capacity. He has been engaged in this one line of work for the past thirty-two years.



Dan O'Leary presenting a purse to Thomas Curley, retiring veteran from section T-40, in the presence of the entire section.

Cleveland

Frank Hetrick and Wencel Veverka, two veterans who have a joint service record of eighty-two years, were feted by their fellow employes at the Cleveland Works on the occasion of their retiring from active service.

With his term of service distributed over East Pittsburgh, Shadyside and



Cleveland, Hetrick has been with the Company for forty-four years. Wencel Veverka has been associated with Westinghouse for thirty-eight years, being employed at the old Allegheny Plant and the Cleveland Foundry.

At a dinner honoring the two men, J. H. Johnston, Superintendent of the Cleveland Foundry, served as toastmaster. F. F. Elliot, C. G. Schluederberg, E. H. Hawkinson, W. Zerung, and N. H. King spoke

Employment Managers Meet at East Pittsburgh

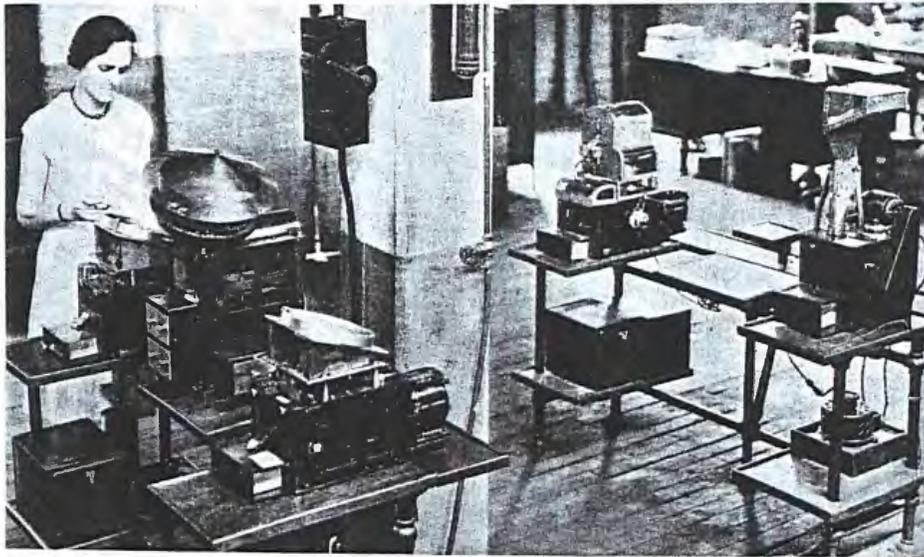
W. G. Marshall, Assistant to the Vice President, was host recently to a conference of employment managers at the East Pittsburgh Works. Representatives from all branch works attended the meeting.

Among those who attended the meeting were: (Front row, left to right) B. J. Williams, Superintendent of Employes' Service, South Philadelphia; G. G. Yoltom, Supervisor of Personnel, Derry; J. W. Schaffer, Supervisor of Training, East Pittsburgh; J. M. Tamarelli, Employment Supervisor, Trafford; R. E. Dobbins, Assistant to Works Manager, Newark. (Back row, left to right) J. F. Trimble, Employment and Housing, Sharon; A. H. Jones, Superintendent of Employment, Cleveland; H. H. Brown, Manager of Personnel, Mansfield; E. S. McClelland, Director of Personnel, East Pittsburgh; W. G. Marshall, Assistant to Vice President; W. G. Appe, Supervisor of Employment, Newark; D. H. Keyes, Supervisor of Employment, Springfield; E. I. Anderson, Works Manager, Attica; C. R. Winston, Manager, Labor and Service Department, Westinghouse Lamp Company.

The purpose of the conference was to discuss employment problems. Considerable study was given to present methods of maintaining employe's records in the several locations with a view to standardization, where possible, of records in the separate branches.

New Inspecting Machines at Newark

The demand for closer accuracy for inspecting OB Watthour Meter parts prompted the building of five machines at the Newark Works to inspect parts automatically within the tolerance of twenty-five hundred thousandths of an inch (.00025).



(Above) Marguerite Jacobus operates one of the new testing machines installed at Newark.

The mechanical inspection insures a more accurate check and eliminates the eye strain and fatigue of hand inspection. It is generally conceded to be one of the most important among recent mechanical developments.

the Apprentice Team being the ultimate winners of the pennant, with the Light Shop Team coming in second. The officers and directors of the Association recently entertained these teams by taking them to Shibe Park to witness a ball game between the Athletics and the New York Yankees. After the game, the entire group had a dinner at

Green's Hotel in Philadelphia. The season on both tenpin and duckpin bowling is getting under way.

The fall golf tournament has been played. This year the golfers played at the Tulley Memorial Country Club where a large turn-out appeared for the match.

The Annual Fall Dance of the Athletic Association was recently held in Stanley's Ball Room, Chester, Pa. This was very well attended and a marked social success.

Golf Tournaments

The Finals of the Second Annual Detroit Office elimination Golf tournament was held at Beach Grove Country Club, near Walkerville, Ontario, Canada, on Saturday, October 4th. Following the matches, dinner was served in the dining room of the Walkerville Boat Club.

The winners of the various sections of the tournament are:—

A. G. Crocker, in the Championship Flight, won over W. J. McCleer; H. C. Jorstad defeated E. C. Huerkamp in the Second Flight finals; H. L. Galliett defeated F. G. Guthrie in the Championship Consolation Flight finals; and Jack Pomeroy defeated C. R. Perry in the Second Flight Consolation Flight.

The Westinghouse Dutch Oven Golf Club of Mansfield, Ohio, with sixty members was organized early in the Spring of 1930, and play of

(Continued on next page)

(Below) Officers and directors of the Athletic Association of the South Philadelphia Works. (Standing, left to right) R. H. Campbell, P. R. Bailey, B. H. Bilbrough, E. E. Neiderriter, F. E. Davison; (Sitting) W. H. Yarnall, A. R. Williamson, vice-president; Miss M. Caufman, secretary; W. A. Steiger, president. B. J. Williams, B. A. Cornell, E. H. Bech, F. P. Richards and G. Eisenhower, not shown in picture, are also members of the board.

South Philadelphia Athletic Association

New officers and members of the Board of Directors of the Athletic Association at the South Philadelphia Works were elected at a recent meeting.

The Westinghouse Athletic Association at South Philadelphia is having a most successful year and more than eight hundred employes are now enrolled in the Association.

The Inter-shop Baseball League has closed after a very active season,



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(Continued from page 15)

the spring handicap event on the Possum Run Golf Course was started in May.

This was followed by a match play closing in September with winners as follows:

Watters, spring handicap, first prize; Wright, spring handicap, second prize; Stapp, champion, first prize; Price, runner up, second prize; Woodman, runner up, third prize; Clark, runner up, fourth prize; Scarff, 10 low net score; Snyder, 10 low metal score.

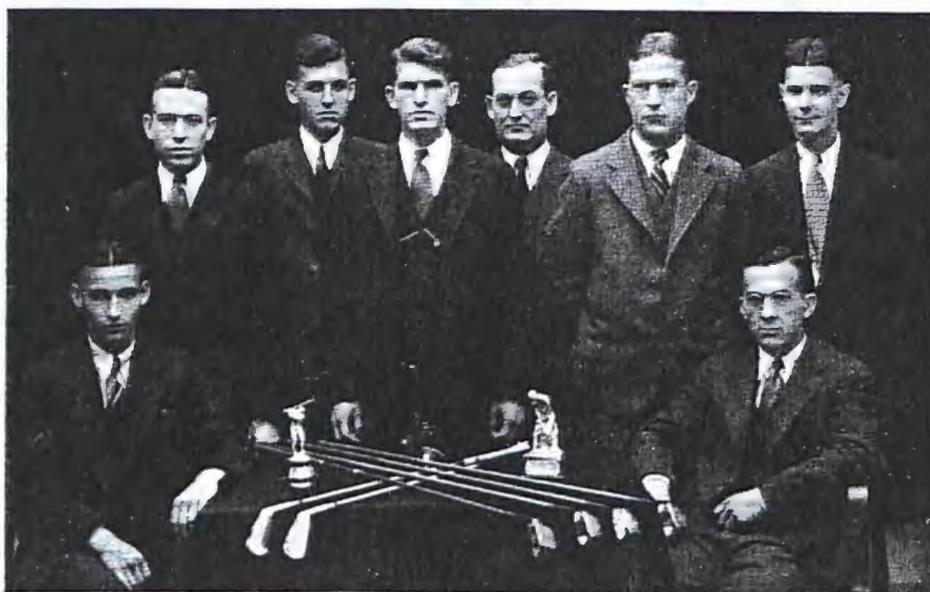
The season was closed with forty five members attending the first annual banquet held in the Works

lowing is a list of prize winnings with their respective scores: R. H. Campbell, low gross score, 89; C. J. Siebert, low net score, 70; I. P. McCurdy, low net score, 1st bracket, 82; A. W. Bass, low net score, 2nd bracket, 78; D. Watson, greatest number pars, 1st bracket, 4; S. A. Graham, greatest number pars, 2nd bracket, 3.

▼
Roll of Honor
▼

Retired

The following list contains the names of employes who will be placed



Tournament winners of the Dutch Oven Golf Club at Mansfield Works.

Cafeteria on October 7 with special entertainment and speeches.

The committee in charge was L. Bergstrom, F. Edwards, C. H. Jones, R. Hayes, and C. Lutz.

▼
The Annual Fall Golf Tournament of the Westinghouse Athletic Association at the South Philadelphia Works was held Saturday, September 20 at Tulley Memorial Golf Club. There were forty-nine entries, including H. T. Herr, Vice President, P. Epplesheimer from the Atlanta Office and several visitors. The fol-

lowing is a list of prize winnings with their respective scores: R. H. Campbell, low gross score, 89; C. J. Siebert, low net score, 70; I. P. McCurdy, low net score, 1st bracket, 82; A. W. Bass, low net score, 2nd bracket, 78; D. Watson, greatest number pars, 1st bracket, 4; S. A. Graham, greatest number pars, 2nd bracket, 3.

East Pittsburgh Works

Thomas Curley, Henry Graffenstette, George F. Midgeley, Thomas E. Powell and George H. Smith.

Other Works

Ernest Gundt, Newark; Jacob Kreiling, Trafford Foundry; Philip Lange, General; Mark McIntyre, Chicago Office; Jennie Ritter, Westinghouse Lamp Company; Harry N. Roger, Derry; and Wencel Veverka, Cleveland.

Veteran Employes' Association

Names of those who were admitted to membership in the Veteran Employes' Association at the organization's last meeting follow:

East Pittsburgh Works

Clair V. Brehm, A. H. Candee, Robert J. Chambers, J. C. Clerc, Harry Coyne, R. R. Davis, G. W. Goebel, James Henderson, Joseph Higgs, J. E. Holohan, Harold O. Holy, Harry G. Klinger, Frank S. Maddock, John McCabe, Delbert McCafferty, James S. McCaughey, Edwin T. McMurdo, Thomas Moffat, Frank Mulholland, L. E. Osborne, George Reichel, Hartman Schroder, Thomas Smith, C. B. Stainback, Frank Struble, H. C. Thomas and R. B. Wilson.

South Philadelphia

Robert W. Beers and F. L. Manspeaker.

Sharon Works

Charles Fornander, Fred Llewellyn, F. B. Miller, and N. G. Mills.

Trafford Works

W. C. Henderson and A. H. Yeagers.

▼
Intermediate Student Dance

A dance sponsored by the Intermediate Students, Association will mark one of the finest social events at the East Pittsburgh Works. On November 15, the members of the Association, their sweethearts, wives and friends will gather at the Edgewood Community Club for this occasion.

The committee working for the success of the dance is composed of Slagle, O'Connor, Thomander and Balsley. The dance is not limited to members of the Intermediate Students, Association, but is open to Graduate Intermediates, Graduate Students, and Junior Technical Students as well.

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Westinghouse Memorial Dedication ❖



(Above) *The Westinghouse Memorial, showing the rare beauty of its natural setting in Schenley Park, Pittsburgh.*

Representatives of industry, city, state and nation gathered in thousands to express eternal tribute to the memory of George Westinghouse at the unveiling of the Memorial to him.

unhappy detail to mar the perfect operation of the advance plans.

One of the most interesting items of the day was a letter from President Hoover, read by E. M. Herr, vice-chairman of the board, Westinghouse Electric, who was chairman of the ceremony. The President expressed regret that he could not be present, and added:

"I wish your Committee to know that I have a high appreciation of the outstanding accomplishments of Mr. Westinghouse during his notable career.

ALL the world joined with the army of Westinghouse workers in the dedication of the George Westinghouse Memorial in Schenley Park, Monday afternoon, October 6, 1930.

It was not only an imposing and impressive tribute to the genius who founded and built up the Westinghouse industries, but it was a distinguished and distinctive celebration of the eighty-fourth anniversary of his birth.

Since its organization in 1927, the Westinghouse Memorial Association had looked forward to the day when the unveiling would climax many months of waiting and anticipation. When that day arrived, many men of national and international prominence in the business and industrial world came to Pittsburgh to participate in the celebration.

The presence of the guests of national significance further intensified the sincere personal interest in the occasion that was deep in the hearts of the officers, executives rank and file of the Westinghouse organizations.

Particularly was this true of the older employees who had known

(Below) *James Francis Burke speaks of the inestimable value of Westinghouse's contributions to the World.*



George Westinghouse and had worked with him and for him. Special sections of seats were reserved for the veteran employes, a fitting recognition of their important position in the organization.

Ideal weather conditions made the Indian Summer day most delightful out of doors and a great throng of people journeyed to the Park for the dedication. There was not a change in the program, not a single

"The inventions he created and the industrial institutions he established have been a most substantial contribution to our American life.

"Characters such as he well deserve to be honored by their contemporaries and their successors. You do well to commemorate his memory.

"Yours faithfully,
(Signed) "Herbert Hoover"

(Continued on next page)



Memorial Dedication

(Continued from page 17)

Similar sentiments were expressed in a letter from Secretary Andrew W. Mellon, also read at the dedication, and in statements made by Thomas A. Edison; Gerard Swope, president, General Electric Company; B. C. Forbes, president, Forbes Magazine; Samuel Vaucrain, chairman, Baldwin Locomotive Works; James H. McGraw, Sr., chairman, McGraw-Hill Publishing Company; David Sarnoff, president, Radio Corporation of America, and others.

Of all the many eulogies paid to George Westinghouse on that day, the dedicatory address of James Francis Burke was perhaps the most eloquent, and this speaker made his oration peculiarly significant, pertinent and timely by pointing out that the Westinghouse brand of courage would relieve the present business depression if used as a pattern by the industrial and business leaders of the country today.

"Let us here and now, as we dedicate his Memorial," said Burke, "also dedicate ourselves to the revival of his spirit which never failed to see a better day beyond the dawn.

"Let us invoke his example of imparting courage to our contemporaries, rather than depressing them

Part of the large throng that crowded the natural amphitheater in Schenley Park to witness the dedication of the Memorial to George Westinghouse.

with dire predictions of disasters that will never happen. The nation has not become a desolate waste. The bottom has not dropped out of existence. Our ability to build was never greater. The doctrine of despair has no place in the gospel of American life. It never healed a wound. It never won a race. It never conquered an enemy. It never cultivated a farm. It never erected a factory. It never built a home.

"If pessimism had inspired the spirit or controlled the destiny of George Westinghouse, neither you nor I would be here today to honor his memory."

A. L. Humphrey, president, Westinghouse Air Brake Company, opened the program with a few appropriate remarks and introduced Mr. Herr, who presided. Herman Westinghouse Fletcher, grand-nephew of George Westinghouse and grandson of H. H. Westinghouse, chairman of the board, Westinghouse Air Brake, came up from the University of Virginia, where he is a student, to unveil the Memorial.

George Munro, representing more

than 54,000 employes, members of the Memorial Association, who contributed to the cost of the Memorial, made the formal presentation of the structure to the City of Pittsburgh, and it was accepted for the City by Mayor Charles H. Kline. Musical numbers were presented by the combined bands of Westinghouse Electric and Westinghouse Air Brake, under the direction of T. J. Vastine, and by a chorus made up of Air Brake, Electric and Union Switch and Signal employes, conducted by Alfred Bartletti.

"Those who knew Westinghouse loved him best," said Mr. Munro in his formal presentation. "While his name is known and honored throughout the world," he added, "it was his fairness, his consideration, his clean life and simple habits that made him beloved as well as honored and admired here in Pittsburgh. That's why this Memorial, which, in its beauty, its symbolism and its strength, typifies the character and achievements of George Westinghouse, is the unique gift of more than 50,000 of his fellow-workers in shop and office.

"In the name and on behalf of this notable association, it is my high

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privilege to present this Memorial to the City of Pittsburgh, in the hope and belief that through the years to come it will be an inspiration to the Youth, not only of the city he loved, but of the world for which he labored, and a constant reminder to young and old alike that the truly good are never forgotten."

Speaking for the City in accepting the Memorial, Mayor Kline referred to George Westinghouse as one of the greatest of world figures and predicted that his name would endure for ages after wind and weather cause the Memorial to crumble into dust. "No material thing can last as long as a good name," he said.

By his official proclamation, Mayor Kline had designated October 6 as "Westinghouse Day". All Westinghouse Works in the Pittsburgh district, were closed for the day to enable employes to witness the unveiling.

Mr. Humphrey was chairman of the Memorial Trustees, who had executive direction of planning, designing and constructing the monument. Other trustees were A. W. Robertson, chairman, Westinghouse Electric; Mr. Herr, vice-chairman; F. A. Merrick, president, Westinghouse Electric, and John F. Miller,

vice-chairman, Westinghouse Air Brake.

R. L. Wilson, assistant to the president, Westinghouse Electric, was chairman of the general committee. The other members were as follows: J. McA. Duncan, assistant general sales manager; A. W. Bass, assistant to the vice-president; J. C. McQuiston, general advertising manager, and S. M. Kintner, manager, engineering research department, Westinghouse Electric; John B. Wright and G. C. Dehne, assistants to the vice-president, Westinghouse Air Brake; and J. P. Coleman, consulting engineer, Union Switch and Signal Company.

Henry Hornbostel, noted Pittsburgh architect, designed the Memorial, and the principal figures were the work of Daniel Chester French, sculptor. Other modeling was done by Massaniello Piccirilli and the panels representing six of the outstanding mechanical achievements of Westinghouse were executed by Paul Fjelde.

Since Norwegian granite and gold-leafed bronze are known to be permanent and enduring, the Memorial was worked out in these materials and for many years to come it will be a golden gem in a perfect setting

of sloping hillsides against a peaceful restful background of soft green foliage.

Complete descriptions appeared in the October issue of the Westinghouse Magazine but neither words nor photographs can do justice to its full beauty or reveal the fidelity of its interpretation as a symbol of all that the name George Westinghouse, "benefactor of mankind" has come to mean in the world.

More than six hundred prominent visitors to the city of Pittsburgh were honor guests at a banquet in the William Penn Hotel following the dedicatory exercises at Schenley Park. Following the singing of the Star Spangled Banner and the invocation by Dr. E. J. van Etten, the entire assemblage rose for a silent tribute to the memory of George Westinghouse. During the banquet, the Westinghouse Ensemble, under the direction of Zoel Parenteau, offered musical selections. The speeches were broadcast by KDKA, as were the exercises in the afternoon, and the festivities were described by Milton Cross to the thousands who were unable to attend.

(Continued on next page)

Memorial Dedication

(Continued from page 19)

A. L. Humphrey introduced A. W. Robertson as toastmaster. He responded to the introduction with a short address in which he pointed out the great difference between George Westinghouse and other individuals. "Although he was possessed of two eyes, as other men," Robertson said, "he employed them differently. Although he had ears, the same as you and I, he used them to a much better advantage. It was this ability, to use nature's gifts to their utmost, that enabled Westinghouse to rise from the level of mortal man and to attain the position of international recognition, almost immortality, that is granted him today."

The address of the evening was delivered by James M. Beck, Congressman from Philadelphia. Mr. Beck ranked George Westinghouse with the great economists of all time, and developed as his theme the fact that since Westinghouse was a great economist, he was also a politician in the greatest sense of the word.

He asserted that the political unity of any nation depended upon the internal means of communication far more than upon the efforts of statesmen. As a developer of safe, rapid transportation, Westinghouse



The figure of "American Youth", part of the Memorial, as he stands facing the plaque of Westinghouse.

had no equal. All political progress depends upon economic progress and that in turn is dependent upon scientific and mechanical advancement.

"George Westinghouse was a master builder of this economic nation," he said, "a nation that is more truly represented by the inventive genius of its citizens than by the documents of all its lawyers. I doubt if the achievements of any man in conquering work equal those



George Munro, representing Westinghouse Employes, presented the Memorial to the City of Pittsburgh.

of the man in whose memory we are gathered here this evening."

Lord Southborough, Under Secretary of State for the British Colonies and acting chairman of the Westinghouse Brake and Saxby Signal Company, spoke in glowing tribute of his friend Westinghouse. He too, thought of the Great Inventor as a master of economic state. He referred to Great Britain's refusing to accept the airbrake until a railway accident occurred, taking toll of more than eighty children's lives.

He also offered the thought, "Westinghouse had a dominating personality and it is quite possible that the government of the future might consist of a man of his type who might be president of the government, surrounded by a hand-picked cabinet."

The final eulogy of the evening was offered by John F. Miller, vice chairman of the board of directors



Herman Westinghouse Fletcher, grand-nephew of George Westinghouse, unveiled the Memorial.

of the Airbrake Company. He was a friend of the late inventor and paid tribute to his memory, extolling the kindly deeds and the individual charm, the patriotism of the youthful Westinghouse as a Union soldier, his courage, his persistence and his loyalty.

Safety Congress

The 19th Annual Safety Congress, held in Pittsburgh from September 29 to October 4, was declared by delegates to be the most successful meeting ever held. The Congress was outstanding in every way—numbers in attendance, enthusiasm, facilities offered to the delegates, reception of delegates and visitors, decorations in the city, spectacular events, and the amount of work accomplished.

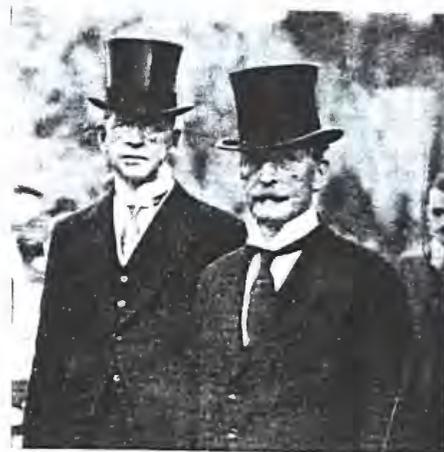
None of the hosts to the Congress took a more active part in the various activities during the week of sessions than did Westinghouse. T. P. Gaylord, Vice President, served as chairman of the Pittsburgh Committee on Estimates and Appropriations. W. G. Marshall, Assistant to the Vice President, Dr. T. Lyle Hazlett, George Miller and C. B. Auel appeared on the program as well as served in other capacities. W. W. Rodgers was active on the House Organ Committee.

The Westinghouse Magazine

Memorial Dedication Pictures



(Above, left to right) Hon. James Francis Burke, F. A. Merrick, John F. Miller, A. L. Humphrey, and A. W. Robertson at the Memorial dedication.



(Above) H. G. Brown, Managing Director of the Westinghouse Brake and Saxby Signal Company, and Lord Southborough, its Acting Chairman, represented England at the unveiling.



(Right) At the microphones, broadcasting a description of the unveiling, were Milton Cross of the National Broadcasting Company and Frederick G. Rodgers of KDKA.



(Left) Henry Hornbostel, architect of the Memorial, discusses the occasion with H. H. Westinghouse, brother of the inventor.

(Below) Two of the local dignitaries appearing on the program were Mayor Charles H. Kline and Bishop Mann, of the Pittsburgh diocese.

(Below) M. H. Aylesworth, president NBC; D. Sarnoff, president RCA; and P. S. Clapp, managing director N.E.L.A., were present.



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THE WESTINGHOUSE MAGAZINE

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 W. W. Rodgers, *Managing Editor*
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Published at East Pittsburgh, Pa., by the Westinghouse Electric & Manufacturing Company in the interests of its employes. Associate Editors of the Westinghouse Magazine are located throughout the country. Material for publication may be submitted to them or mailed direct to the Managing Editor, at East Pittsburgh.

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T. O. ARMSTRONG	

♦C. S. Stewart 1873-1930

C. S. Stewart, for many years a buyer in the Purchasing and Stores Department at East Pittsburgh Works, died October 13. He was one of the first employes in his particular department and had worked himself up through various ranks until he attained the position he held at the time of his death.

C. G. Taylor, General Purchasing Agent, paying tribute to his life long

friend, said: "Mr. Stewart was one of the original employes in the department and was next to the oldest in service. We have never had a more faithful or loyal employe. In the early days, before the Westinghouse organization was developed to the degree of efficiency that it is today, it was frequently necessary to work nights and overtime. Stewart was an exceptionally hard worker and often remained for hours after the regular quitting time. Never in the years of this extra work did he complain; in fact, it was difficult to persuade him to take a vacation.

"I think one of the outstanding characteristics of Mr. Stewart was his untiring patience. Never was he rough or impatient with an employe, especially if the employe were a newcomer in the department. He was especially courteous and kindly in his dealings with women."

♦David C. Hershberger 1883-1930

Early on September 27, David C. Hershberger, Assistant Manager of Gas-Electric Traction Section, died at the West Penn Hospital, Pittsburgh. He had been ill for several months, but his death was unexpected.

Mr. Hershberger's first position with Westinghouse was that of machine hand, in 1902. After graduating from Westinghouse Tech in 1906, he assumed the duties of switchboard engineer. Three years later he was made a switchboard draftsman. In 1911, he again advanced himself by entering the General Engineering Department, where he was Assistant Manager of the Gas-Electric Traction Section at the time of his death.

♦A Correction

Through an error, an editorial note was printed in the October issue concerning the retirement of R. L. Brown, Works Auditor at East Springfield. Mr. Brown does not retire from the services of the Company and we take this opportunity to correct the error made.

The story published should have referred to W. T. Clark of Spring-

field Works, who recently retired after many years service with the Company.

♦A. W. Robertson Visits President

A. W. Robertson, Chairman of the Board, and Mrs. Robertson were recently the guests of the President and Mrs. Hoover at the White House. Mr. Robertson, together with the leaders of other industries, was called to a conference by the President to discuss various economic conditions, especially referring to the subject of employment.

♦An Expression of Thanks

The following communication was received from Mrs. Isadore Sternefeld, the death of whose husband, Westinghouse representative in foreign fields, was mentioned in the October issue of this magazine.

21 rue Jacob Sept. 23, 1930.
 Paris VI en, France
 Dear Sirs:

Please accept thanks from my daughter and myself for the much appreciated article published in your magazine referring to my husband's death, his movements and work done during thirty-six years with the Westinghouse Company. His heart was always in his work and he was happy when busy with the Company's affairs.

Not only have we had a great loss in his death, but we also regret deeply that we will no longer be connected with the Company. My children have grown up with that name before them constantly and, of course, love it as I do.

My daughter is making a book of all letters, cards and telegrams,— numbering many. The article you sent will fill the front page, with his photograph.

Again may I extend thanks to you and also to all of Mr. Sternefeld's friends in the Company, for their sympathies in our great bereavement.

We remain gratefully,
 (signed) Louise and Mrs. I. Sternefeld.

The Westinghouse Magazine

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We Point with Pride to



*Lott Steffey
East Pittsburgh*

LOTT STEFFEY started to work with the old Westinghouse Machine Company at East Pittsburgh in March, 1906. After completing the Machinist Trade Course, he was promoted to tool maker of the division. When the Westinghouse Machine Company moved its works to South Philadelphia, he was transferred to the Blading Department and promoted to group leader in the Tool and Die Department where he worked continuously until the Blading Department was transferred to South Philadelphia, when he was transferred to the Westinghouse Electric and Manufacturing Company.

Lott then saw greater advantages and advancements in the Foremanship Training course which he completed January 14, 1925 and was promoted to acting tool supervisor of MI-1 Apprentice Training Department and again was promoted and transferred to Switchgear Apparatus as foreman of terminal condenser bushing, machining and assembly and is now in charge of Section P-1, machining of large oil circuit breakers.

Lott received his education in the North Braddock schools and graduated from the Westinghouse Technical Night School.

November, 1930



*Thomas Faulds
Homewood*

He has the very unusual record of being a member of the Veterans' Association at the age of 35.

Thomas Faulds became a Westinghouse employe on February 19, 1900 at East Pittsburgh in Section L-7 as millwright helper. After fifteen years' service he was transferred to the Twenty-Eighth Street Works in December, 1915. In this new position he was placed in charge of setting up the equipment for the manufacture of shells. He worked in this capacity until April, 1919, at which time he was transferred to P-80 on millwright work. Again, in 1923, his position was changed to his present one, that of millwright gang leader, Homewood Works.

Michael Elias began to work for the Company at the Newark Works in 1916. His first job was that of a machine operator in the Fan Motor Department, but after a short time he was transferred to the Automotive Department on similar work.

Possessing an unusual amount of ambition and desire to get ahead, he attended the Newark Technical School in the evenings. By hard work he finished a college preparatory

(Continued on next page)

Lott Steffey
East Pittsburgh

Thomas Faulds
Homewood

Michael Elias
Newark

E. S. Holt
Emeryville



*Michael Elias
Newark*



*E. S. Holt
Emeryville*

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Point with Pride

(Continued from page 23)

course in two years and was granted a scholarship in the Newark College of Engineering. However, owing to unfortunate circumstances, he was forced to leave college after two years, and return to work.

After re-entering the employ of Westinghouse in 1925, his duties were varied. Starting as inspector in the Watthour Assembly Department, he was soon transferred to the Test Department. From there he went to the winding room as general inspector. Because of the high calibre of his work, he was selected to assist the works branch of Material and Process Work and direct the students, instructing and handling all work connected with student activities.

During this time of being shifted from department to department, he had not stopped studying. He attended night school regularly for the two year period between 1925 and 1927. In 1927, an opportunity was presented for Elias to attend a late afternoon course at the Newark College of Engineering. After three years of intensive study at the College, he was graduated with the degree of Bachelor of Science in Engineering.

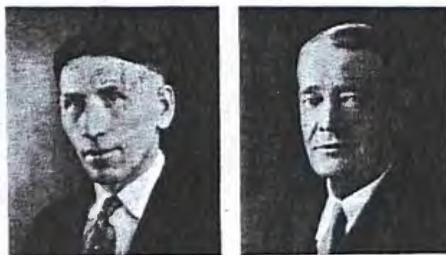
E. S. Holt enrolled in the ranks of Westinghouse in 1913, when he became affiliated with the Cost Department of the Westinghouse Machine Company. Later, he was transferred to the Price and Estimating Division, and was a part of this personnel when the Electric Company took over the Machine Company.

In 1919, he was transferred to the Service Department, handling switchboard and coil orders in the General Office at East Pittsburgh. From there he was sent to the Brooklyn Works, continuing in the same department, when the manufacture of panelboards was moved to Brooklyn.

Holt was moved to the Detroit Service Department in 1926, as Chief Clerk. Four years later he went to Emeryville as Office Superintendent for the Pacific Coast Service Department.

Best Suggestions

The Company is always responsive to suggestions from employes concerning the operation of the various Works. Not only are these suggestions asked for, but those individuals making them are rewarded for an accepted suggestion. A sliding scale of remuneration is in effect, paying more as the number of accepted suggestions from an individual employe increases.



William J. McGuire and William Smith were both rewarded recently for submitting best suggestions in their respective Works.

Honors for the best suggestion made at the South Philadelphia Works last month go to William J. McGuire, Production Department, L-11. He suggested a change in the method of manufacturing caulking strips for impulse blading. These strips are used in the spindles and in the cylinders of steam turbines. They were originally cut to size and machined to fit. Mr. McGuire suggests that the Company purchase the strips drawn to shape through dies, so that when they are cut to size, the strips will be in proper shape for use without the necessity of machining each one of these small pieces. This scheme will save the Company a considerable sum of money per year, not only in eliminating extra labor costs but also because it expedites the construction of turbine spindles and cylinders.

Among the best suggestions for the past month is that of William Smith, of the Electric Equipment and Maintenance Department at East Pittsburgh. When he was assigned to work on extensions being made in control equipment at the radio station on the Greensburg

Pike, it proved a means for him to demonstrate his constructive ability.

The conventional method for mounting No. 23-A telephone jacks was found unsuitable for application to steel panels. To eliminate the operation of cutting rectangular openings in the steel panels mentioned and in which insulated mounting blocks are usually inserted, Smith recommended that five-eighth inch diameter holes be drilled. The jacks were then mounted on a micarta strip and tubing assembly fastened to the panel by machine screws. This construction enabled mounting the jacks either singly or in gangs as desired. The advantage lies in much neater appearance and simplicity of construction.

Insurance Report

The following is a report of Deaths for the month of September, 1930, applying to the Free Group Insurance Plan. There have been also recorded death claims totaling \$25,800.00 for the same period under the Contributory Plan:

September	Free Insurance
2 Howard F. Hawk, Mansfield Works.....	\$500
4 Clark B. Somerville, C-3, Ck. 12.	600
*5 Jacob Szczygiel, East Springfield Works.....	500
10 John M. Laudermilch, R-16, Ck. 89.....	500
10 John Letterle, Nuttall Works....	1500
12 Frank J. Beck, Boston Service...	2000
14 Paul Turkovich, Disability No. 308.....	1300
15 Thomas A. Fike, F-12 Production	1600
17 William McSeveney, Annuitant..	500
23 Robert Shannon, Annuitant.....	1800
24 Wm. Ed. Baggot, New York Service.....	500
25 Alexander Dick, Annuitant.....	2000
27 David C. Hershberger, General Engr.....	2000
	\$15,300

Additional deaths not previously reported are:

May	
2 Willis W. Whitney, Cleveland Works.....	\$2000
June	
26 Hans Anderson, Annuitant.....	500
August	
31 **Wm. B. Smith, Mansfield Works	
	\$2,500

*Permanent and Total Disability Claim.

**Less than six months.

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"Do Unto Others"



Third Annual Campaign

The Welfare Fund

November 12 to 25

A NNOUNCING a goal of \$1,520,-248, the Welfare Fund is preparing for the third annual campaign, November 12 to 25. Demands for relief from welfare agencies have risen steadily this year, and the success of the Welfare Fund campaign is essential if many families and individuals are to receive needed assistance this winter and next year.

The goal, which is higher by some \$346,000 than the amount raised last year, includes a greatly increased estimate for family relief and the operating expenses of eight new agencies. Every possible economy has been effected in the budgets which make up the goal this year. Cost of operation of the Welfare Fund has been reduced from 5.7% of the total to 4.6%, a figure which is clear proof of the economy and effectiveness of cooperative financing.

Close to eight thousand volunteer workers will serve in the November campaign. Some 360 business establishments are already organized and opportunity will be given to employees to make voluntary contributions.

Westinghouse will again enter this drive for funds, according to T. P. Gaylord, Vice President of the Company. Last year, in the second annual Welfare Campaign, employees in the Pittsburgh district made a larger contribution than any other industrial group.

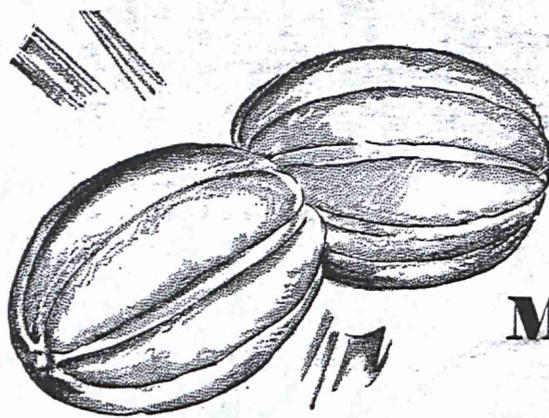
All these volunteer workers serve without pay as do directing boards and committees of the Welfare Fund.

▼

The Fund represents a great community undertaking, aimed to develop an adequate program of community service in Pittsburgh and Allegheny County. Of the funds raised this fall 14.4% will be spent in child care, 38% in individual and family assistance, 17.4% in health promotion, and 15.5% in the field of character-building.

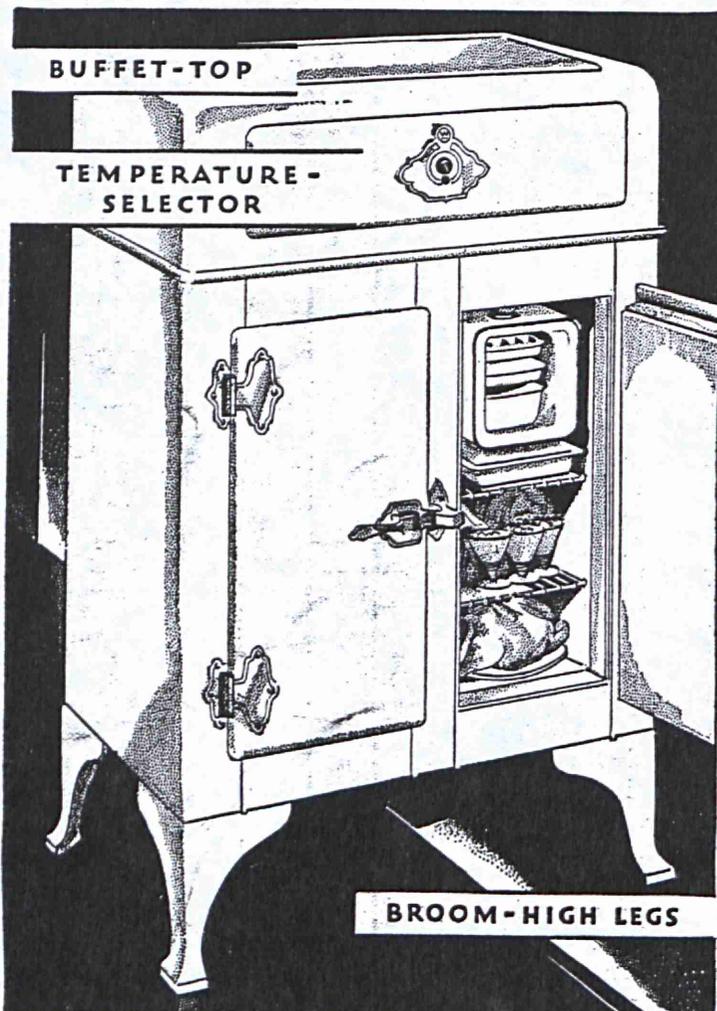
The importance of a program such as this, aiming as it does at improved living standards in the community, health education, care of dependent children, family relief and service, healthy activities for underprivileged boys and girls, cannot be over-emphasized. It is a genuine attempt to attack the fundamental causes of crime, juvenile delinquency, disease, poverty and ignorance which are to be found in all large communities. It needs the intelligent support of every thinking citizen.

THESE TWO



MELONS

help make a payment on your **Kitchen-Planned Westinghouse Refrigerator**



"Ten cents apiece, three for a quarter," says your market man. Quantity buying, on all foodstuffs, results in a saving of ten per cent. And you can buy in quantity, knowing that the food will keep perfectly when you own a Westinghouse. Food spoilage and waste of left-overs exact another ten per cent from your pocketbook. This saving of 20% of your weekly cost will pay for your Westinghouse Refrigerator.

There are many reasons for choosing this kitchen-planned refrigerator: The Buffet-Top a flat, usable surface; the Temperature-Selector, with seven freezing speeds; the Broom-High Legs for every-day kitchen cleaning convenience.

Other reasons are found inside . . . the large shelf area and ice capacity . . . the flexible ice tray and the gleaming porcelain-enamel evaporator.

You need not wait to obtain the many conveniences and money-saving possibilities built into the Westinghouse. A small down payment places it in your home. Payments conveniently spaced over many months take care of the balance. Put one in your home today. And remember — "A Westinghouse Refrigerator Pays for Itself."

A Family of 3 on an Income of \$55.00 a Week Can Save \$145.00 a Year

If your family is this size and your income near this level these figures can apply directly to you and your home budget.

Make Us Prove It!

Westinghouse REFRIGERATOR



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THE
KDKA
CONCENTRATED
AREA

JUNE 1, 1928

Westinghouse Radio Stations
1207 Chamber of Commerce Bldg.
Pittsburgh, Pennsylvania

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Copyright
1928
Westinghouse Radio Stations

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An International Audience!

Westinghouse Station KDKA is the Pioneer Broadcasting Station of the World.

Since November 2, 1920, it has operated on a daily schedule, without a single interruption.

Its audience is the greatest of any station in the world. Program and technical superiority have assured that.

KDKA programs are enjoyed regularly in every country in the world. Regular broadcasting on long waves, and experimental transmissions on short waves have made this possible.

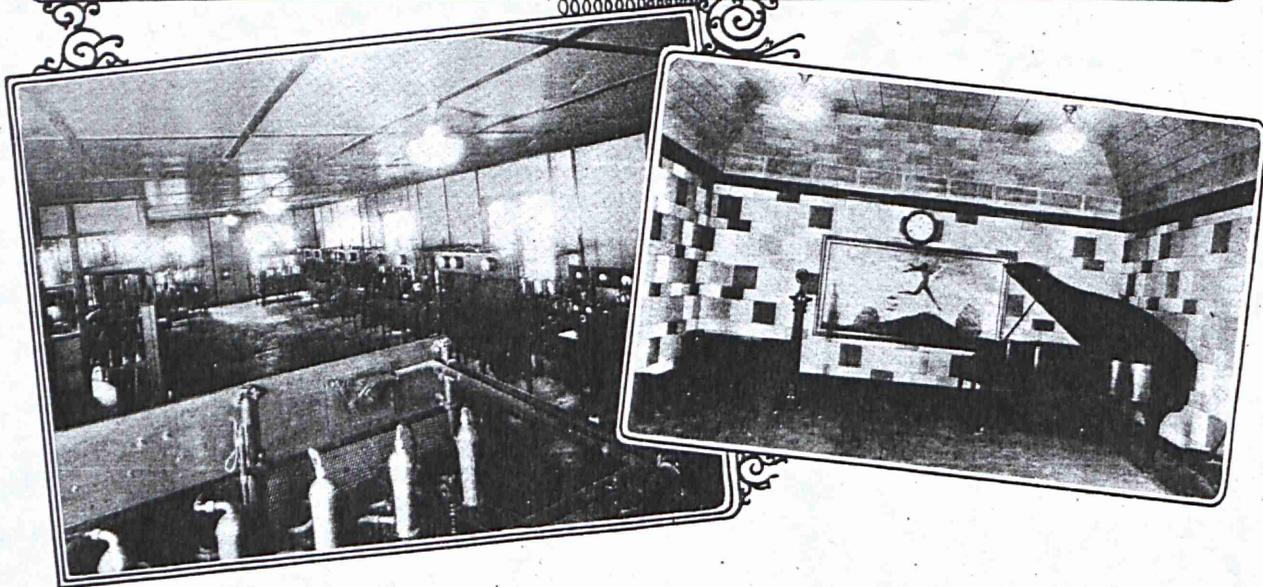
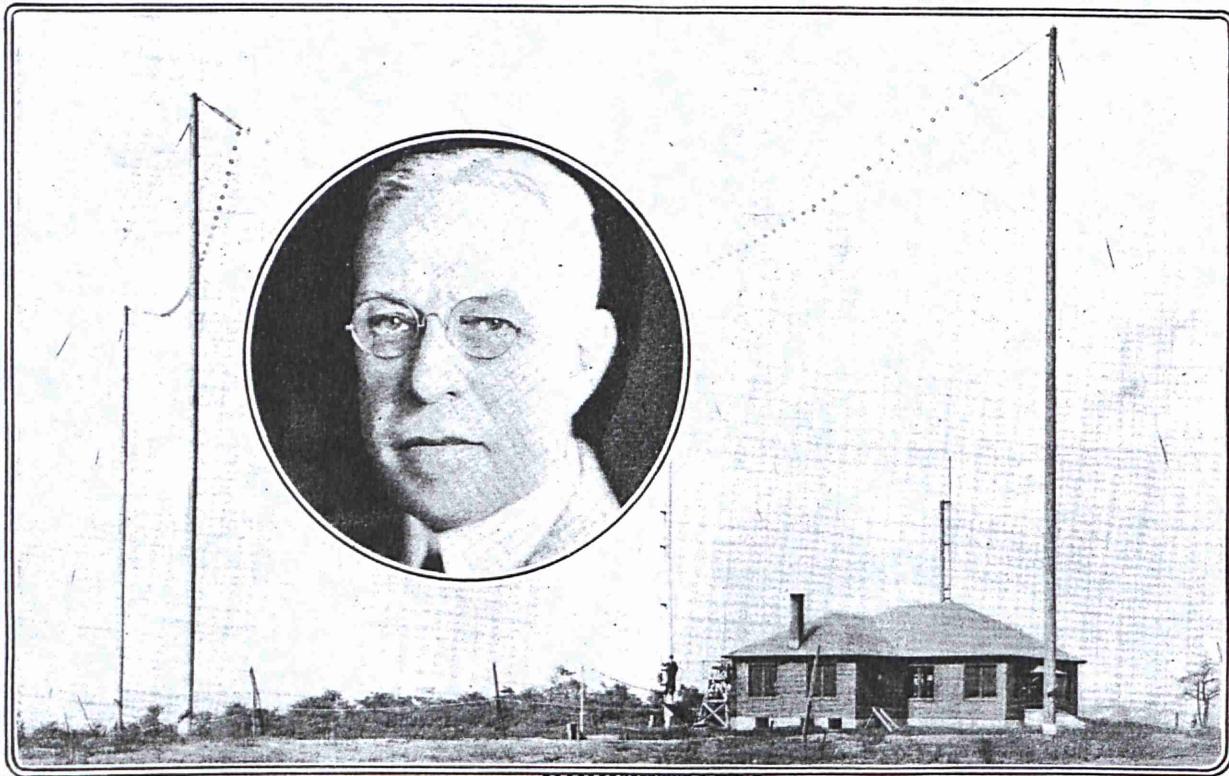
Its greatest service is to the Concentrated Area in which its signals are regularly and dependably received at virtually any time of day or night.

That Area is computed conservatively to lie within a radius of 300 miles of Pittsburgh.*

Within 300 miles of Pittsburgh, KDKA is dominant. Wherefore, this study of the KDKA Concentrated Area.

**Edgar H. Felix estimates the effective range of a 50,000-watt broadcasting station—KDKA is one of four such stations in the United States—as 350 miles. (Radio Broadcast, May, 1928.)*

THE KDKA CONCENTRATED AREA



Inset—H. P. Davis, Father of Radio Broadcasting, Vice-President Westinghouse Electric & Manufacturing Company

Upper right—View of the transmitting station of KDKA, showing antenna system; located 14 miles from KDKA Studios in downtown Pittsburgh. Lower left—Interior view of transmitting station, showing amplifier, modulator, and oscillator panels. Lower right—Principal Studio, where a majority of KDKA programs originate.

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The Market

A Cross Section of Related Statistics in the KDKA Concentrated Area

Portion of State in KDKA Concentrated Area	State	Number of Persons per Square Mile*	Number of Persons per Family*	Number of Persons per Telephone*	Number of Persons per Passenger Car*	Percentage of Homes Wired*	Percentage of Homes Having Radio Sets*	Percentage of Farm Homes Having Radio Sets*	Distribution of Radio Sets in KDKA Area by Percentage in Each State	Distribution of One Year's Mail to States in the Concentrated Area
100%	Del.	102.9	4.5	8.4	6.4	45.6	18.1	9.0	0.5	0.14
100%	D.C.	7885.7	4.4	3.8	5.6	77.5	32.3	2.1	0.39
20%	Ind.	87.4	4.3	5.8	4.1	69.3	25.5	42.0	1.9	3.19
30%	Ky.	62.9	4.6	11.4	8.9	30.2	14.6	7.0	1.3	1.14
100%	Md.	131.1	4.8	8.2	5.6	62.9	32.4	21.0	6.2	1.41
35%	Mich.	79.2	4.5	6.4	3.9	82.4	30.8	23.0	5.7	2.39
85%	N.J.	464.6	4.8	6.4	5.3	88.6	33.6	96.0	12.8	0.84
45%	N.Y.	234.7	4.4	6.8	6.0	97.0	19.1	29.0	6.8	7.05
10%	N.C.	56.0	4.4	18.6	6.9	23.8	15.5	3.0	0.5	1.79
100%	Ohio	166.3	4.3	6.1	4.3	78.2	29.5	26.0	23.4	11.28
100%	Penna.	218.4	4.9	7.2	6.2	62.8	26.8	21.0	30.9	42.72
95%	Va.	60.4	5.0	14.1	7.6	28.0	16.0	6.0	4.6	1.89
100%	W. Va.	71.3	4.7	11.6	6.9	30.6	16.6	12.0	3.3	5.19
Average		136.7	4.6	8.6	6.0	67.5	23.9	25.0	Total 100.0	Total 79.42

*Figure for section of state in KDKA Concentrated Area applies also to entire state.

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THE KDKA CONCENTRATED AREA

Area, Population and Families

*U. S. Census Bureau Estimate,
July 1, 1928*

Portion of State in KDKA Area	State	Area in Square Miles	Population	Families*
100%	Delaware	2,370	244,000	53,745
100%	District Columbia	70	552,000	122,665
20%	Indiana	7,271	635,200	147,720
30%	Kentucky	12,179	765,900	167,595
100%	Maryland	12,327	1,616,000	333,195
35%	Michigan	20,293	1,606,850	357,075
85%	New Jersey	6,990	3,247,850	675,230
45%	New York	22,142	2,947,500	663,850
10%	North Carolina	5,243	293,800	66,770
100%	Ohio	41,040	6,826,000	1,594,885
100%	Pennsylvania	45,126	9,854,000	2,006,925
95%	Virginia	40,496	2,446,250	488,275
100%	West Virginia	24,170	1,724,000	365,255
	Total	239,717	32,759,350	7,043,185
	Total in U. S.	3,026,789	120,013,000	26,670,000
	Percentage in KDKA Area	7.8	27.3	26.4

*See footnote on page 10.

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THE KDKA CONCENTRATED AREA

Telephones and Passenger Automobiles

*Courtesy Bell Telephone System
and National Automobile Chamber
of Commerce, respectively.*

Portion of State in KDKA Area	State	Telephones June 1, 1928	Automobiles Dec. 31, 1927
100%	Delaware	29,000	38,037
100%	District Columbia	145,279	98,162
20%	Indiana	109,400	139,472
30%	Kentucky	67,200	76,768
100%	Maryland	198,000	265,768
35%	Michigan	248,850	574,264
85%	New Jersey	510,000	498,534
45%	New York	435,427	522,140
10%	North Carolina	15,800	39,022
100%	Ohio	1,120,000	1,374,402
100%	Pennsylvania	1,362,000	1,354,548
95%	Virginia	172,900	274,233
100%	West Virginia	148,000	217,689
	Total	4,561,856	5,473,039
	Total in U. S.	18,250,000	20,230,429
	Percentage in KDKA Area	24.99	27.1

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The Concentrate



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Area, Magnified



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Homes Wired for Electricity

*Courtesy of RADIO RETAILING,
McGraw Hill Publishing Company,
January 1, 1928.*

Portion of State in KDKA Area	State	Number of Homes*	Homes Wired	Homes Unwired
100%	Delaware	58,000	26,430	31,570
100%	District Columbia	126,000	97,700	28,300
20%	Indiana	148,800	103,120	45,680
30%	Kentucky	180,000	54,390	125,610
100%	Maryland	376,000	236,400	139,600
35%	Michigan	364,000	299,880	64,120
85%	New Jersey	745,450	660,705	84,745
45%	New York	703,750	682,975	20,775
10%	North Carolina	67,600	16,110	51,490
100%	Ohio	1,570,000	1,228,000	342,000
100%	Pennsylvania	2,290,000	1,437,500	852,500
95%	Virginia	566,200	158,840	407,360
100%	West Virginia	396,000	121,000	275,000
	Total	7,591,800	5,123,050	2,468,250
	Total in U. S.	27,850,000	17,596,390	10,559,510
	Percentage in KDKA Area			
	Area	27.3	29.1	23.4

**The figure for percentage of homes in the KDKA Area agrees with that for the percentage of population. (See table on page 6.) The percentage of families, however, does not correspond to percentage of homes, because of the inherent difference in composition between homes and families.*

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Radio Receiving Sets and Listeners

(Urban and Rural)

*Courtesy of RADIO RETAILING,
McGraw Hill Publishing Company,
January 1, 1928.*

Portion of State in KDKA Area	State	Sets	Listeners (Estimating Four per set)
100%	Delaware	10,500	42,000
100%	District Columbia	40,700	162,800
20%	Indiana	38,000	152,000
30%	Kentucky	26,400	105,600
100%	Maryland	122,000	488,000
35%	Michigan	112,350	449,400
85%	New Jersey	250,750	1,003,000
45%	New York	135,100	536,400
10%	North Carolina	10,450	41,800
100%	Ohio	463,000	1,852,000
100%	Pennsylvania	613,000	2,452,000
95%	Virginia	90,725	362,900
100%	West Virginia	66,000	264,000
	Total	1,977,975	7,911,900
	Total in U.S.	7,500,000	30,000,000
	Percentage in KDKA Area	26.4	26.4

THE KDKA CONCENTRATED AREA

Farm Radio Receiving Sets and Listeners

*Courtesy of RADIO RETAILING,
McGraw Hill Publishing Company,
January 1, 1928.*

Portion of State in KDKA Area	State	Sets	Listeners (Estimating Four per set)
100%	Delaware	1,170	4,680
100%	District Columbia
20%	Indiana	20,775	83,100
30%	Kentucky	6,630	26,520
100%	Maryland	15,790	63,160
35%	Michigan	19,565	78,260
85%	New Jersey	30,990	123,960
45%	New York	30,570	122,280
10%	North Carolina	1,180	4,720
100%	Ohio	81,215	324,860
100%	Pennsylvania	53,600	214,400
95%	Virginia	14,590	58,360
100%	West Virginia	14,080	56,320
	Total	290,155	1,160,620
	Total in U. S.	1,600,000	6,400,000
	Percentage in KDKA Area	18.1	18.1

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Analysis of One Year's Mail

All mail received at Station KDKA from
February 1, 1927 to January 31, 1928

	Mail Pieces		Mail Pieces
Alabama.....	403	Nevada.....	12
Arizona.....	34	New Hampshire.....	395
Arkansas.....	225	New Jersey.....	742
California.....	1,187	New Mexico.....	11
Colorado.....	91	New York.....	6,220
Connecticut.....	847	North Carolina.....	1,578
Delaware.....	125	North Dakota.....	134
District Columbia.....	344	Ohio.....	9,954
Florida.....	839	Oklahoma.....	177
Georgia.....	808	Oregon.....	96
Idaho.....	46	Pennsylvania.....	37,697
Illinois.....	2,005	Rhode Island.....	396
Indiana.....	2,812	South Carolina.....	708
Iowa.....	1,169	South Dakota.....	198
Kansas.....	491	Tennessee.....	754
Kentucky.....	1,006	Texas.....	314
Louisiana.....	237	Utah.....	14
Maine.....	505	Vermont.....	420
Maryland.....	1,247	Virginia.....	1,676
Massachusetts.....	1,676	Washington.....	204
Michigan.....	2,109	West Virginia.....	4,604
Minnesota.....	911	Wisconsin.....	1,221
Mississippi.....	251	Wyoming.....	16
Missouri.....	814		
Montana.....	117	Canada.....	3,961
Nebraska.....	405	Other foreign.....	707
Total U. S.....	88,245		
Total Foreign.....	4,668		
Grand Total.....	92,913		

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Cooking School Membership

The KDKA Cooking School was given every Wednesday morning, from 10:30 to 11:00 a. m. for 26 weeks, from October 12, 1927, to April 4, 1928. These figures demonstrate strikingly the range of Station KDKA for daytime features.

	Mail Pieces		Mail Pieces
Alabama.....	3	Nebraska.....	3
Arizona.....	4	New Hampshire.....	2
Arkansas.....	1	New Jersey.....	26
California.....	54	New Mexico.....	5
Colorado.....	16	New York.....	675
Connecticut.....	16	North Carolina.....	19
Delaware.....	9	North Dakota.....	7
District Columbia.....	17	Ohio.....	5,831
Florida.....	27	Oklahoma.....	18
Georgia.....	6	Oregon.....	4
Idaho.....	2	Pennsylvania.....	19,322
Illinois.....	70	Rhode Island.....	1
Indiana.....	92	South Carolina.....	1
Iowa.....	19	South Dakota.....	4
Kansas.....	13	Tennessee.....	10
Kentucky.....	22	Texas.....	14
Louisiana.....	9	Vermont.....	2
Maryland.....	376	Virginia.....	168
Massachusetts.....	21	Washington.....	7
Michigan.....	77	West Virginia.....	2,940
Minnesota.....	2	Wisconsin.....	16
Mississippi.....	3	Wyoming.....	2
Missouri.....	10	Canada.....	126
Montana.....	7	Central America.....	1

Domestic..... 29,953
 Foreign..... 127
 Total..... 30,080
 Total Cook Books Distributed.... 35,000

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THE KDKA CONCENTRATED AREA

Three Groups of
Westinghouse
Broadcasting Stations

Have Outstanding Advertising
Facilities

KDKA, Pittsburgh—Pioneer Broadcasting Station of the World

KYW, Chicago—Pioneer Broadcasting Station of the West

KFKX, Chicago—Pioneer Agricultural Station of the West
(Formerly located at Hastings, Nebraska)

WBZ, Springfield }
WBZA, Boston } Pioneer Broadcasting Station of New England

Headquarters, Commercial Dept.
1207 Chamber of Commerce Building
Pittsburgh, Pa.

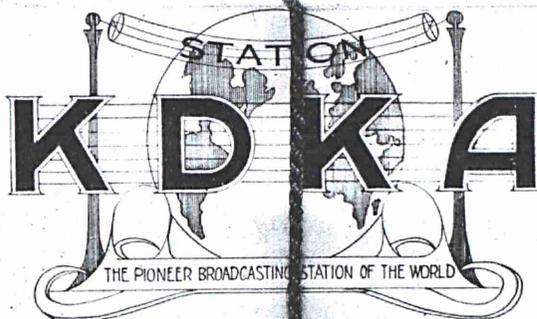


Anniversary Dinner

KDKA

THE PIONEER BROADCASTING STATION OF THE WORLD

TUESDAY Nov. 6, 1928



MENU



H. P. Davis



Harvey Gaul



Dr. Bowman



Howard Heinz

Fruit Cocktail Supreme
 Stuffed and Plain Celery Hearts - Pimento Olives
 Fresh Tomato Bouillon - Cheese Sticks
 Breast of Guinea Hen - under bell
 Parisian Potatoes in Nest
 Broccoli Hollandaise
 Endive and Alligator Pear Salad -
 French Dressing
 Baked Alaska Individual
 Petit Fours
 Demi-Tasse
 Cigars Cigarettes



Dr. Conrad



Rev. E. J. Van Etten



L. W. Chubb



H. W. Arlin



J. C. McQuiston



A. E. Braun



C. W. Horn



O. S. Schairer



Lloyd Thomas

SPEECHES

Opening Remarks, H. P. Davis.

Introduction of Toastmaster.

Toastmaster, J. C. McQuiston

Introduction of H. W. Arlin,
 Pioneer Radio Announcer

Our Anniversary Occasion, - H. P. Davis.

Retrospect of Radio Broadcasting, - A. E. BRAUN.

Radio in the Church, - REV. E. J. VAN ETTEN.

Radio in Education, - DR. J. G. BOWMAN.

Echoes from Washington, - HON. JAS. J. DAVIS

Election Returns and Broadcasting Features



F. A. Merrick



Eugene Connelly



E. S. Bayard



Hon. J. J. Davis



S. M. Kintner

Autographs

H.P. Davis Nov. 6. 1925

Eugene Connelly
Franklin D. Row

~~W. H. [unclear]~~

~~W. H. [unclear]~~

E. Bayard

John H. [unclear]
Frank Connel

Frank [unclear]

Caution
E. J. [unclear]

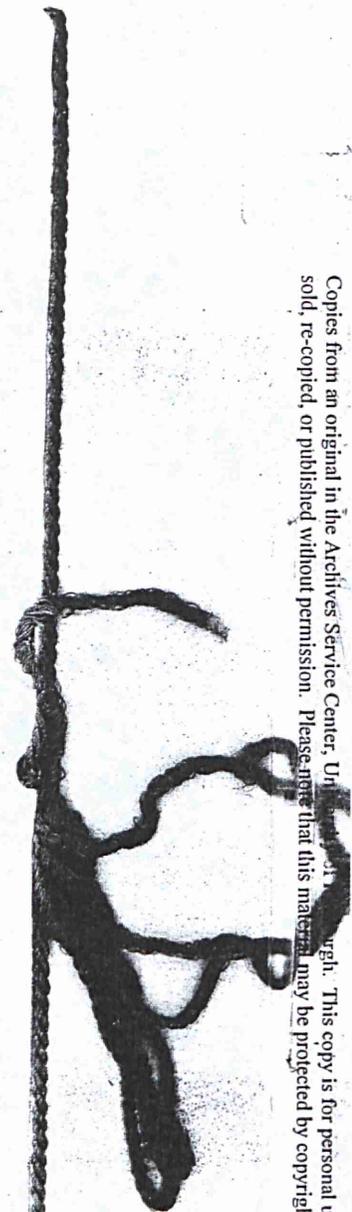
O. S. [unclear]

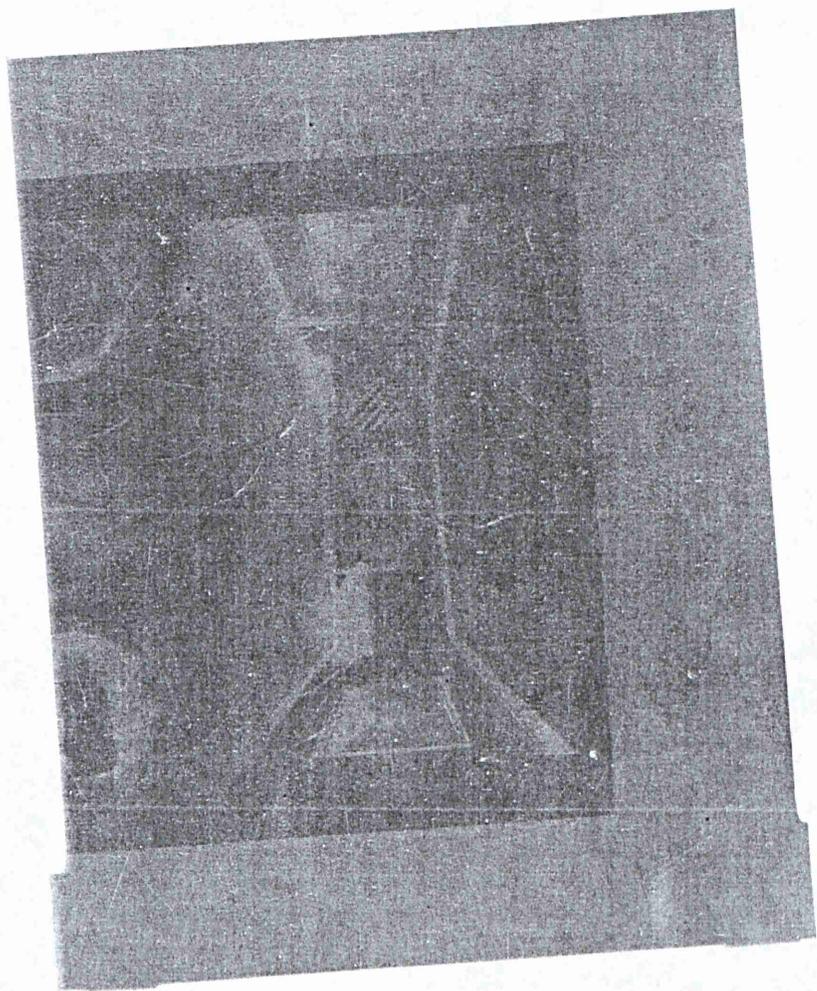
Lloyd C. Thomas

J. [unclear] Fleck

H. W. [unclear] L. W. [unclear] [unclear]
Arthur E. [unclear]

11/12/25





AIS 64:21

Box 2

ff 34

Radio Station KDKA
Pittsburgh, PA

H. P. Davis, 1868-1931, Papers, 1915-1944

P.O. Box 183.
TELEPHONE No. 995.
TEL. ADDRESS,
"JOCKEY CLUB"

JOCKEY CLUB OF SOUTH AFRICA,
JOHANNESBURG.

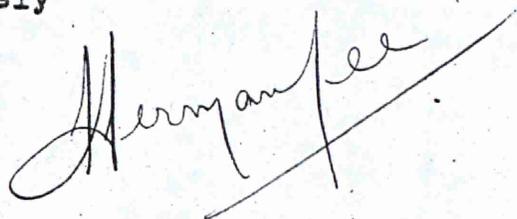
Feb. 25th, 1925

C W Horn Esq,
Supt. Radio Operations
Westinghouse Electric Manf. Co

Dear Sir,

Mr Grant Dalton has kindly furnished me with your address for the purpose of informing you of the remarkable results obtained by me of reception from your station on the short wave length. The reason I use the word "remarkable" is because I live in a flat (2 storeys high) in the heart of this town, screened at the back with a high blank wall and at the side with a steel building nine stories high, and buildings all around me, yet notwithstanding all this I hear K D K A with startling clearness using a detector and either one or two stages of low. On Tuesday night, Feb 24th, when the ~~XXXX~~ Brunswick Musical Soc. were giving their memory contest the items came thro with great clarity, particularly free from distortion and very little fading. The Vibraphone was particularly clear. Thinking this may be of interest to you, and assuring you of my appreciation of your radio concerts.

Yours sincerely



Herman Lee

H. Lee

COPY

at 2/27/25 KDKA

Dear Sir:

With great pleasure I hasten to inform you that reception of your KDKA is marvelous here in RIO. There are days in which we receive your station with sensation given by local's tones.

Excuse my mistakes. I'm Brazilian and I have learned English reading American newspaper of Radio and excited by wishes of understand your broadcasting.

I was surprised yesterday, 4 March, at Dinner Concert that I received at 8 hs 45, by your changed wavelength. Permit me to tell you that your 63 m. is preferable.

Reception more strong, no static noises; it is so easy to assemble set for wave as low as 63 m.

Why have you changed? The transmission 63 m. is so good that I have received it, with hard regeneration, without antenna on detector and one audio, in ear phone.

That was in comprehensive manner. The reception on antenna twenty meters is so good that we have it only on detector good reception in ear phone; on detector and two audio ~~XXXXXXXXXXXX~~ on loud speaker. This results with very few tikler, no squeal absolutely. The reception on detector and one audio is as strong as locals. This on ear phone. The tone is very pure.

Enjoying you to go back for primitive wave length.

I'm yours very truly;

Arthur Oliveira,
Rio de Janeiro, 30 Palmeiras street, Brazil.

5 March 1925

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E. Nielsen
Casilla C
Punta Arenas
Magallanes
Chile

Punta Arenas, 28th. November 1924.

< - Most southern city in S. A.

To the

Westinghouse Electric & Manufacturing Co..

BROADCASTING STATION KDKA

Esat Pittsburg

Pensylvania

X

Dear sirs:

strong

Agreable to the request of the speaker of the station
KDKA 64 Mts. I herewith let you know that I have heard the opera
THE MARRIAGE OF FIGARO boradcasted from the above station, which came
R 7 (Music and speach strong - faintly heard on the loud speaker)
and was as steady as if it were a local station, which I think is
remarkable for this distance (no fadings I have noticed).- The
Receiver I used was a PERRY O' Briggs type (simple regenerative)
and one low frecueny stage, all the apparatus are home made inclusiv
the transformer.-

Awaiting your reply in confirmation

I remain, Dear Sirs

Yours faithfully

E. Nielsen

P. S. The reception took place last
night (27/11/924.)

*Used outside antenna, badly
screened by houses, 15 mts high the antenna.*

EN

P O. Box 6468.

TELEPHONES:
2151
5583
5584
CENTRAL.

CAPETOWN:
P O. BOX 424.

DURBAN:
P. O. BOX 978.

Dobson & Dobson, Ltd.

MECHANICAL & ELECTRICAL
ENGINEERS, MERCHANTS
AND CONTRACTORS.

TELEGRAMS AND
CABLES:
"DOWNRIGHT."
JOHANNESBURG,
CAPETOWN AND
DURBAN.

CODES:
A.B.C.
5TH EDITION.
BENTLEYS

AGENCIES —

BRITISH REINFORCED CONCRETE
ENGINEERING CO., LTD.
B.R.C. Concrete Reinforcing Fabrics.

BRITISH POWER RAILWAY SIGNAL
CO., LTD.

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Co., Ltd.**

HEAD OFFICE

CORNER OF SIMMONDS AND ANDERSON STREETS.

JOHANNESBURG, 3rd. December, 1924

Messrs. Westinghouse Electric Co. Ltd.,
Shortwave Experimental Station,
East Pittsburg,
Pen. U. S. A.

Dear Sirs,

It may be of interest to you that the JB (our local station) Engineer and myself relayed a portion of a programme from your Shortwave Station on Thursday morning last.

I am enclosing a cutting from our local paper describing our efforts. You will notice in my letter to you about the end of October I stated that we hoped to relay one of your programmes about the beginning of January.

The relay on Thursday morning last proved to be such a success that a special direct land line was installed, and on Sunday morning your programme was officially relayed from JB from 4 to 6 a.m. with huge success.

I think this constitutes a record for long distance relay work.

/After

39471

3/12/24.

After having listened to your station regularly for several nights I have come to the conclusion that you do not pump out the same power every evening, that is, you utilise increased power on special occasions. Would you be so kind as to forward me some sort of time schedule of transmissions from your Shortwave Station, also keep me informed of any change of wavelength output power etc. I am asking you this on behalf of the S. African Amateurs .

I have noticed that your station is always silent between 5 and 6 a.m. i.e. after you have relayed the Arlington time Signal and given the weather forecasts. This is rather a pity as far as we are concerned as we have proved during Radio Week that the above hour is the best for reception from your station, as X's abate very rapidly after 5 a.m. I have noticed that you transmit twice a week from 6 to 7 a.m. our time, but I am afraid the reception during this hour will always be somewhat weak, owing to the sun having been up for some considerable time. However, weak reception between 6 and 7 a.m. our time maybe due to your never having used increased power ^{of late} between these hours.

I should like to state that the reception of your shortwave Station has never been so consistently powerful since your alterations about the end of October, whatever these alterations may have been, they have not proved beneficial as far as South Africa is concerned, however, I should like to add that what you have lost in strength, you have gained in clarity and modulation.

Trusting that the above will be of interest to you, and that you will forward me the information asked at your earliest convenience.

I am,

yours sincerely,

W. Grant Dalton

*Signal pole tower
England installed -*

Date December 11, 1914

JOURNAL OF THE
SOUTH AFRICAN



MR. OWEN D. YOUNG.
The Agent-General for Reparations
Payments is a lawyer and Vice-President
of the General Electric Co.

A RADIO RECORD.

DAWES PLAN CHIEF HEARD HERE.

By a remarkable piece of reporting by radio, "The Star" is able to give to-day statements made at New York this morning by Mr. Young, the American who is Agent-General for Reparations under the Dawes plan, referring to Germany's debts and the use that should be made of America's gold hoard.

Only a few hours ago—between 4 and 6.30 this morning (South African time)—Mr. Young was invested with the Legion of Honour by the French Ambassador in New York at a banquet given in honour of his work in Europe, and in reply made the statements referred to, which, from one so intimately connected with the war debt problem and the Dawes plan, and so highly thought of in America, have no small importance in view of to-day's cable news.

The credit for the achievement is due to Mr. G. W. Smits, of Hendrina, Eastern Transvaal, who heard the whole proceedings on his wireless set, took a very complete shorthand note and telephoned the report direct to "The Star" offices.

USE FOR AMERICAN GOLD.

At the banquet Mr. Young dealt with reparations and the Dawes plan in his speech.

He said he thought Germany honestly intended to pay her debts and to prove her desire to meet her obligations, and that the American hoard of gold should be unselfishly utilised in bringing the world to a better understanding of good will and peace. He also dealt extensively with the economic conditions in Europe.

Mr. Smits told his own story of his experience to a representative of "The Star" over the telephone.

"Early this morning," he said, "I listened again to a most remarkable function—I quote the announcer of the KDKA broadcasting station in Pittsburgh. The banquet was given in honour of a Mr. Young for his work in connection with the restoration of Europe.

"The function took place in New York and the Governor of New York was the chairman. The Bell long distance system was employed to carry the speeches from New York, and they were broadcast by KDKA on a short wave and relayed by the following stations:—WEAF, WGB, WYG, WJAR, WRC, KDKA (the long-wave station), KXW, WDF, and WBZ. During the transmission I tuned in to WBZ, and found exactly the same signals as were coming from KDKA.

"The guests represented every branch of finance, industry, the army, and the navy in the United States, and among those present were diplomatic representatives and others, including Mr. J. D. Rockefeller, President Coolidge and Mr. Hoover spoke by landline from Washington, a Mr. Richards from Maryland, and a Mr. Wickenshire spoke from a place which I did not catch. The French Ambassador was also present, and during the proceedings he decorated Mr. Young with the Cross of the Legion of Honour amidst tumultuous cheering.

SNOW FALLING.

"Describing the scene, the announcer stated the hall was decorated with the flags of many nations, and that the guests, including some of the greatest giants of capital and industry, were enjoying themselves like youngsters. The menu card was inscribed to commemorate the occasion. Outside snow was falling."

"The Governor of New York and Mr. Wickenshire spoke in eulogy of the work of Mr. Young, and after considerable speech-making letters were read from President Coolidge, General Donner, who referred to Mr. Young as the most useful and constructive man on their committee, Mr. Baldwin, Signor Mussolini, and the Belgian Ambassador. The French Ambassador read a message from the President of France congratulating Mr. Young on his work.

"After a silence he said, 'In appreciation of your untiring efforts in the cause of humanity I hereby bestow upon

you, on behalf of the President of the French Republic, the Cross of the Legion of Honour."

BURST OF CHEERS.

Mr. Smits remarked that this event seemed to be unexpected by the guests and the burst of cheering that followed lasted for three minutes. He said it was easy to picture the scene from the description given by the announcer of the broadcasting station, who outlined in a circumstantial way the investiture ceremony and explained how the recipient in the customary way was kissed on both cheeks.

A director of the General Electric Company surveyed Mr. Young's career. He said that in 1923 Mr. Young was one of three men who tackled what seemed an impossible task.

Mr. Smit said that when Mr. Young was called upon to reply there was wild enthusiasm. "In a voice touched with emotion," he said, "he spoke slowly and first of all thanked the French President for the great honour bestowed on him and the President of America and all those who had that night so honoured him." Continuing, Mr. Young made the statement on war debts that has been quoted.

(Continued in next column.)

Gray, Thompson & Rose,
Attorneys at Law,
Commonwealth Building, Pittsburgh

Nov-25th

JAMES C. GRAY.
A.M. THOMPSON.
ROY ROSE.

H. STEWART DUNN.
WALTER H. KELLY.
DONALD C. ANDERSON.

December 22, 1924.

Westinghouse Electric & Manufacturing Company,
Broadcasting Department,
East Pittsburgh, Pennsylvania.

Dear Sirs:-

I have some friends who live in Belfast, Ireland. My wife and I visited Belfast during the latter part of August of this year and were most hospitably entertained by these friends.

One of them, Mrs. S. Elizabeth Gillmour, who has relatives in this country who are also great friends of ours, heard the radio from Pittsburgh during November and has put her impressions in writing in a letter to me. This letter is expressed in such beautiful English and with such stirring eloquence that I thought you might be interested in publishing it or in giving it some kind of circulation and therefore am enclosing same for such use as you may see fit to make of it. When it has served its purpose kindly return it to me.

I am assuming that the message, which Mrs. Gillmour received was broadcasted through the KDEA station although she does not mention the station except that it was from Pittsburgh.

Very truly yours,

T/H.
Enc.

Allen Thompson

#12 1/14/25

Chadwick

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COPY

Knocknarea,
The Knock,
Co. Down, Ireland.

file

[scribble]

[scribble]

✓

To -
The Gentleman who spoke from ~~from~~ *R. O. K. A.*
Pittsburgh! Nov 12 th, 924.

Greeting!

Dear American Friends:

We have not, just yet, recovered, as it were, from the wonderful and soul-stirring experience of listening to your voices in both song and speech over all the miles! It was indeed a memorable hour and one which we shall ever, never forget.

You asked, through your representative speaking from the Broadcasting Station that those who heard would kindly let you know and we now do so with inexpressible pleasure.

We always knew you were there! - dear American Cousins, but now we have actually heard your very voices and felt the thrill of a cordial relationship (that has always existed), in a new and intimate manner.

It seems well nigh the impossible to express in words just all that we felt "over here" but it seemed as if (through the miracle of "wireless") some hitherto untouched Great Harp of the Universe had for the first time, been played upon, and the sweet chords of Brotherly Love which were sounded from your souls, and from ours, in warm response, together made a glorious and Heavenly harmony, to which the Music of the Spheres sang a great "Amen".

"So let it be, So let it be".

With a kindly "God Bless you" from your "cousins" over here!

I am,
Yours cordially,

S. Elizabeth Gillmour
Knock, Belfast, Nov 27-23

Heard
Through the
Belfast B.C. Station.

X
relayed
↓

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FERROCARRIL TRANSANDINO ARGENTINO
FERROCARRIL TRANSANDINO DE CHILE

ADMINISTRACIÓN COMÚN

a/c Transandino
Los Andes Chile.

22/1/25

Dear Sirs.

I would like to say again how much we appreciate the short-wave programs — e.g. "Last Rose of Summer" etc night before last, and "L'Arlesienne" suite last night (that trio is very good).

But: please send the late programs also on the shortwave, and also the Arlington time-signals. These ^{latter} would be of enormous value to me, for clock correction: in fact, if I could rely on their being sent by short-wave set, this Railway would take its official time from them.

I should esteem a reply, and also should like to know whether any large increase in power or

FERROCARRIL TRANSANDINO ARGENTINO
FERROCARRIL TRANSANDINO DE CHILE

ADMINISTRACION COMUNA

change in set has recently taken place — I lost
all my receives in a fire in November, & have only
just been able to get parts & rebuild: whether
I have got a better set, or ~~you~~ have, I do not
know, but KDKA on 64 is near about the same
as strong as I used to get it. Believe it is
at your end, as I do not see such an
improvement on other stations.

Yours Truly,

R. Raven-Hart.

Telegraph Supt.

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all right

↙
"Khandala"
Bent Street,
Lindfield,
Sydney,
New South Wales
Australia.

The Manager,
K.D.K.A. Broadcasting Station,
East Pittsburg,
Pennsylvania,
United States of America.

①

Sir,

I take the liberty of sending you a detailed account of my reception of your programme. My set is a two valve receiver of the Reinartz breed. My aerial is an eight wire cage (single) diameter of 5ins 3/20 wire... 50feet long height average 35ft. My residence is situated on the side of a valley tall Eucalyptii all round and generally considered a very unfavourable spot for Radio work of any kind. My friend Mr Lawrence Deane of Lindfield has received you on one valve using the same circuit as my own. I understand he is writing you. I am sending you a cutting from our leading daily paper the "Sydney Morning Herald" which may interest you. the Evening and Sunday papers have made a big feature of your splendid accomplishment. Many photographs of the various sets which have logged you and in one paper a large half page photograph of your factories and works, and other photos of reporters with note books at the homes of those who had received your Station. At your convenience I would be extremely grateful to know what degree of accuracy there is in my Q.S.L. I have only a few minutes to catch the mail so I will conclude. Very best wishes for your future tests.

Thanking you in anticipation

Yours Faithfully,

Berenson

P.S.
Will eagerly look for you again.

(Watson)
Berenson
Late 1st Australian Wireless Squadron (Nespot)
A.I.F.

January Friday 30 1925.

I opened up at 8pm, the idea of hearing America was to me a "Castle in the air" the last thing I expected, the day previously I was going to scrap my set in disgust, an invitation to go out prevented me from doing so. To return to the point. It was a perfect night for distance reception very little static, just an occasional crash.....AND NOT A HOWLING VALVE FOR MILES...PHENOMENAL!...I gave the tuning condenser a slow twist and heard the flick of a carrier, a local Amatuer I thought and went on, finding nothing I came back and tuned it in...and to my amazement I heard as smoothly as possible in a mild well balanced American Accent "K.D.K.A."...ONE MOMENT PLEASE"... a Jazz number followed in strength equal to one of our local amateurx Transmitters, at the conclusion of this piece..."K.D.K.A.....HAVE SOME PRESS MESSAGES FOR YOU"...another Jazz number followed. Through not having any vernier adjustments on my Condensers I found tuning critical..also there was a slight variation of the wavelength and Iam very sorry to say that I lost some of the programme...The announcer then came on "THE WESTINGHOUSE ELECTRICAL MANUFACTURING COMPANY (OF EAST PITTSBURG PENNSLY) YVANNIA UNITED STATES OF AMERICA...BROADCASTING TO THE MELBOURNE HERALD MELBOURNE SOUTHERN AUSTRALIA..... THE FIRST PRESS MESSAGE.....NEW YORK.....YESTERDAY A

REPUTATION OF KLANSMEN FROM FOUR STATES. DRESSED IN
THEIR ROBES STOOD AT THE GRAVESIDE.....

Then "K.D.K.A. BROADCASTING TO THE MELBOURNE HERALD
MELBOURNE AUSTRALIA....THE NEXT PRESS MESSAGE.....NEWYORK
..WALL STREET BANKERS YESTERDAY.....14970 IN GOLD AND
PARCHMENT TO INDIA AND RUSSIA.....INTERNATIONAL BANKERS
1,100,000..... 1,100,000 CANADIAN BANK OF COMMERCE.....
3,600,000 TO AUSTRALIA...DEPRECIATION OF THE AUSTRALIAN
POUND IN LONDON"...Another Gramophone record was played
at the conclusion of which the Station call and address was
again given.....Then the Announcer...THIRD PRESS MESSAGE
(this was very difficult to get, but from odd words I
concluded that an outbreak had occurred (of some disease)
"THE REMARKABLE FEAT OF BROADCASTING TO AUSTRALIA BY K.D.K.A.
...THE MANAGING EDITOR OF THE NEW YORK TIMES SENDS GREETINGS
TO ALL CONCERNED IN THE BROADCASTING TO AUSTRALIA BY K.D.K.A.
F.J.BRADSHAW....SENDS CONGRATULATIONS ON THE SUCCESSFUL
RADIO BROADCASTING TO THE MELBOURNE HERALD..THAT IS THE END
OF THE MESSAGE FROM F.J.BRADSHAW...MARTIN PUGH(?)X ...EDITOR
NEW YORK CITY(SUN) TAKES THIS OPPORTUNITY TO EXTEND GREETIN
-S TO KEITH MURDOCH OF THE MELBOURNE HERALD.....SUCCESSFUL
FEAT IN BROADCASTING TO AUSTRALIA WAS A REMARKABLE
ACCOMPLISHMENT....ONE CAN WELL IMAGINE THE THRILL OF THE
PEOPLE IN AUSTRALIA ON HEARING VOCAL ITEMS AND MUSIC FROM

AMERICA.....9000 MILES AS THE CROW FLIES...IN MY
OPINION...IN THE NEAR FUTURE THE WORDS OF OUR PRESIDENT
WILL BE AUDIBLE TO THE PEOPLE OF FAR AWAY AUSTRALIA AND
THE WORDS OF THOSE IN AUSTRALIA WILL BE RECEIVED HERE
....."CYRIL BURGESS EDITOR.....K.D.K.A. REMARKABLE
FEAT OF BROADCASTING TO AUSTRALIA.....THAT IS THE
LAST PRESS MESSAGE.....The whole of the above programme
was repeated again twice with intervals of Jazz numbers
in closing down reference was made to a snow storm which
had been very severe....

With a decent Condenser I am confident that I could have
got the whole business. Your Announcer was absolutely
splendid.

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Sunday February 1st 1925

There was a tempest raging on the ether last night, static crashed in with a vengeance, but K.D.K.A. Rode the storm well Howling valves were in good voice, and had gathered in numbers since Friday night. It took the best part of ten minutes to get the big station in through all the medly, but I got him o.k. and held on right through. The vibrating music of his generator hum was remarkably plain, about twice as strong as on Friday night. There was absolutely no variation of wave length on this occasion and it will be noticed that this reception is much more complete than the last. Towards the end of the programme the strength increased very greatly. I tuned in as strong as I could and put on the Loud speaker, musical items could be heard comfortably by those sitting by the set. In the phones the music was beautiful, very full and clear, the various ^{INSTRUMENTS} could be recognised. I would not claim Loud speaker strength for this...I will give you the programme as I received it word: for word.....

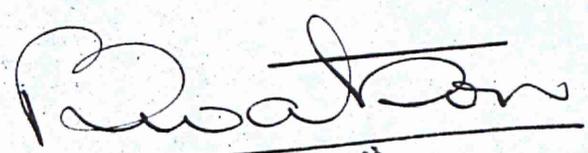
K.D.K.A. JUST A MOMENT PLEASE...An orchestrial item was then played, very clear and could be heard with the phones lying on the table..... "WESTINGHOUSE STATION K.D.K.A...EAST PITTSBURG PENNSLYVANIA...UNITED STATES OF AMERICA... BROADCASTING TO AUSTRALIA..MR J.J.M.ELDER JUST ARRIVED IN TOWN BY THE MORNING T AIN..HE WILL SPEAK TO YOU

K.D.K.A. WESTINGHOUSE STATION....." ANanother record was played a duet from grand opera..tenor and a soprano after which "K.D.K.A. PIONEER BROADCASTING STATION OF THE WORLD BROADCASTING TO AUSTRALIA.....MR.J.J.McKENZIE ELDER" Then Mr. Elder spoke, his voice was vastly different from that of the Announcers, and was difficult to follow except when he did not speak too loudly and too fast. At times when he dropped his voice it was splendid. He said.."MR ELDER SPEAKING TO YOU FROM THE UNITED STATES OF AMERICA" (although incomplete the following words will be of interest) " THE WONDERFUL FEAT.....THE PRIVELIGE THEY HAVE AWARDED TO MEOPENS UP GREAT OPPORTUNITIES FOR THE FUTURETHE REMARKABLE FEAT WAS MARVELOUS.....THE THING IS GOING TO DO MORE GOOD FOR THE WORLD..."What followed was very hard to pick up, Mr. Elder was apparantly settling down to his speech. He spoke of Andrew Carnegie...The Schools being a feature of America and referred to a little church in the middle of New York..He spoke of the citizens of the commonwealth and of communal friendship, in concluding his he slowed down and I heard very clearly...."I SEND MY LOVE TO AUSTRALIA, AND I INTEND TO SPEAK TO YOU AGAIN IN THE NEAR FUTURE...." Then the Announcer...."K.D..K.A. WESTINGHOUSE STATION EAST PITTSBURG PENN. U.S.A. YOU HAVE JUST HEARD MR.

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J.M. ELDER. COMMISSIONER FOR AUSTRALIA, THE UNITED STATES OF AMERICA, SPEAKING FROM THE WESTINGHOUSE STUDIO...WE WILL TURN OFF THE HOUR WITH A FEW MORE ~~XXXXX~~ MESSAGES.....WE HAVE NOT HAD ANY WORD TO CONFIRM THE RECEIPT ON OF ANY OF OUR PRESS MESSAGES YESTERDAY" Another musical item followed and then WILL SEND ONE MORE MESSAGE AND SIGN OFF....JUST ONE MORE MOMENT PLEASE" An orchestral item followed the best and strongest of the whole programme and then "K.D.K.A. BROADCASTING TO AUSTRALIA...THIS CONCLUDES OUR PROGRAMME FOR THIS EVENING...K.D.K.A. PIONEER BROADCASTING STATION OF THE WORLD SIGNING OFF.

That is the whole of my reception as I did not know you were transmitting tests until late in the week



Beresford McEwan Watson.

1290 E. 21st St.

Portland, Ore.

March 7, 1925

KDKA - Pittsburgh,
Gentlemen, -

It may be of interest to you to know that your low wave transmitter is being heard at my station very regularly. Ever since I got on the low wave dope, and built my first low wave set, I have been hearing KDKA. Your signals are, at present, very strong and clear, fading very slightly whenever it does fade; modulation perfect, every word of the announcer being heard. Your wave is so stable that I can turn off the set and at any other time you are on turn on the rheostat and there you are.

The set I am using is a two circuit tickler feedback low loss type tuner using one WD12 as detector and no amplification. My antenna is 25' high and consists of four wires on 6' spreaders, and is 75' long.

Since you come in so well, I enjoy the programmes KDKA broadcasts, and would like to know your schedule for the 630 set.

Hoping this interests you,

I am, Yours truly,

Member ARRL.

Bob Cunningham

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& POUR L'EXPORTATION
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Crèmes et Pommades
Articles pour la Traite

Conserves Alimentaires
Chocolat et Cacao
Pralines

12th March 1925.

To the Manager
Station KDKA
Pittsburg, Pa.,

Sir:-

May I offer you my very heartiest congratulations on your splendid transmissions on 68 meters? Last night here in Brussels I heard your orchestra quite as loud and clearly as one gets a local station with a good crystal set. I couldn't believe that I was receiving America until I heard you announce: "This is Station KDKA on 68 meters". This was at about midnight over here.

I was using the single-tube hook-up described by Mr Stanley G. Rattee on page 168 of the March issue of "Modern Wireless". Batteries 6-volts and 50 volts. Twin antenna 30 meters long with lead-in.

I shall now look forward eagerly to receiving you regularly and meantime I again tender you my best thanks and hearty congratulations on your achievement.

Yours faithfully,



72. Sydney Road,
Judith Paarl,
G Johannesburg,
Transvaal.

25.3.25.

Mr Horn,
Station K.D.K.A.,
Pittsburgh,
Penn.

Dear Sir.

I am writing like many other South African Amateurs have done, to report reception of Station K.D.K.A. I first received K.D.K.A. in October 1924, when President Coolidge spoke from White House via K.D.K.A. This I believe was the Keinge Banquet. Since then I have received K.D.K.A. without fail every time I have listened excepting on two occasions when the carrier-wave came through but no speech or music was received. On one occasion I received K.D.K.A. until 7:45 A.M. South African Time. Speech + music was very indistinct. I am enclosing a copy of some of the programmes I have logged. I am using a receiver made by myself. 1 Detector 2 Audio Frequency

✓
lves. I received K.D.K.A. last on
the 26th or 27th of February 1925. I think
it was the Star Electric Vocal Quartet
& an instrumental quartet. The dance
music given by the Potomac Hotel Orchestra
comes through fine on the loudspeaker.
The Little Symphony Orchestra also comes
through well. The programmes given by
K.D.K.A. ought to suit everybody's taste.
They are very good.

Should this information prove
satisfactory I should like a confirmation
of my reception

I am,
Yours Faithfully
D
Jalovich.

clifford

Westinghouse Electric & Manufacturing Company

COPY

G. & A. BAKER LTD

Constantinople, Turkia Han
Kutubhanem Stamboul.

17/4/25

Westinghouse Electric Co.
Radio Station KDKA
Pittsburgh, Pa.

Dear Sirs:

Observing that I have already written asking for an official confirmation of my reception of your renowned station on 38(?) metres, I hope that this further description of your last night's programme will convince you that you are being heard consistently in Turkey, and that my first report did not prove to be a phenomenon.

It is through my company and I that radio is being introduced into this country, therefore I shall value very much a confirmation from you to prove, not only the efficiency of your station and my operating qualities, but the possibilities of radio in general. The following is a resume of your last night's programme heard here at between 3:30 and 5 a.m. local time:

- "A Voyage round the world by radio".
1. An English comic ryme, each verse finishing with "Dontyerknow".
 2. Ireland, song "Mother Machree"
 3. Scotland, "Annie Laurie, song.
 4. Paris, song "Madelon"
 5. Italy, "O sole mio"
 6. India, "A song of India"
 7. Japan, I forget the name of this song but it was something about a "maiden picking flowers" by some American composer.
 8. Hawaiian Isles, "Farewell to Thee"
 9. The Golden Gate, San Francisco, "Home Sweet Home"

This was given by some Chewing Gum Co. and the announcer asked for reports on the audience's opinion of the concert.

Followed by baseball results, time signal from Arlington and weather report.

This was all quite clear on a two tube hookup I built myself using a ten metre antenna with counterpoise.

Hoping this will prove of interest to you and that I shall receive a confirmation from you in due course, I will close, wishing the staff of your first class station the very best of luck.

Yours very sincerely,
DONALD T. LEE,
radio technician

370 Grande rue de Pera,
Constantinople, Turkey.

COPY

Stockholm, Sweden, May 18, 1925

To the Broadcasting Station KDKA
c/o Westinghouse Electric & Mfg. Co.
East Pittsburgh, Pa. U.S.A.

Dear Sirs:-

I suppose it will interest you to hear a little about the exceptionally good reception of your broadcasting on 68 metres, that I had some little time ago. The reception took place two consecutive nights in the end of april, about 1.45 - 3.30 a.m. (night) Swedish time (12.45 - 2.3) a.m. Greenwich Mean Time) and I suppose this will coincide with your Eastern Standard Time 7.45 - 9.30 p.m., because I heard your announcer inform the listeners that a new part of the program should start at 9 o'clock Eastern Standard Time, and I heard that part begin exactly at 3 o'clock in the morning, swedish time, which seems to be 6 hours before your time.

The strength and clearness of the music and talking was O.K.; the former I can speak of as "low loudspeaker strength", the later as good as an ordinary local line-telephone call.

There was no fading or change in the strength or clearness during the whole time, and scarcely any disturbances - except a few momentaneous atmospheric "crasch's" of no greater influence - and I could hear the different items, mans and womans singing, pinaoplay and several numbers played by a ~~Hawai~~ Havaian Band. Also I could hear, due to the different voices, that it was not the same announcer in duty the second night as the first. The call-letters "KDKA" I could hear about 10 - 15 times each night, and also several times the whole name of your company was announced.

The receiver is an ordinary Reinartz 2-valve receiver (detector and one stage low frequency amplification), built from a description issued by the swedish firm Aktiebolaget Baltic, Stockholm; the tuner being a low-loss coil (bare, thick silverplated copperwire, spaced windings), manufactured by the firm mentioned above.

The event took place in Appelviken, a suburb of Stockholm, Sweden, and I used a rather bad antenna, single wire, about 30 feet length and 25 feet above the ground, and no earth connection (due to electric mains disturbances), the batteries and leads therefrom serving as a counterpoise. I think the distance from here and to your station will exceed 4000 engl. miles.

Hoping that the above informations will interest you, I am,

Yours sincerely,

(signed)

G.H. d'Ailly, D.Sc.

Address: Drottninggatan 37, 3 tr.
Stockholm, Sweden.

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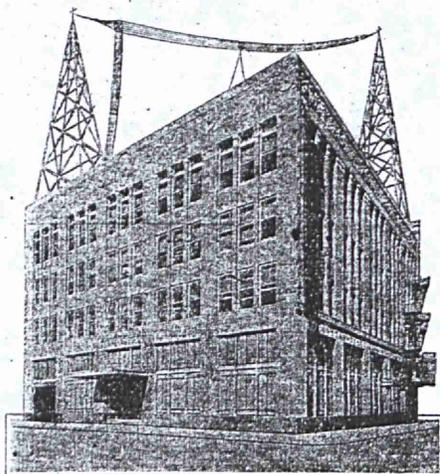
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HAROLD V. HOUGH
Treasurer and Circulation Manager

Mr. H. W. Arlin,
Radio KDKA,
Pittsburg, Pa.

Dear Sir:

Having never met you personally, I feel as though I know you via radio. You possibly have heard WBAP if you still are a radio fan. I congratulate you on the place you are holding in the announcer's contest, and we note with interest that the Hired Hand is dropping down the list a little, our good friend Henry Field getting ahead of him.

The business end of this letter is to see if you can give us permission to re-broadcast an occasional program from KDKA? Your short wave broadcasts are coming into Fort Worth with many times more power than your main wave. The boys have constructed a short wave receiver and it occurs to me that an occasional rebroadcast of some of your good programs would not only be an asset to WBAP but would considerably extend your range in the Southwest, as our station is now 1000 watts and is in the process of being increased to 5 KW.

Please let me hear from you at your earliest convenience.

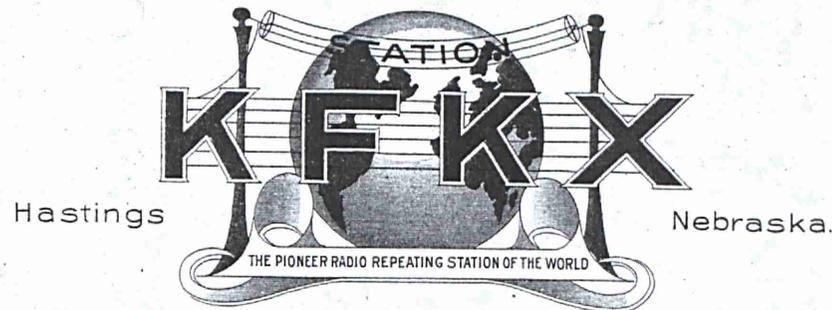
Yours of the announcer's fraternity, announcer W.E.B.

W.E. Branch
W. E. Branch.
Director-WBAP.

WEB:EF

Rec'd July 25/25
Hous

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Westinghouse Electric & Manufacturing Company



Mr. F. Conrad. Assist., Chief Eng.

Dear Mr Conrad;

Have been very busy since we arrived here or would have written you sonner.

Had a talk with Evans in Chicago. He said that the programme that he relayed a few weeks ago was very good. The static was very low, there was no hum at all, quality was about as good as that of most of his studio stuff. He plans to relay quite a bit after he gets the big set installed. At the present time he is very busy with the new installation.

He expects to have the short wave antenna up by the time I get back to Chicago so that I will have a chance to see how it is working. He has made arrangements to take me out to Morrel Park when I get back. That is the place where the A.T.&T have their long lines repeaters. They have their broadcasting repeaters and one of the men has promised to give us the dope if we go out there.

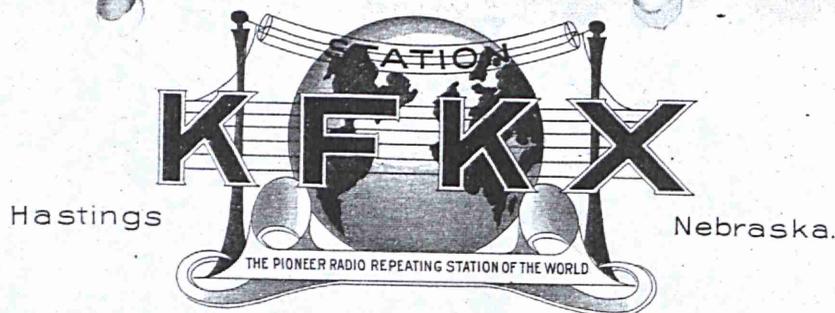
Things here are in very good shape now. All the ~~apparatus~~ apparatus has been re-arranged. The only thing that is in bum shape is his speech amplifiers and they are beyond repair. He should have new ones by all means.

The new studio is very nice and seems to be fine from a broadcasting standpoint.

The new copper circuits are in and we are all ready to try the transmission of sixty four meters. Am starting out with the transmission from a local oscillator at the farm. Believe that that will be the best.

The new loop is about ready to raise into position. It is quite an affair. After looking the situation over we decided that it was possible to construct a loop on one pole that would swing around. The loop is forty feet square and hangs fifty feet in the air. It is built out of light lumber trusses. It is light and very strong and has provision for anchoring it down in bad storms. The total cost of it is only about forty dollars not counting the pole it hangs on. This arrangement will be much better than a stationary one.

The signal as received here is good in some ways and bad in others. The strength is too low. It is just at the value where a little more out at that end will make a great change here. Little's argument that twice the power will not raise the signal enough to do any good is in the class with the statement that to



Westinghouse Electric & Manufacturing Company



cut the power in half will not lower the signal much. The quality is excellent. The fading is nil but there is a new kind of hum present that I have never heard before. It has a frequency of about four hundred cycles. It can be heard only when you are exact in tune with the carrier. If you get a little off the carrier you cannot hear it at all. It sounds like some kind of trouble with the exciter. Undoubtedly the crystal has helped matters a lot.

The weather is so hot here that it is almost unbearable. Have never seen anything like it and never want to see it again after this time. Am all burned up to a crisp. It has been about one hundred and four and higher ever since we arrived. It is actually H****? all the time. All the bugs are as big as mice and there are millions of them.

In about one week more we will have things in pretty good shape. With all the construction work finished we will not mind the discomfort so much.

Have you decided when you are coming out?

Will write you again at the end of the week and let you know how things are progressing.

Respectfully yours.

F. Falknor.

Sydney, Australia
Feb 7 - 1925

Gentlemen:

I want to tell you what a thrill I had here in my home last evening, in far off Australia, to hear your station play the "Star Spangled Banner". I heard it about 9 P. M. our time. The preceding program was not clear, on account of static, and

I could only get an occasional intelligible word in the announcements, but the national anthem came through clear as a bell, and to me, the flag representative of our country in Sydney it was inspiring. My radio set is a modest 3 valve plate tuner with a single 100 ft aerial. Your tests are good propaganda for an entirely cordial Sincerely. E. M. Lawton

AIS 64/21

Box 2
ff 35

Westinghouse Electric & Manufacturing Co.
Correspondence relating to radio station, KDKA,
1921-1925

H. P. Davis, 1868-1931, Papers, 1915-1949

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