

Underground Aerials—New Portable

Radio Digest

**TWICE
A MONTH**

**FIFTEEN
CENTS**

FIRST JUNE NUMBER

Vol. XVII No. 6



JOAK, JOBK, and JOCK, the Japanese Broadcasters; "S-O-S," New Portable; Mlle. Aimee Presents CKAC, the French-English Station; Spring Set

...m-990ke. 4000 wa... Lib-
...uncer, Bill Hay. Daily ex Sun.
...am. Sun. 5-6 pm. Central Day-
...with part of the directory v

No. 8 OFFICIAL BALLOT

Announcers' Contest

RADIO DIGEST THIRD ANNUAL GOLD CUP AWARD

GOLD CUP AWARD Editor, Radio Digest,
510 North Dearborn Street, Chicago, Ill.

Please credit this ballot to:

.....Of Station.....
 (Announcer's Name) (Call Letters)
 Signed.....
 Address.....
 City..... State.....

6-1-26

MAY TOPS STANDING IN GOLD CUP AWARD

BROKENSIRE AND BARNES FOLLOW CLOSE BEHIND

Hired Hand Shows Fourth in Spite of Himself—Lillian Shaw Leads Canadian Field

Stand by for the shock, for we are about to divulge the first actual standing, with votes, of the 1926 Radio Digest Gold Cup Award. The warning is given primarily because your favorite announcer probably will not rate where you think he should. In that case, there is nothing to be done about it, except to save more votes and work hard to get your friends to save votes for your choice.

Remember that consecutive votes, sent in together, earn a bonus. The longer the series of consecutive numbers, the greater the bonus.

Earl E. May, owner and announcer of KMA, Shenandoah, Ia., has sprung the big surprise and tops the list. Although Norman Brokenshire, of WJZ, New York, and Patrick Henry Barnes, of WHT, Chicago, are running close second and third, respectively to Mr. May, the large metropolitan listener populations of either of these two cities may require a lesson in teamwork before they can equal the support of the sparsely populated area, relatively, about Shenandoah, Ia.

H. H. Popular in Spite of Himself

Fourth in standing comes the Hired Hand, of the Forth Worth Star-Telegram station, WBAP. While his present vote is less than half that of either of his three leaders, indications and rumors point at the conclusion that this veteran of the microphone is to be feared.

The Hired Hand, strange to say, is polling his large vote in spite of himself. He has sent three "threatening" letters to the Gold Cup Award editor, demanding that his name be withdrawn, but the editor laughed at him, and told him that he would have to win the gold cup one year before he could withdraw.

Attempting to dodge this ruling, the famous Hired Hand has gone on the air and denounced himself as a candidate to no avail. The votes keep rolling in.

Standing of Leaders

The standing of the twenty-five leading American announcers, as this issue went to press, follows:

Earl E. May, KMA.....	12,729
Norman Brokenshire, WJZ.....	10,916
Patrick Henry Barnes, WHT.....	10,083
The Hired Hand, WBAP.....	4,724
Peter McArthur, WOC.....	3,058
Phillips Carlin, WEAF.....	2,881
Louis John Johnen, WLW.....	2,877
Clyde R. Randall, WSMB.....	2,736
Lester Palmer, WOAW.....	1,732
Gayle Grubb, KFAB.....	1,705
Robert W. Griffin, WHO.....	1,684
Henry Field, KFNF.....	1,680
Lambdin Kay, WSB.....	1,528
Chester Gaylord, WTAG.....	1,481
Wm. (Bill) Hay, WGN.....	1,468
Jerry Sullivan, WQJ.....	1,273
Harold Isbell, KYW.....	1,252
G. C. Arnoux, WGY.....	1,245
Paul Johnson, WCCO.....	1,167
The Janitor, WFAA.....	1,019
Jennings Pierce, KGO.....	962
H. Dean Fitzer, WDAF.....	920
Frank Lane, KVOO.....	906
Sen Kaney, KYW.....	887
N. Dean Cole, WHO.....	813

Silver Cup Canadian Standing

It will be remembered that a large silver loving cup was proposed as prize for the most popular Canadian announcer in 1926. Last year such a cup was awarded to D. R. P. Coats, CKY's chief announcer. He has withdrawn from the 1926 contest and from the list of his assistants, Miss

.....	1,529
.....	480

Geo. A. Wright, CNRY.....	383
Bert Hooper, CKCK.....	301
C. Walter Darling, CFCF.....	95

Incidentally, the American announcer finishing second in the 1926 Gold Cup Award, will be presented with a large silver loving cup which is a duplicate of the Canadian prize.

GUS EDWARDS STAR IS ON FRONT COVER

BROADWAYMEN and others will recognize Radio Digest's cover girl this week. They will remember seeing Doris Walker twinkling over the footlights in Gus Edwards' particular array of American beauties. The program people in charge of the official launching of the new Madison Square Garden Radio Station, WMSG, spent a great deal of time and exercised much care in combing the available talent in New York for that occasion. Gus Edwards was booked for a full hour, and when he offered Miss Doris Walker and Miss Ruth McDonald, "The Harmony Babies of Broadway," the whole affair was a huge success.

Despite the fact that the award is nearly half finished, nominations continue to be made. Eleven new names, bringing the total entries to 190, were added since last issue. The candidates newly named are:

E. J. Bowers, CFCA	Otto Lowe, KPO
Father James F. Cronin, WLWL	Dick McMurray, KUP
J. L. Fox, KFH	W. G. Patterson, KWKH
Edwin Kent, WHT	Ralph Shugart, WJJD
W. J. Kotera, WOAW	Fred Slouton, WOAW
	Fred Williams, WOAW

Don't fail to get the second June issue of Radio Digest, out June 14, to see the revised American and Canadian standings of contestants.

SHORT WAVES

By Marcella

Gladycy, our best "asker", wants to know if Jack Smith, Victor record artist, and Jack Little are one and the same. I frankly don't know, but have written the Victor company. While waiting for a reply, I'll just broadcast this query to anyone who may know. Anybody have the information?

Now back to Gladycy who asks to have the low-down on the Mona Motor Oil Twins. The banjo-mandolinist and his singing partner are, in my estimation, two of the best-looking males who ever peered into a microphone. Both of that brunette, Jack Pickford type. Look on page eleven of our April 10 effort and you'll see them. Don't believe that either are married, and would hate to be disillusioned. Both are young—about 24 years apiece. Nationality, American; favorite dish, pie. They started at KOIL, their home station, which is owned by the Mona Motor Oil company of Council Bluffs, Ia. Then Mr. "Mona" decided they were too good to be kept from the world, so he started them on a tour of all the stations. The good-looking twins are now doing the Pacific coast.

Here, you sisters of the Underwood, read this excerpt from Gladycy's letter and let's have a good cry. "Note the absence of the typewriter? I am sitting here with my back to it and every once in awhile I turn around and GLARE at it. Honestly, I get so tired of typing, that I have to rest from it occasionally. I know you can sympathize with me, as I suppose you have to write your 'copy' on one." Yes, "Glad," I do.

Gerald Deering, ex-WMC announcer, left that position to work for the Tennessee State Marketing bureau. He is clean-cut, and slender, but short. I wouldn't call him handsome, but he has very polite ways and that make his medium features really seem handsome. This in answer to Dimples. As for his martial state, Dimples, you had best write to "Miss Kitty" Nelson at WMC, who can give you the last minute data.

Mary, Judith and Jeanette, you are just six months late on the trail of John T. Schilling, blond WHB announcer, for he was married last fall. Yes, it was a true Radio romance—he met her in the Sweeney school studio. Description of him: height, 5 feet 10 inches; weight, 165 pounds and no contours; hair, blond and a lot left; age, 29 summers and winters; eyes, blue and happy; degree of pulchritude, looks well in a dress suit but feels terrible; likes, musical instruments in tune, good cigars, l. w. and b. (well maybe); personality, positive-ly winning, according to the way his wife coyly looks at him; dislikes, artistic temperaments.

Now Mr. J. F. S., since you got "all thrilled" over Miss Eva Sharrard's picture on the front cover of the April 3 issue of Radio Digest, here are all the important facts and figures. Yes, she's just as pretty as her picture. This talented pianist of Port Huron, Mich., who gives many pleasant hours to WAFD listeners is but 19 years old. She is of medium height and weighs just 98 pounds. She has small features, a medium dark complexion, sparkling brown eyes and dark brown hair which is cut very short. If you like brunette types, you will certainly "fall" for her winsome smile.

Eddie Ellingson is one of the "Harmony Boys" at KFAB, Nebraska Buick station at Lincoln. Gloomy Gus is the other very popular member of the team. Eddie has one of the sweetest voices on the air and can make you cry with classical as well as popular numbers.

No, C. M. B., Lee Sims hasn't left KYW for good. He is on the road under contract to appear at various theaters for the next few months. He is with Bobbie Brown, Gail Bandell, the Harmony Girls, and Charlie Schultz. The troupe is booked as the "KYW Gloom Chasers." They all will return to KYW after the tour.

Yes, Nate Caldwell, former "Joy Digger," announcer for WBBM and later KMOX, has returned to WBBM, the Stewart-Warner Air theater. He can't stay away from Chicago, you know, because all of his best girl friends live there.

Phil Friedlander is in hiding, I guess, since he tangled with Chicago's state's attorney, Mr. Crowe. At least he isn't on the air. Harry Geise withdrew his membership from the Alimony club, but he is not permanently connected with any station at this time.

What deep secret would you like to know about your favorite broadcast star? Drop me a note, girls and boys, and I'll do my best to answer here. MARCELLA.

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Looking Ahead

Among the Paradoxes of City Nomenclature Occurs the Word, "New." Our oldest cities are "New." New Orleans is no exception. Out of its quaint and picturesque characteristics and manners has arisen the broadcasting station, WSMB. You'll read about it in the next Radio Digest, out June 14.

"True Story of the First Municipal Broadcasting Station in the World" and the second licensed station in the United States—Station WRR, owned and operated by the City of Dallas—as told by W. J. Reid, secretary of the city Radio commission, will also be in the mid-June Radio Digest.

In the Mississippi Valley There Is a Tendency to Linger Over the Dials when they are set at 273 meters for the St. Louis Star station, WIL. There is something novel in the way the "Little Old Professor" at the station handles the programs. Tune in the mid-June Radio Digest for particulars, out on June 14.

Hugh Fullerton's Great Story, "Big Rabbit," Will Arrive at It's Thrilling Climax in the second June number of Radio Digest. An introductory review of the preceding chapters will make it possible for the reader to understand this story of the Florida jungle.

Nashville, Tenn., Is Famous for—Well, Mr. B. L. Lowe, for illustration, who constructed his underground antenna out of a ten-gallon crock and receives 37 stations without old man static getting a look in. The next issue, out June 14, will contain this most interesting article on buried antennas.

Radio Digest's S-O-S Portable Made a Killing. The second and last article will cover the complete wiring, testing and operation. Build this if a simple, practical "Super" strikes your fancy.

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URGE SET MAKERS HELP STATIONS

SENATE REPORTS ON COMPOSITE AIR BILL

STILL POSSIBILITY THAT RADIO WILL HAVE LAW

Senators Favor Commission—Combine White, Dill and Borah Bills—Little Time Left

WASHINGTON, D. C.—Indications are at the time this report is written that if the present session of congress is to enact any Radio legislation it will be in the nature of a new Radio commission which will take the jurisdiction of Radio out of the hands of the department of commerce where it has been lodged ever since there was any law and place it entirely in the hands of a commission.

Both President Coolidge and Secretary of Commerce Hoover have stated publicly that they were opposed to a Radio commission, but in spite of these protests senate leaders are going ahead, and in this connection the senate committee on interstate commerce has reported to the upper house the White bill severely amended. That bill now provides for a commission of five members at a salary of \$12,000 a year, and is a composite of the White Radio bill which passed the house, the so-called Dill bill, and the Borah bill.

The bill as reported carries many added features to the Radio bills which have so far been discussed by congress and is in-

KFWB STAFF RANKS HIGH IN POPULARITY

HOLLYWOOD, Calif. — Station KFWB, the movie broadcaster, almost made a clean sweep of a contest sponsored by a Los Angeles newspaper when Charlie Wellman, KFWB's popular announcer, recently won first prize as most popular announcer heard from the dozen odd Los Angeles and Hollywood stations, while Mable Leonard, pianist and studio accompanist for KFWB, took first prize as most popular Radio entertainer.

STRESS NEED FOR ADEQUATE 24-HOUR BROADCAST SERVICE

Radio Manufacturers Active at Convention—Look Forward to Formation of Used Set Marts —Elect A. T. Haugh, President

THREE FAIR STARS OF MICROPHONE



When little Helen Rank, center, plays the piano at WHT, Chicago, everyone tunes in for the program. Left is Ruth Bramberg, violin student at the Oregon Agricultural college who plays over KOAC. Right, Anastasia Rabinoff, dramatic soprano who is well liked at KYW, Westinghouse station at Chicago.

ALTANTIC CITY, N. J.—More than 200 leading Radio manufacturers together with representatives of broadcasting stations, Radio publishers, government bureaus and others recently gathered in the Ambassador hotel here, for the second annual convention of the Radio Manufacturers association.

"The greatest need in the Radio industry today is the cooperation of the entire industry in the creation of a nation-wide effort which will furnish twenty-four hours of broadcasting service of interest to every individual in the country," said Herbert H. Frost, of Chicago, retiring president of the association, in opening the convention.

Hoover Sends Message

A letter of welcome from Herbert Hoover, secretary of commerce, was read. Mr. Hoover noted that he thought that the association could profitably engage in an economic inquiry into the trade with a

view to determining whether some substantial changes should not be made in the method of distribution, which today imposes unnecessarily large distribution costs upon the consumer and at the same time increases the risks and production costs of the manufacturer.

That broadcasting is the life blood of the Radio industry was emphasized repeatedly by President Frost in his opening address to the industry. He urged the manufacturers to become very active in the support of adequate broadcast service.

Sees Coming of Used Set Marts

The establishment of used Radio set exchange marts will likely come in every city in the United States before long, in the opinion of Carl Boyd, who was elected first vice-president of the association.

Just as the handling of used automobiles and the reselling of cars that are traded in by purchasers of new cars is an important part of the automobile industry, so the sale of used Radio sets will become an important part of Radio sales, Mr. Boyd declares.

"More than seven million Radio sets have been sold in the United States since the listening pastime became a business, and approximately five million of them are in condition that they can be used today," Mr. Boyd says.

CKY Starts Second Annual Series of Astronomy Talks

WINNIPEG, Man.—CKY here has recently commenced broadcasting its second annual series of lectures on the stars. The talks are illustrated by means of a simple system devised by D. R. P. Coats, which he has named "Stellagrafs."

Arrangements have been made with a local astronomer, A. W. Meggett, for the erection of a 3½-inch telescope on the roof of CKY on certain nights during the summer, when listeners are invited to come and see for themselves some of the wonders which they have heard described in the talks. Admission to view through the telescope is controlled by tickets which are issued to CKY listeners.

Radio Brings Auto Tourist To Bedside of Dying Wife

SAN FRANCISCO.—Station KPO here recently proved the means of bringing Allen Straight, traveling by automobile through Southern California, to the bedside of his dying wife in Loveland, Calif. When Mrs. Straight suffered a stroke of paralysis, relatives were unable to reach her husband and appealed to KPO.

tended to take care of the entire Radio situation for a period of years, leaving considerable to the discretion of the commission.

Indications are, at the time of this writing, that if the senate can be made to take up the bill, that it will be passed without much opposition. The trouble will be to get the bill before the senate during the closing hours of this congress, which already are well occupied.

After

“Science for Service” KOAC

OREGON Agricultural College Has Radio Listener Student Body of 80,000. Broadcasts Its Campus Courses Throughout State and Beyond. Faculty Members Deliver 450 Air Lectures in Year.

By ALBERT J. WOODS

A RECENT newspaper cartoon pictured Radio Broadcasting as a mighty Pegasus—a winged horse—hovering over the pigmy figure of a government official with a bridle in his hand.

Perhaps Radio is wild, untamed; cavorting here and there through the heavens with a song in its wings, a commercial kick in its heels and a wilful sort of freedom that should be brought under the control of man-made order and system.

But in Oregon it has been harnessed to a school that, through its aid, is scattering knowledge and wisdom to the largest student body, possibly, in the world.

Oregon, rich in scenic grandeur, natural resources and a perennial temperate climate, has a state college that maintains an aggregate class attendance of 80,000. The campus is shown on this page. Of course, it is not intended to infer that the 80,000 are assembled here physically, but it is assumed very positively that they are massed here regularly in mind, spirit and ear-power for they are the Radio-listening student body of the Oregon Agricultural College at Corvallis.

“Science for Service,” is the slogan of this worthy institution. Here they have harnessed Radio broadcasting to higher knowledge and in a manner of system and order are making culture and understanding available to all, under all circumstances of living. Skilled educators have arranged progressive lectures in connection with their regular courses on the campus so that teachers, farmers, farmers’ wives and their children, city dwellers, foresters, stockmen, engineers and others may participate in these studies as a relaxation from the day’s routine and reap the benefits of the latest teachings of science. This latest great discovery of science is, therefore, utilized for service, exactly in accord with the motto of the school.

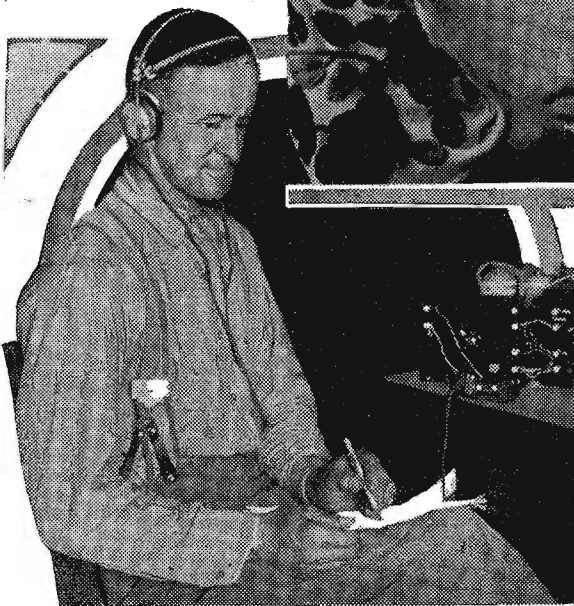
During the current college year, October 2, 1925 to June 30, 1926, Radio Station KOAC will have broadcast approxi-

mately 450 lectures furnished by eight of the nine major schools of the college, as follows: Agriculture, Basic Arts and Sciences, Commerce, Engineering and Mechanic Arts, Forestry, Home Economics, Mines and Vocational Education.

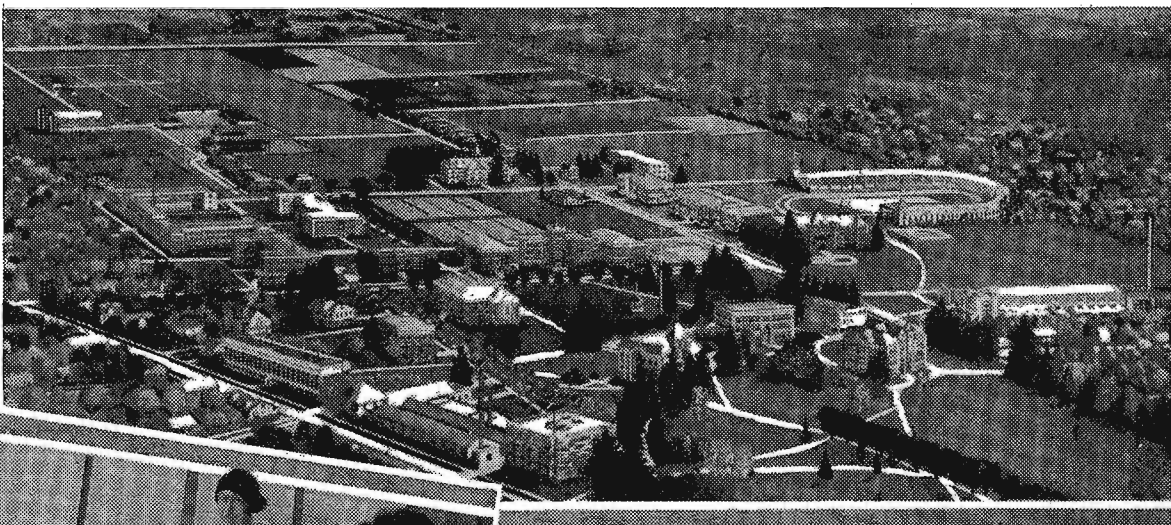
Suppose you were unaware of all this and should tune in KOAC on a Monday. At noon, between 12 and 1 o’clock you would tap the O. A. C. Lunch Box, containing an assortment of ten minute morsels very satisfying to one with an intellectual appetite. In the evening you would sit with certain text books, note paper and pencil and follow lectures that parallel the resident instruction in the campus class rooms. On this certain day it would likely be under one of these subjects: Agricultural Engineering, Animal Husbandry, Dairying, Beekeeping, Farm Crops, Farm Management, Horticulture or Poultry. There are 130 lectures on these subjects presented by forty-three different faculty members.

Oregon Agricultural College works in close cooperation with the United States department of agriculture and on this night would be broadcast information of a general and also specific nature prepared by Mr. Sam Pickard, chief of the Radio department in the government bureau. Child welfare is a matter of study at O. A. C. and there are weekly broadcasts to the boys and girls clubs by H. C. Seymour, state club leader. On Mondays and Fridays a special committee broadcasts the latest market conditions, of particular interest to cattle and horse raisers.

Wednesday and Thursday afternoons are set aside for the Homemakers’ programs. This is not a hodge podge of come what may. Every member of the faculty may present one of these subjects: Seasonal Suggestions for the Flower Garden, China and Her Present Troubles, Is the League of Nations a Success? The College Woman of To-



Top, Mrs. Jeanette Boyer Kanten, soprano, voice instructor. Below, typical Oregon farmer student taking KOAC notes—the Glee Club quartet, above the O. A. C. campus. W. L. Kadderly, director KOAC, in circle.



day, Eugenics and Social Welfare or Rambles with Nature. Another day they may hear something about, Child Care and Training, Household Management, Home Planning and Decoration, Millinery and Clothing, Meal Planning, The Ideal Diet and Food Preservation.

This branch has been under supervision of Mrs. Jessie D. McComb, state leader of home economics instruction for the college extension service. The program includes seventy-eight lectures by twenty-eight different faculty members and has been worked out as the result of a state-wide survey of actual home workers’ requirements.

All work and no play would make a college broadcasting station a rather fearsome thing for those who enjoy college sports and society. So KOAC does not neglect this phase of its service. College effervescence finds its vent through special programs by the glee club, cadet (Continued on page 14)

REAL
Sell your property quickly and welfare are after where located, part of study of Estate Salesman, 509 Broadway on the Nebraska. Allis.

Listening to 東京放送局

WHICH Is to Say You Are Listening to "Tokyo Broadcasting Bureau" About to Celebrate First Anniversary of Public Radio in Japan. Three Stations Now Heard Here. Classical, Educational and Drama Features Preferred. Not Interested in Jazz.

By MARSHAL TAYLOR

HIGH on the historic old hill of Atagoyama, outside the gates of Tokyo, an important event is planned for next month. Flags will fly, long lines of visitors will parade, gay Oriental music will thrill the air. Radio Station JOAK will celebrate its first birthday. Broadcasting is young in Japan, but it is growing fast. Tokyo has its thousand watt station, JOAK; Osaka an equally powerful station, JOBK, and Nagoya has JOCK. All three of these stations have been heard by many DX fans in the United States. JOAK not only has reached the California coast cities, a distance of 5,000 miles, but has penetrated to the very center of the North American continent with reception reports coming from Chicago and Ohio.

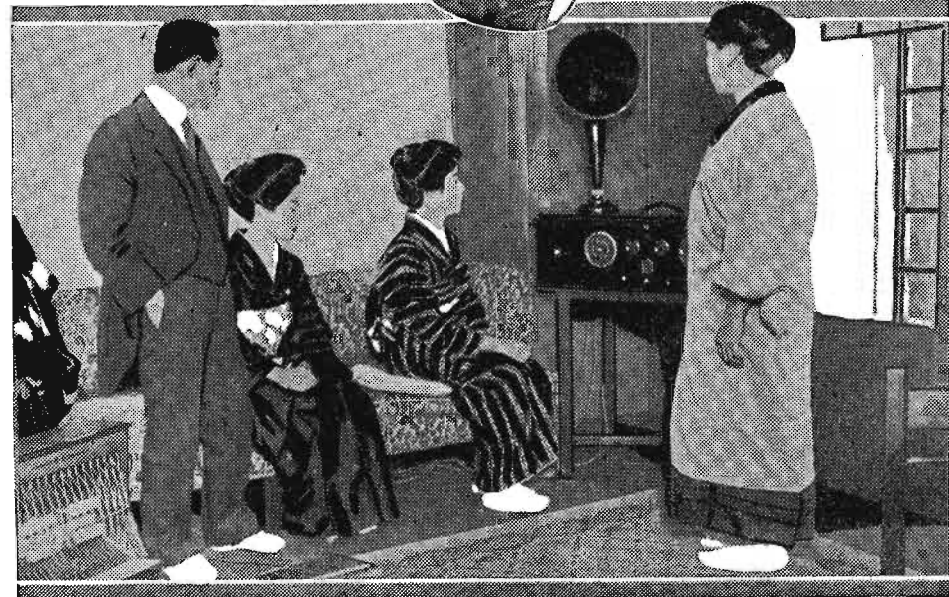
After four months of experimental broadcasting JOAK moved into its big, new station on Atogoyama hill last July. A letter from M. Oyama of JOAK to Donald Wright at Terminal Island, California, states that there are now 180,000 listeners in Japan with the list growing during the last few months at the rate of 600 new ones each day.

Japanese listeners like their sets ready to perform. They get no kick out of "hay wire" hook-ups. Radio apparatus manufacture has not been extensively developed as it generally is conceded that the Americans have the best inventions which are, of course, protected in Japan. The more wealthy families have the best standard sets. Those in moderate circumstances are satisfied with crystal sets or those of the more simple construction.

Mr. Oyama states that work is under way to build a superpower station of 10,000 watts for JOAK in order that "crystal set owners for 100 miles distant may be able to hear and enjoy the programs." The government engineers already have relayed between the three leading stations and it is expected that soon they will be able to exchange programs with each other. The operating stations are called "bureaus." Set owners pay a bureau tax of one yen a month and a government tax of one yen a year.

"Nighthawks," "Hoot Owls," and "Coo Coo" clubs are still unknown in Japan. The stations all sign off at ten o'clock, but they begin at 9 in the morning. They take their Radio more seriously than we do.

Educational subjects are most in demand. There also is a general interest in stock and exchange quotations. News bulletins are frequently flashed over the air during the day. In the afternoon there is apt to be an opera between university or



Madame Akiko Midorikawa (above), first woman announcer in Japan, at JOAK. Miss Kurishima (below) is her assistant at microphone. At left are JOAK Players presenting Japanese drama, "Paper Doll Whispering of the Coming of Spring." Radio dramas are popular with Nipponese listeners.



Japanese school girl (left) with typical Japanese made receiving set in which simplicity of operation is the chief goal of manufacturers. Below is home of one of the wealthier families with American made set.



college lectures. More attention is paid to the teaching of English than any other single educational subject. Listeners provide themselves with English text books, then follow the readings and teachings of the instructor who conducts his class in the silence of the broadcasting studio.

When it comes to mere entertainment the Japanese listeners seem to prefer Radio plays, mystery drama and romance. They enjoy allegorical compositions, and the children, especially, are enraptured with such Japanese story-plays as "Kamingyo Haru-no-Sasayaki," which means, "Paper Doll Whispering of the Coming Spring." With ear phones pressed close to their little dark heads they sit entranced when such artists as Miss Shizuko Myabe or Miss Umemura Yoko softly converse into the microphone the prophesy of the little buds that shake out their silken skirts to clothe the naked cherry trees with glorious blossoms. And they believe that the actresses are indeed paper dolls who have come to life high in the fleecy clouds and that the Radio, like a butterfly net, has caught their voices for the children to hear.

American jazz finds no responsive chord in the breast of the Japanese. It is looked upon as a sort of weird musical insanity. But the Japanese are a courteous people, and, inasmuch as there are many who enjoy the hot, syncopated dance music of the empire who enjoy the hot, syncopated dance music of the empire as an act of courtesy.

M'selle Aimee L presents CKAC

*La Presse of Montreal Broadcasts
in French and English. Quebec Called
"Little France of America." Damoiselle Thinks
Announcer Jacques Cartier "Magnifique."*



At left is Norton H. Payne, Capitol Theater organist, feature of CKAC programs. Raoul Duquette, cello leader of the Windsor Hotel Concert Orchestra, exclusive feature. Right is CKAC staff, left to right: J. P. Callaghan, Arthur Dupont, Adrien Arcand, Mary Brotman, Leonard Spencer, Jacques Cartier, Norah O'Donnell and A. Lebeau. Lower, Cartier and Capt. Edmund Burke.

By H. P. BROWN

WE HAD a very entrancing visitor some weeks ago when it was still quite cold and I have saved her for you until these warm days because I think she will bring you a whiff of the pines and a cool breeze from that romantic land of Cartier, Quebec and the Canadian St. Lawrence.

Dave ushered her in. Dave is seventeen and all the world is fair and young to him. He was a little pale as he preceded her and I did not wonder.

"Memshell Aimee Baudouin of Montreal," he whispered. "Gee, she's a cute little Frenchy."

I stood up as she entered. She was like a bird as she flitted into the room. Her fur-topped kid boots, laced half way to her knees; her white, fox-trimmed jacket and snowy tam with its tuft of silky fur proclaimed her

From beneath her jacket she drew a large, gray envelope. "Pardon," she smiled, "I speak English not even fair but I hope you forgive and write nice story for my dear La Presse Radio, Posst Say-Kay-Ah-Say, Moan-ray-al; as the English say, 'CKAC, La Presse, Montreal.' I have here some photographeries of ze arteests an' mon ver' good fren' Monsieur Cartier."

"'Car-shay?' Do you mean Jacques Cartier?"

"Oui, the same, monsieur. You know Monsieur Cartier?"

"Never had the pleasure of meeting him personally but I hear a lot about him."

"Ooo-la-la! He is ze great annoucaire, wif ze grand maniere, so virile, so homme d'esprit. The people of Quebec—all Canada—I—we, we—I know not how to say eet—faire de etat, Monsieur Cartier—"

Jacques Cartier, the explorer, who first sail the boat into Canada and plant the French flag at Montreal for France. His uncle was Sir George Cartier, the first prime minister of Canada.

"My papa he tell me ze story long time ago when I was a—a—jeune fille. We live north, long ways in the snow. My papa catch the fox, the otter, the bear. So many, many people live in the woods and alone and now they have the Radio. Oh, if you could un'erstan' how, how marvielle, wonnerful the CKAC Radio is for our people in Quebec—no other Radio speak ze French and that is all the most of our people un'erstan' and the CKAC it come four year ago when only twenty-five homes have receiving Radio. Now everybody have.

"La Presse, which is the bigges' newspaper in Canada, she give the great band concerts for towns all around and the people (Continued on page 14)

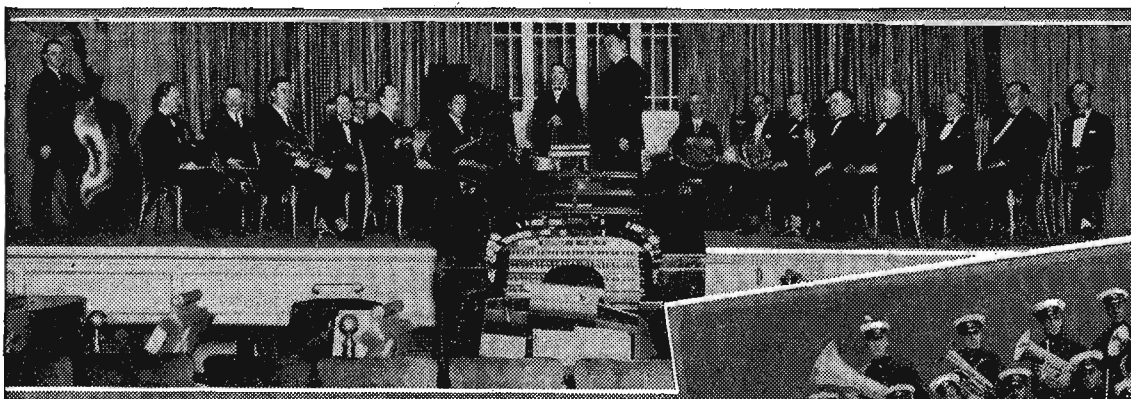


"You have not been long on this side of the Atlantic?" I changed the subject deliberately. Her soft, brown eyes were filling with tears as she struggled to express herself adequately.

"All my life I haf lived in ze Province of Quebec, monsieur."

"Don't they talk English?"

"Only a few, un petit nombre. Eighty per cent are French. It is the Little France of America. Monsieur Cartier of La Presse he makes the programmes in bos the French and the English. Monsieur Cartier, his great, great, great, grandpere was



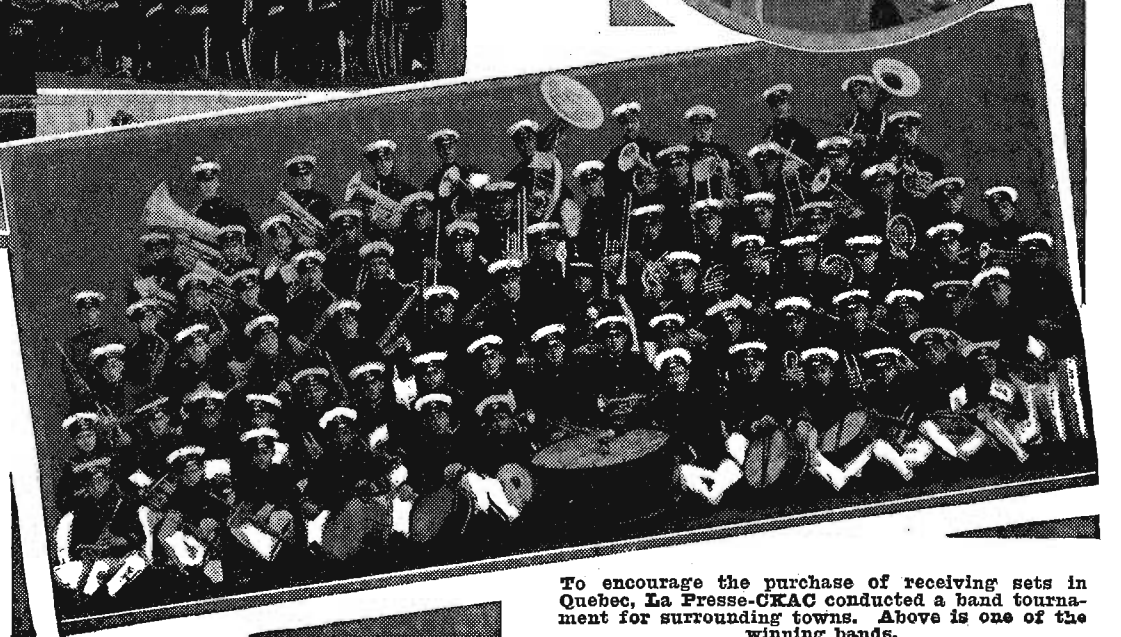
Above is the Capitol Theater Symphony Orchestra, said to be one of the finest musical organizations in the Dominion. Its classical selections have won many friends from this music loving community.

the very spirit and soul of the great Northland snows. "Parle vous Francais, oui?" she chirped. Everybody knows that much French, especially since the war. So I answered:

"Not enough to carry on any animated conversation, Ma'm'zelle Baudouin. Je parle Anglaise only foire."

"Ah, eet is to be regret but I am not much surprise," tiny dimples darkened the natural tint of ripe winter-green berries that glowed on her cheeks.

Dave, puzzled, placed a chair beside my desk. She pushed the edge of it, and I sat down. Dave looked over his shoulder.



To encourage the purchase of receiving sets in Quebec, La Presse-CKAC conducted a band tournament for surrounding towns. Above is one of the winning bands.

BIG RABBIT & by HUGH FULLERTON

MORE SPEED, man. It's up to you, now. Give her the limit." Big Dick Borton, the best pal a man ever had, stood over me as I urged more power into the little engine that was carrying us so swiftly through the water.

The thought that it was "up to me" sent my heart with a throbbing ache against my ribs. Somewhere in the depths of the Florida wilderness was my Roberta. Suppose we should be too late—what would happen?

It seemed like ages since I had received that note, hurriedly written, that she was being taken away from the Atlanta home of her guardian, Major Gaskill. We had been warned. The hard visaged little banker had told me that something was wrong; that the major had been speculating, first with his own funds, then with the girl's and finally the bank had become involved. Roberta had told me herself she feared kidnaping but she dared not protest for fear of the scandal.

Dick and I had managed to leap aboard the private car on which she had been taken by the mysterious negro giant, Trimble. She had been accompanied by her maid and then we found evidence that the major, himself, was one of the party. Before we could protect ourselves we had been attacked and overcome by Trimble and dumped out, as the train sped onward, at the edge of Jacksonville.

It was hours before we were in condition fit to resume the trail. Then we heard talk of the "Big Rabbit." It seemed a powerful, yet intangible, voodoo that had terrorized the negroes. We found Roberta had been whisked aboard a strange craft which departed inland, off the channel route. Dick took one boat and I chartered the Jason with the understanding that we were to meet at a certain point.

Dick had come and gone when I reached the objective. I waited frantically for word from him until Danforth, a detective I had known in New York, arrived on the scene. He was looking for timber thieves. Borton returned all but exhausted after swimming and tramping through swamps and bogs until he had found the rendezvous, the lair of the Big Rabbit. He had obtained disguises for himself. Dan and I were blackened to pass for negroes as we now raced to the rescue in this desolate jungle.

CHAPTER VIII

The Race Through the Swamp

PUSH her! Drive her to the limit!" Borton kept repeating. The Jason was behaving beautifully and, tuned to perfection, she was slicing the water at the best speed I could coax out of her without risking overheating the motor. She was doing almost forty miles an hour and not a knock or rattle marred the purr of the engine. Again and again Borton turned to me in nervous impatience, begging for greater speed.

"At this gait we'll make it in less than two hours," I growled as I nursed the engine and listened carefully to the steady hum of the motor. The Jason was covering herself with glory.

"Get everything you can out of her while we are on the St. Johns," Borton remarked, fretting, "I'm going to crawl down into the bottom and try to get a nap. We can't make any real speed after we turn into the Ocklawaha and it will commence to get dark in there shortly after six o'clock. The moon will not help any until after eight o'clock and if we are that late we may lose. Drive her."

He spoke with savage earnestness, and his face was drawn into lines by anxiety and weariness.

"Why?" I demanded, still hanging over the engine.

"The negroes are ordered to meet at eight o'clock tonight," he exclaimed. "Evidently they are meeting for something important, connected with Major Gaskill. If we are late, or miss the meeting place the Lord only knows what will happen. An hour may mean everything."

His manner and words increased my uneasiness, which had been relieved by the physical exercise of operating the boat. Above the steady explosions of the engine I fired question after question at Borton but he either did not under-

stand or was too weary to attempt to reply and, coiling his big frame in the bottom of the boat, his legs under a seat, he cuddled up with his head resting on a piece of his odd baggage and snored.

LET him sleep," Danforth advised, "We'll wake him when we get well into the Ocklawaha. You run the engine and I'll steer. I know the river." Crawling over the baggage he took the wheel and commenced cutting corners to save every possible foot of distance.

It was a strange ride as the boat flashed through the silence of the narrowing St. Johns. The physical and nervous strain was beginning to tell upon us. Forward, Danforth sat humped over the steering wheel peering steadily ahead, the stump of a cigar clenched tightly in his teeth. There was little chance for talk. Occasionally Danforth called back to me as I hovered over the engine, listening, coaxing, watching the gasoline supply.

Danforth was taking all the short cuts, clipping quarter and even half miles off the distance where the course lights marked a wide sweep in the channel. Once he swerved like a flash to avoid a log floating just under the surface. Half a dozen times he slipped over bars where the water seemed scarcely deep enough for us to pass and where the boat stirred up the sediment on the bottom in its rapid passage.

The river banks were pressing more closely together. Clearings and orange groves showed on one side. On the other clearings had ceased entirely, and the bank of the river was marked with a blackening solid growth of oak and cypress with tall pines rising behind them. The trees were covered with a heavier growth of Spanish moss, and the

under jungle was a matted tangle of smaller growths. The green of new sprouted eaves of the water oak showed livid where the yellow jasmine, creeping upward through the matted masses of moss, burst into a shower of beauty that cascaded down almost from the crests of the trees.

We were reaching the deeper swamp land. Clearings ceased at both sides. With a quick nod of his head Danforth ordered a slower rate of speed. A sudden turn, a rush seemingly straight at the bank of the river and the boat, flashing into a narrow lane of water, dived, as it seemed, into the heart of the swampy jungle. Before us a narrow, tortuous lane of water opened, winding between solid walls of dank growths rising, it seemed, out of the water itself. With a second jerk the Jason lost herself in the water wilderness and was twisting her way through the narrow aisle of water.

IT WAS late afternoon. The sun still was shining warm and bright, but as we dived into the depths of that Stygian river of the jungle, it seemed as if night were falling. In that forest arcade of water lay a ghostly twilight. In the tree tops far above us we could see the glint of sunlight and occasionally a golden bar, prying its way through some crevasse, splashed the surface of the water like a flame across a river of ink.

"We've got to push her," Danforth called, gripping his teeth grimly into the remains of his cigar. "Drive her hard. It is getting darker in here more quickly than I expected. Watch the lighter spots and race through them. We must make speed while I can see to dodge

stumps and turn the corners. It'll be worse soon."

I slowly increased the speed, but a few moments later the motor commenced to miss fire, and, after spluttering along spasmodically for half a mile while I strove vainly to locate the source of the trouble, it stopped entirely and floated helpless in the sombre blackness of the dark river.

A huge water moccasin, disturbed, dropped like a plummet from a cypress limb into the water. An alligator slid with a soft splash from the side of a hummock and sank slowly, leaving only the tip of its snout above the surface. In the tree tops a wondrous choir of birds sang the evening hymn of the Land of Flowers. Gay parrots and other birds of brilliant plumage moved across the upper parts of the trees, flashes as of flame showing the fitting of the Cardinals.

The silence, punctuated only by the notes of birds, exaggerated the noises and the whispering voices of the creeping, crawling things of the jungle.

IHAD no eye for beauty nor ear for the music of the forest, but sweated and swore while wrestling with that infernal engine, every precious instant bringing the denser darkness nearer.

"Take it easy," said Danforth quietly. "Look it over instead of killing yourself whirling that wheel."

His advise was sound. I stopped physical effort and, within five minutes, located a clogged feed pipe that had crippled the carburetor—a small thing, remedied in a moment with a bit of wire. I was swearing at my own denseness and whirling the wheel when Borton awoke suddenly.

"Five minutes to six," he said sharply as he looked at his watch and glanced outboard, "How long have we been stopped?"

"Twenty minutes, engine broke down," I reported, just as the engine exploded twice and settled into a steady throb as the boat leaped forward. The noise of the exhaust made conversation, save in loud tone, impossible, but Danforth, from his post at the wheel, called back:

"Is the place we're going to this side or beyond the place where the sight seeing boats tie up for the night?"

"Several miles this side," Borton called back. "I'm not certain just how far."

"We have a chance to reach it in time then," Danforth said grimly. "Cut loose that engine and I'll try to take her through."

"We've got more than half an hour of this kind of light," I yelled, "If the trees don't get any thicker."

"All right—speed her up," said Danforth, chewing his cigar and talking back over his shoulder. "If we land on a stump or log, swim for the east bank. Give me speed; I'll take her through."

Never before and probably never again will that black lane of water, winding through the heart of the tangled swamp, see such a display of speed and reckless daring. Twisting, turning, sometimes swerving aside so suddenly in avoiding a crash into trees or logs that the boat skidded on one side and water flew like a screen over the rail, we dashed through that ever darkening inferno of semi-tropical growths. We flashed past a row boat, proceeding leisurely up the river and the two negroes, paddling with their faces toward the bow after the custom of the natives, turned toward us with surprise, and one, evidently accepting us as colored, waved a greeting.

BORTON, as we passed them, lowered his face that they might not see he was white, then did a strange thing. He rubbed his hands in the oil in the boat bottom, near the engine, blackened them and with the black hands made some sign in the air. One of the negroes rested his oars, raised his hands, made motions as if pawing the air—and shook his head sideways vigorously.

"They're not going," Borton yelled over the drumming of the motor. "I hoped they were and that we were getting near. Probably can't row there in time. Push her."

"She's doing close to thirty-five miles now," I yelled in reply.

"We'll make it—if we don't hit something," Danforth called back.

Light still illumined the tube far overhead as the dying twilight already



"Tillie," I said as calmly as possible, "you must help us. There are three of us here to save the major, Miss Tomneson and you. You must show us where they are. If possible you must tell your mistress that help has arrived."



As our eyes pierced through the red glow of pine knot flames and the fog of resinous smoke rising straight in the still air we discerned at the opposite end of the natural woodland cathedral, a crude, stage-like structure. It was open at the side, facing the clearing . . . A large chair, rudely carved, occupied the exact center.

branches of the trees and heavy shadows lay on the water, with lighter lanes where the trees were not so thick, making it more difficult to see objects in the channel.

I scarcely could see beyond where Danforth sat crouched in front just behind the hood of the bow, peering steadily ahead into the shadowy darkness. He seemed a machine, whirling the wheel rapidly in one direction, and reversing so quickly it seemed we must be swamped if not wrecked.

No one was speaking now. I nursed the engine, oiling, and in nervous desire to do something, testing screws and wires. It was well—for once a screw, jarred loose by the heavy vibration of the boat, released one of the battery wires, and before I could restore the connection we lost speed, and sharp curses flashed at me from both the others. Once we struck a glancing blow, reeled crazily, scraped heavily along one side of the boat and shipped water. Danforth, was partly torn from the steering wheel, lost control for an instant, the boat careened wildly, tore through the overhanging branches of a tree, righted and fled onward.

FOR more than ten miles we raced recklessly through the depths of the swamp, scarcely slackening speed. Every instant we expected the frail craft would dash against a tree or a floating log and that we would be hurled into the inky water, or shattered by the impact. Not a bit of solid land could be seen, the trees rising from the water, save where hummocks had formed around the aerial roots of huge cypress trees.

"Better turn on the headlight," I called.

"We don't dare," Borton cried back quickly. "We're getting close."

In one of the minutes in which I dared raise my eyes from the engine and bearings I observed Borton had crept forward and was leaning over the rail studying the east side of the river carefully, as if seeking some mark he knew. He struck a match, cautiously screening it low in the boat and looked at his watch.

"It's six minutes of seven," he called. "Drive her—just a little further."

The light had failed and it was dark, almost as midnight, excepting where occasionally a luminous land broke the blackness as the dying afterglow shone through a semi-submerged forest, without guide, without knowledge of the channel, depending only upon the sharp eyes of the little detective for safety from an accident which might mean destruction.

Borton suddenly threw up a hand with a sharp command to slacken speed. An instant later I breathed a sigh of relief as the engine, throttled down, changed its tune and the speed of the vessel slowly lessened.

"We are almost there," Borton said in lower tones. "We just passed the cypress hummock where I hid before taking to the river. Run slowly and make as little noise as possible."

I obeyed thankfully and in silence. Borton crawled forward again, and crouched over Danforth's shoulder, peering over the line of

to the trees on the left," he ordered. "Go ahead slowly. I want to find the landing place I picked out."

ALMOST without sound we slipped along, the engine now muffled down. To stifle as much of the noise as possible I leaned far over the side and draped a heavy wet cloth over the exhaust, deadening the sound of the explosions. The side of the boat was scraping under the overhanging branches of trees. Moss laden ends of branches whipped our faces and forced us to crouch low in the boat.

"Shut off the engine," Borton called in a hoarse whisper.

For five minutes we propelled the boat noiselessly along the bank by catching the branches of trees and pulling her along as Borton peered anxiously under the trees.

"All right," he said in a low tone. "Pull her in alongside that hummock just ahead. There is an opening on this side of it. Slide right up alongside the log. We can climb over it into a path and the boat will lie hidden."

Noiselessly we obeyed orders and dragged the Jason between the tree clumps and alongside the prostrate trunk of a huge pine, half buried in mud and water. In its fall the pine had torn up a huge pile of mucky earth in which plants and grass had rooted, forming a soggy little island. We tied the boat fast, her nose to a Judas tree, covered with masses of pink blossoms. A huge clump of needley like Spanish bayonet formed a screen which hid the boat entirely.

"Help me with this stuff," Borton whispered cautiously. "The path is right over there beyond the hummock, back of those Spanish bayonets. Mark the spot well so you'll know it when we come back. Remember the way."

We were lifting the packages from the boat and Borton led the way. Behind the huge clump of Spanish bayonet we stopped while he went on a few yards, glanced around and returning announced the road was clear.

"Listen, fellows," he said, "whichever one of us manages to reach the girl must make a break for the boat. Whoever reaches it with her must make a get-away without waiting for the others unless they are coming. I don't know just what we are running into but we must get the girl. Don't hesitate to shoot her rather than have the negroes retake her."

"Come on, let's hurry," he added sharply. "We want to be on the ground as soon as possible. It can't be far from here, for I hear them."

WE CLAMBERED over a log, through oozy mud and up an incline to where the footing was firmer, and came upon a well trodden path leading away from the river.

Borton led the way rapidly along the path. I was burning with excitement, curiosity and there was sort of a dry feeling in my throat and a burning fear for the girl I loved. There was no chance to ask questions as I brought up the rear of the procession.

Danforth, his cigar stub still clenched

between his teeth, trotted steadily in front of me. I could not help envying the coolness of the man. He tightened his belt and with a big package of Borton's mysterious disguise held under one arm, he jogged along through the darkness, perhaps to death, as coolly as if strolling up Broadway. I was hampered with an unwieldy package which, while not weighing much, handicapped my movements.

For perhaps half a mile the strange procession wound in single file along the narrow path. Ahead a sound like far away voices increased in volume yet we saw no one. A glow, as of fire, shone from somewhere ahead. Borton slowed down, moved forward again cautiously and finally stopped in a small opening where the path on which we had been traveling met another.

"Here is where we part, fellows," he said briefly. "I do not know what we are going against except that there are hundreds of negroes going to meet at a place less than a mile ahead. I want you fellows to light your pine torches, go right on and mingle with the crowd as quickly as possible. Join right in and don't talk to anyone. No one will recognize you or notice you unless you betray yourselves. One thing is certain you will see more negroes than you ever have seen together in your lives."

"I am certain Miss Tonneson and her uncle are prisoners by order of Trimble. What he intends to do I don't know. He has sent out orders for all the Sons of the Big Rabbit to meet and every negro in this section of Florida who can get here will be present."

"What are we going to do? What are you going to do?" I asked.

"CAN'T tell," Borton said briefly. "I am going to try to run the whole show and to beat Trimble at his own game. If I am discovered—let it go. Don't cut in if you have a chance to save the girl. You circulate around in the crowd and try to learn where the major and Miss Tonneson are kept. Then try to get the girl away to the motor boat. I will try to distract their attention and give you more chance to do it. If either of you happens to be left when the boat pulls out stick to the crowd and follow the negroes out through the swamps. You'll be safe unless they find out you are white. You will reach a railroad in fifteen miles or so—but get clear before daybreak—or they'll spot you."

We shook hands. I was surprised to find how little excited I felt. It was as if we were parting for a night's sleep.

"Above all," Borton said, "don't start anything unless things come to a show-

down. If we are found out, back against a tree and cut loose—and GET TRIMBLE FIRST. We'd better push on. You go straight ahead. I'll take this back path."

Picking up his queer packages Borton hurried away into the blackness. We stood gazing after him an instant, then without a word, moved quickly forward. Ahead, now bright, now shut off by heavy growths, we could see lights moving like giant will-o'-the-wisps. We stopped, lighted our pitch pine torches, waited for them to flame up and Danforth and I moved forward, side by side along the widening path. In a few minutes we fell in with negroes carrying torches and lanterns, emerging from other paths, all moving toward the place where a great glare lighted the forest. They laughed, called shouted scraps of songs, jostled each other in rough play.

We went forward as rapidly as we could without the risk of drawing attention to ourselves and presently emerged from the mouth of the tunnel-line path into a great, open glade. A small island in the heart of the swamp had been cleared and, as we stepped out into the clearing, there burst upon our gaze one of the most weird and appalling scenes ever beheld by the eyes of man.

CHAPTER IX

In the Rabbit's Den

WE STOOD, stunned with awe, at the mouth of the forest path, looking out upon a scene so wild and weird it might have been taking place in some jungle depth of the Upper Congo.

An exclamation of amazement, perhaps mingled with terror, burst from my lips that almost betrayed us to the negroes who passed us both coming and going and in large numbers. Danforth recalled me to my senses grabbing me by the arm and digging his fingers into the muscles. He burst suddenly into a boisterous laugh, imitating the tones of the black men around us and whispered, "Steady, Wen; keep cool."

My sudden paralysis of mind and muscle passed.

We emerged into a large clearing, perhaps a hundred and fifty feet wide and four hundred or more in length. Evidently it had been a pine covered knoll and the pine had been cut away, the underbrush cleared. Whether there had been a saw mill at one time is impossible to know, but the ground was covered with sawdust. Huge live oaks and water oaks at the sides of the rectangular clearing extended their

(Continued on page 23)

It's Time for Spring Cleaning

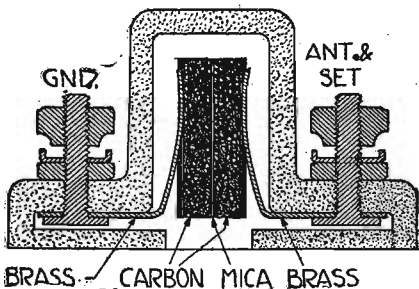
TIPS HOT Off the Bat for the Beginner or Fan Who Had His Set Installed. What Lightning Arresters, A and B Batteries Are. Part II.

MAY we repeat—"Lightning never strikes twice in the same place." There isn't usually anything left to strike. Emphasis is therefore placed upon the necessity of installing approved lightning protection for your Radio if you would avoid fire hazards as well as comply with the rulings of the Board of Fire Underwriters.

In figure 4 of the last issue was shown the proper location and method of installing such protection. The



Figure 6, above, is a well-known lightning arrester. Figure 7, below, shows how it would look cut through.



market affords several makes which one may use with assurance of satisfactory operation. The majority of such makes comprise an airproof housing of porcelain in which is installed and sealed two carbon blocks separated by a very thin strip of mica. The blocks are connected to antenna and ground respectively.

In operation they function as a low capacity shunt path to ground from the antenna. This path is such that normal current values will not pass or bridge the gap, while the extreme voltage or power of a lightning discharge breaks down the gap and allows the discharge to pass directly to the earth. Thus is eliminated the danger of lightning entering the house and receiver where much damage might occur.

In figure 6 is pictured a well-known make of arrester using carbon blocks with mica air gaps, while figure 7 is a sawed apart drawing showing its interior mechanism.

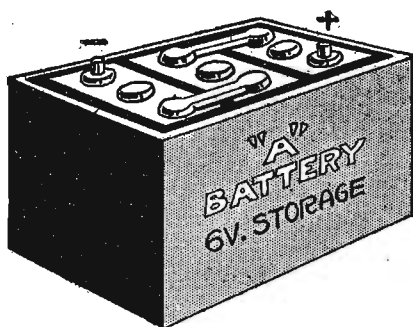


Figure 8. A six volt storage A battery.

Once the parts are installed the bottom of the arrester is hermetically sealed with a noncombustible material. To install it, after mounting upon the outside of the building, the antenna is connected to one of its terminals and then passed on to the receiver, and the ground wire is fastened to the remaining terminal and then to the ground post of the receiver. Be sure that the ground wire runs in as direct line as possible to its earth connection. Electricity in any form dislikes flowing in other than straight lines. Therefore all bends and turns should be avoided.

Lightning arresters employing copper, brass or other metals as the discharge media should be avoided. The reason for this is that all metals have a relatively low fusing or melting point and cannot withstand heavy discharges, without the danger of such fusing causing a short circuit which would make the receiver inopera-

By the TECHNICAL EDITOR

tive. On the other hand, carbon has a very high fusing point and seldom if ever need be replaced. Because lightning has never bothered your receiver there is no valid excuse for not providing protection before it is too late. Do it now while the subject is fresh in your mind.

Now about batteries, which in Radio are called A, B and C batteries. These letter classifications refer to the particular circuit within the receiver which is served by the battery. Radio A batteries are of two general types, storage A batteries (figure 8) and dry cell A batteries (figure 9). Storage batteries are the more economical for use with tubes which require 1/4 ampere or more for the lighting of the filaments, such as the 201A, 301A, UX, WX, or CX class. They have the advantage over dry cells in that they can withstand heavy current drains without losing their voltage efficiency, and can be recharged readily when exhausted

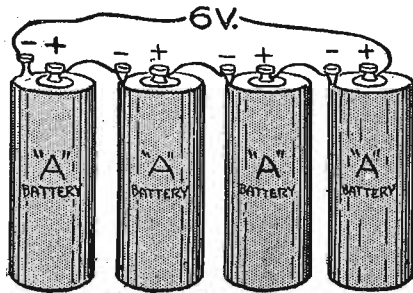


Figure 9. Dry cell A batteries. Four are shown here connected in "series."

or discharged. One should clearly understand that the purpose of an A battery in a Radio receiver is to heat the filament of the tube to a point where it will expell sufficient electrons to permit the B battery to function. It has no other reason for existence. A storage A battery should for general utility work have an ampere

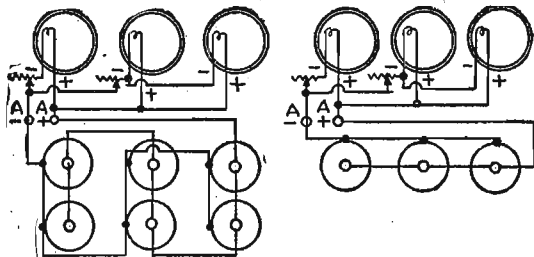


Figure 10, left, and Figure 10-A, right, for all 1 1/2-volt tubes. Not less than one, preferably two cells, should be used for each tube.

hour capacity not less than 100. A smaller size requires recharging often while a larger size will be inclined to deteriorate through standing inactive too long before being recharged. This then means that in order to secure the greatest efficiency and longest life from a storage battery, it must be used, and at a fair ampere discharge rate. An idle battery soon goes to the scrap heap.

A batteries of the dry cell type, shown in figure 9, are preferred for use with tubes using less than 1/4 ampere, such as 199's, or tubes of the 3-volt type. Perhaps the most important consideration for the securing of best results is the use of a sufficient number of dry cells connected properly. Figures 10 to 13-A, inclusive, show a number of ways of connecting dry A cells properly for various numbers and voltages of tubes.

Figure 13-B shows what is meant by "series" and "parallel" connections. Connecting in series means the connection of the center or carbon post of one cell to

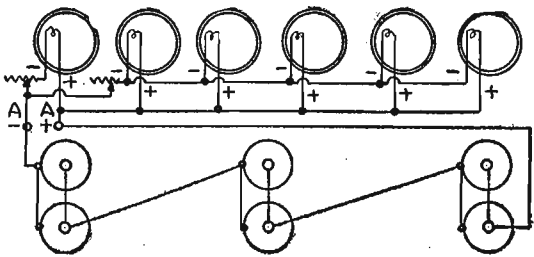


Figure 12. For one to six 3-volt tubes, the above arrangement is recommended as the best.

the zinc or outside post of the next cell. Connecting in parallel means connecting the center post of one cell to the center post of the next, and zinc or the outside post to zinc or outside post of the next cell. For illustration, a "bank" of four cells in parallel would have all four of the center or carbon posts connected together by one wire, and all four of the zinc or outside posts connected together by another wire. To connect such a bank in series to another such bank, connect the zinc post of one bank to the carbon or center post of the next bank, etc. Figure 13-A shows a series connection of four banks of two cells in parallel.

The B battery is that battery which supplies the energy which operates the telephones or loud speaker of the receiver. It is also sometimes known as the plate battery. B batteries

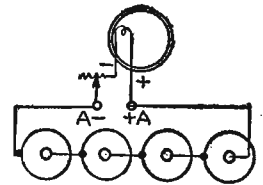


Figure 13. For one 5-volt tube, use four dry cells in series.

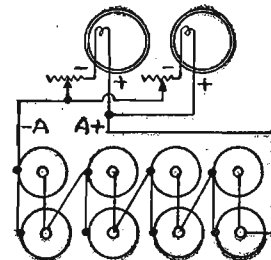


Figure 13-A. For two 5-volt tubes, use one bank of four dry cells in series for each tube.

Contrary to the impression current in some localities, a wet B battery is preferable for all receivers in which the drain exceeds 16 milliamperes, and especially if the receiver is in fairly constant use. Wet B's are readily recharged, but have the disadvantage of requiring considerable attention. The more popular B battery is of the dry cell type. Recent improvement in manufacture have now provided dry cells which withstand heavy current drains and remain in efficient service for unbelievable periods. It has now become almost an axiom that all receivers using five or more tubes should use only the "heavy duty" type of B battery in order to secure the greatest economy of operation over a given period. Such batteries are made in the 45-volt size with 22 1/2-volt tap.

At this point it appears as pertinent to the subject to contradict the thought that B batteries, of either the dry or wet cell type, cause noises in a receiver. Exhaustive tests with such batteries in every condition of charge have been made by no less an authority than the U. S. bureau of standards, but no noises attributable to the batteries were observed. It is true that loose

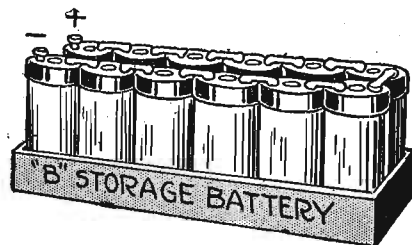


Figure 14. A typical "wet" or storage B battery.

or corroded connections give an imperfect contact and sometimes a resulting scratchy noise, but when such connections are well made, one may as well look to some other portion of the circuit for the trouble.

Another point of equal value is the testing of batteries. How often have you seen them tested anywhere from fifteen minutes to an hour or more after the receiver has been turned off? All battery tests should be made when the set is in operation, not when disconnected. It is not the recovery voltage which you desire to learn, but the operating value.

Test your B or A batteries immediately after you have finished using the receiver and before shutting it off. All such tests should be made with a high-grade voltmeter. The 50 cents "and up" kind will do more harm to the batteries than good, while its readings are quite likely to be far removed from the truth. Thirty per cent below normal is the "cut-off" voltage. In other words, when a 45-volt battery reads 29.25 volts, it has rendered value received.

(Continued)

are made commercially in two kinds. One, known as a wet or storage B battery, is shown in figure 14. The other, pictured in figure 15, is a typical flat type of dry B battery. In addition to the above, there are now available very commendable B battery substitutes which are known as B eliminators. As these have not come into general use by the masses we will confine our discussion to the types of B's shown in figures 14 and 15.

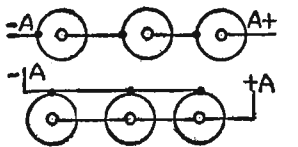


Figure 13-B. Top is "series"; bottom, parallel connection.

Exhaustive tests with such batteries in every condition of charge have been made by no less an authority than the U. S. bureau of standards, but no noises attributable to the batteries were observed. It is true that loose

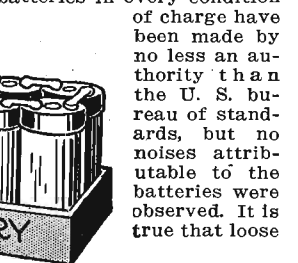


Figure 15. Typical block of "dry" B battery.

S-O-S: New Portable Super

*AUTOMOBILE, Canoe,
Motorboat, Beach or Camp---
All These Are Home to This Little
Super-Heterodyne Which Is Easy
and Reasonable for Anyone to Build.*

By MILO GURNEY

Now that many of the downtrodden are recovered from their annual attack of spring fever, comes vacation time and the lure of the great outdoors. Yet no vacation can be complete without a portable Radio receiver. The evening bedtime story, the voice of your favorite announcer, the "pep" of the Charleston, and the soothing melody of "Always" must be with one always.

The word "portable" as applied to a Radio receiver means much more than compactness. The set's design cannot be such as to over-crowd the parts, it should be adaptable to either antenna or loop reception, and it must insure a mechanical ruggedness which will permit of considerable rough handling without marring its efficiency. Beyond this, where possible, the finished receiver should present a pleasing appearance to add to its usefulness in the home.

In presenting a "how to build" article for Radio Digest's "S-O-S" portable, the author feels that this receiver combines in a marked degree many, if not all, of the desirable features required.

As super-heterodyne circuits have passed through another eventful winter of experimentation and resulting betterment, we may then look to this circuit as most suitable for our purposes. It is also of interest that in building this circuit one has the advantage of using the new No. 171 Victoreen intermediate transformers, designed particularly for use with tubes of the 199 class. These transformers represent a new offering by the Geo. W. Walker Co., of Cleveland, Ohio. Their amplification factor and general operating performance make them stand out as distinctive in their field and well worthy of one's confidence.

As a portable receiver is subject to very

the final selection had to be met. First among these was the requirement that the condenser possess a mechanical ruggedness beyond that found in many makes of the so-called straight line frequency type. Of equal importance was the assurance that the rotating shaft carrying the rotor plates be so designed as to offer automatic compensation for wear, thus obviating the necessity of adjustment attention by the user.

The final selection was the type No. S. L. F. 1223 Amsco condenser, manufactured by Amsco Products, Inc., of New York city. This particular make possesses much which was desirable. The

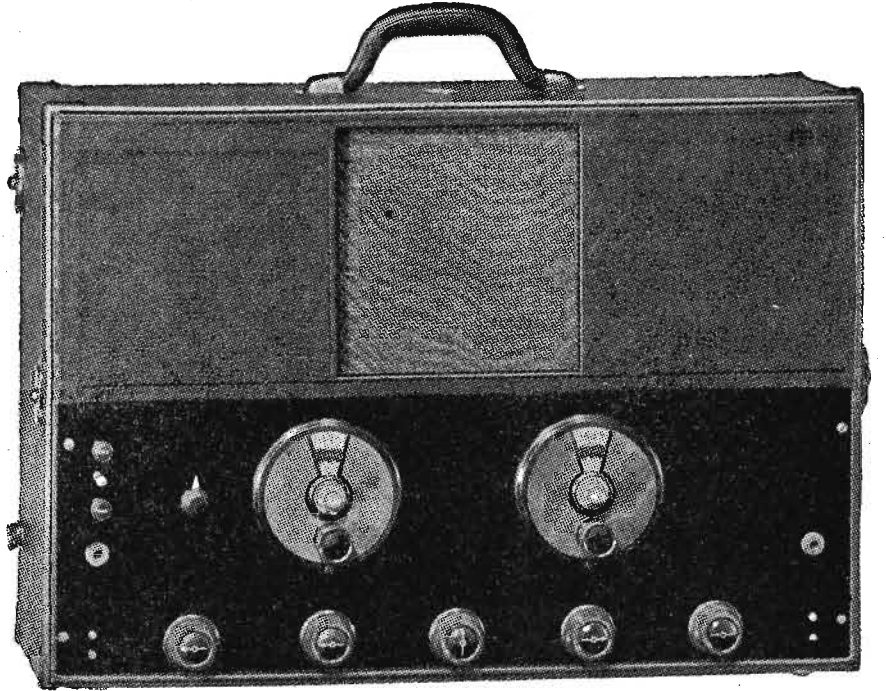


Figure 1. All set to tune in. Symmetrical and neat, isn't it?

LIST OF PARTS

4 No. 171 R. F. Trans.	Geo. W. Walker Co., Cleveland	\$28.00
1 No. 150 Oscillator	Geo. W. Walker Co., Cleveland	5.50
1 No. 160 Antenna Coupler	Geo. W. Walker Co., Cleveland	3.50
2 No. E180 Audio Trans.	Thordarson El. Mfg. Co., Chicago	8.00
2 No. S. L. F. 1223 .0005 mfd. Condensers	Amsco Products, Inc., New York	8.50
8 No. 9040 Cle-Ra-Tone Sockets	Benjamin Elec. Mfg. Co., Chicago	6.00
2 No. 103 Radio Jacks	Carter Radio Co., Chicago	1.80
2 No. 104 Radio Jacks	Carter Radio Co., Chicago	2.00
1 No. I. R. 400 Potentiometer	Carter Radio Co., Chicago	1.25
2 No. I. R. 30 ohm Rheostats	Carter Radio Co., Chicago	2.00
2 No. I. R. 6 ohm Rheostats	Carter Radio Co., Chicago	2.00
3 No. 711 A Batteries	National Carbon Co., Chicago	1.50
4 No. 764 B Batteries	National Carbon Co., Chicago	7.00
7 Eby Binding Posts	H. E. Eby Mfg. Co., Philadelphia	1.05
1 Hammarlund .000045 Cond.	Hammarlund Mfg. Co., New York	1.80
2 No. 1175 .00025 Fixed Condensers	Aerovox Wireless Corp., New York	.80
2 No. 1092, 2 meg. Grid Leaks	Aerovox Wireless Corp., New York	.70
1 No. 1200, 1 mfd. Condenser	Aerovox Wireless Corp., New York	.90
1 No. 1250 .001 mfd. Fixed Con.	Aerovox Wireless Corp., New York	.40
1 7"x21"x3/16" Formica Panel	Formica Insulation Co., Cincinnati	3.44
1 7"x20"x3/16" Formica Panel	Formica Insulation Co., Cincinnati	3.28
1 Special Portable Cabinet	Knickerbocker Case Co., Chicago	12.50
10 Lengths Celatsite flexible wire, screws and miscellaneous materials		2.00
Total Cost.....		\$103.92

outer frame makes the condenser rigid and strong, while both the stator and rotor plates are wedged into machine milled bars,

stand that a condenser constructed as is and the Amsco has much to commend it as distinctly quality apparatus.

There is an old axiom which reads that no chain is any stronger than its weakest link. This applies very forcibly in the selection of fixed bypass condensers. While a more serious attempt has been made of late by several manufacturers to produce fixed condensers whose values will remain fixed and with the limits of error narrowed down to an acceptable point, we are still confronted with altogether too many brands in which one cannot place much confidence. In the selection of fixed condensers for Radio Digest's S-O-S portable, the ex-

perience of a great many manufacturers of Radio receivers was called upon, the final selection favoring Aerovox condensers, as designed and constructed by the Aerovox Wireless Corp., of New York city. The No. 1200 type which is used as the main bypass for radio frequency currents readily met the 500-watt breakdown test to which they were submitted. Contrary to the general impression, it should be understood that a discharging condenser is subject to very heavy surges. This discharge takes place as a successive ripple. At each peak the strain to which the holding plates are subjected is quite beyond that usually understood. Mechanical strength in addition to careful calibration of capacitive values are therefore important and are well met in the product mentioned.

POSSIBLY no product used as an accessory to a portable receiver is called upon to provide efficient service as are the filament and plate batteries. Of necessity space will not permit the use of husky, large capacity units, therefore one's selection must assure a make which enjoys a reputation for uniformity, a high recovery value and a construction assembly which, except under severe abuse, will give full value received. Of a few types meeting these conditions, the National Carbon company's Nos. 764 and 711, were selected as representative of the high quality required. The name "Eveready" hardly needs additional mention. It is already generally established that products produced under this label will prove well adapted to the work in hand. The No. 764 B battery is of the heavy duty type, capable of withstanding the drain incident to the extended use to which receivers of this class are usually put.

It is apparent to the reader that it would be folly to make a selection of audio frequency transformers suitable for this receiver without ignoring all of the "boost" literature offered and selecting that make which in conjunction with the associated apparatus, offered the most pleasing reproduction. Fortunately, early in the making of such tests a transformer was found which (Continued on page 30)

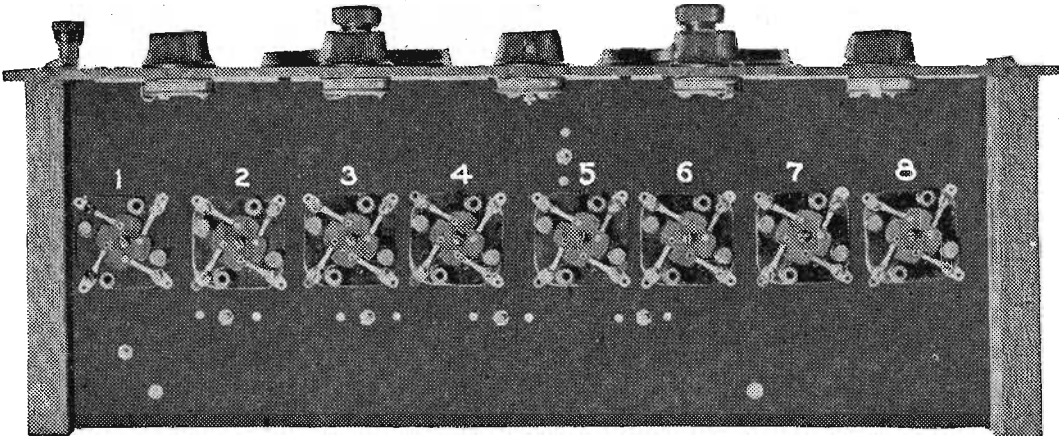


Figure 2. Bottom view of sub panel showing sockets in place.

severe shocks through handling and the microphonic noises incident to the use of 199 tubes must be circumvented, the selection of a suitable socket entailed a careful test of several makes. Our final selection was the No. 9040 Universal as manufactured by the Benjamin Electric Mfg. Co., of Chicago. Upon examination of this device, many very desirable features are disclosed beyond the novel method used for reducing microphonic effects. Taking advantage of one of these, it will be noted that the sockets are mounted in a reverse position underneath the sub panel, the socket base proper protruding up and through the panel, thus providing not only neatness in top sub panel appearance, but permitting the placing of all wiring beneath this panel without unsightly drill holes.

The variable tuning condensers offered another problem which was not easy of solution, of several factors bearing upon

and in turn wedged into Radion supporting studs. The rotating shaft carrying the rotor plates is made of chromium nickle needle steel and fits into a locked bronze bearing. This bearing is split in order to offer a self compensation for wear, while a hardened steel washer is interposed in front between this bearing and the rotor bar. The opposite end of the rotor bar also fits into a bronze casing assembly and is provided with a steel ball thrust bearing. From the above description one will readily under-

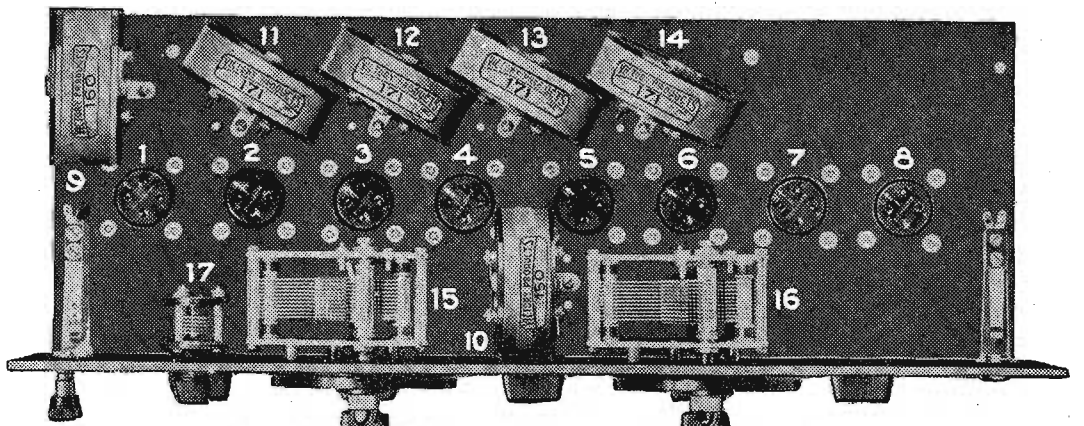


Figure 3. Top of sub panel. Arrangement of parts is shown.

Old Man Static's Funeral

PART III, in Which Is Described the Making of an Efficient Buried Antenna System

By MILO GURNEY

THE author is not "Bubbling Over" this morning—if you know what I mean. In truth, he lacks fifty pieces of silver. All of which is irrelevant, not admissible or pertinent to the subject of underground antennas. In the last article on antennas of this character a promise was made that suggestions would follow for experimentation with horizontal types of aerials. The details of these experiments, promised for the June 15 issue, will be delayed as the avalanche of mail on buried aerials has brought a few very valuable experimental ideas which are of such interest that all will want to learn of them.

May I then introduce Clifton G. Whitchurch, of Ardmore, Oklahoma. This gentleman has invented an underground system which is novel in design and, according to his statement, works very satisfactorily in his locality. We are taking the liberty of reproducing his description of the underground condenser antenna with the certainty that each of you will agree that his plan possesses merit.

Takes But Very Small Space

Mr. Whitchurch writes in part as follows: "The antenna about to be described, is the result of a number of experiments conducted with the two objects in view, efficiency and adaptability for installation in a very small space. From my experience, it appears the first object has been attained while as to the latter, the reader is left to judge for himself. All that is required for the installation of this interesting experiment is a post hole digger, a space six inches in diameter and enough man power to sink the hole five or six feet deep.

"My experience has been with antenna coupled

had, one may use an equal length of ¼-inch, 24-strand ribbon aerial wire. You will need a cylinder of either bakelite or paper 5¾ inches in diameter and 27½ inches long. If this diameter is not available, either a smaller or larger one may be used, making sure, of course, that if a smaller diameter cylinder is used, then the length will have to be increased, and vice versa for a larger cylinder." (For those not familiar with the method for determining the length of tubing required, the diameter times 3.1416 equals the length of a turn. Therefore the length per turn and the spacing will determine the total length of cylinder required.—Editor's Note.)

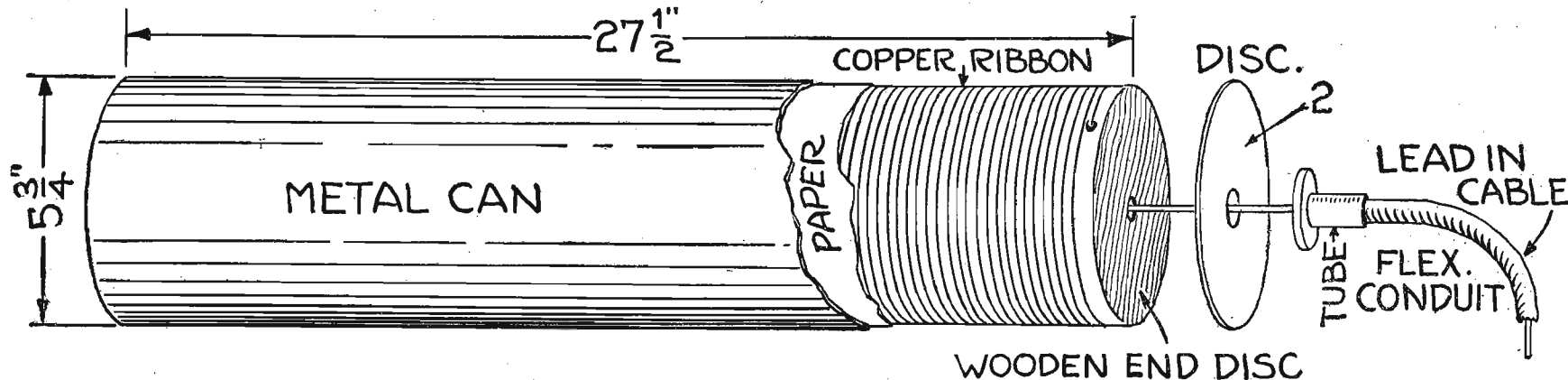
"The cylinder selected should have a sealing head disk of bakelite or wood at each end (see illustration). A ¾-inch hole ½ inch deep should be drilled in one of the heads at its exact center. Next drill a ¾-inch hole ¼ inch from this same end of the cylinder and on into the center to intersect the hole in the center of the head. These two holes now form an outlet for one end of the winding to pass through. It is needless to mention that if a paper cylinder is used, it should be thoroughly dried and given a coating of hot paraffin.

cised in doing this so that you will not burn the lead covering.

"We are now ready to install the antenna, which will require a hole 6 or 7 inches in diameter, or just large enough to admit the can. This hole should not be less than 5 feet deep and preferably 6 feet.

"The hole finished, lower the "canned" antenna clear to the bottom and pour thin mud over it, being careful to hold the can down with a stick while so doing in order to keep it from floating. Gradually fill the hole with dirt, keeping it more or less watery. One foot from the top, the process of watering may cease, and the remainder of the hole can be filled with dry dirt and thoroughly tamped.

"The exposed end of the copper wire in the lead-covered cable is to be attached to the antenna post of your receiver, while the ground post of the receiver is to remain attached to the ground you are now using. If your receiver is grounded and shielded, you should solder the sheath of the cable to such shielding. If not shielded and you care to go to the trouble of doing so, you may expect added selectivity as a reward for your efforts."



super-heterodynes and two stage radio frequency receivers. While ordinary loop aerial reception was also tried, the reception results with the underground system were considerably more uniform and static was reduced markedly. When using the loop a number of bloopers were ever present but with the underground aerial, but one or two of these tormenters were able to plow through. These were located so close I was compelled to admit they were neighbors.

"A defective electric lighting transformer was barely audible when receiving underground. With the loop and under the same conditions the noise from this transformer would drown out WBAP, Fort Worth, and WFAA, Dallas, Texas, 100 miles away. This interference was so pronounced on the loop that with loud speaker reproduction nothing but a roar could be heard. The receiver I am using is a seven tube Super-Autodyne. The loop employed when comparisons were being made is of the box type, 18 inches wide and 84 inches high. On stations farther than 200 miles away, the volume received favors the underground system. Under this distance, there is little choice so far as volume is concerned when using either the loop or underground systems. I believe the two stations mentioned, WFAA and WBAP, actually come in stronger when using the loop.

Underground System Beats Loop for DX

"On stations 500 miles or more distant, the use of the underground system brings in a very noticeable increase in volume over that obtained with the loop. In fact, it is observed that it is readily possible to bring in distant stations on the underground system which cannot be picked up at all when using the loop.

"The writer has not tried for extreme DX, all reception being secured upon a large concert type diaphragm loud speaker which lacks in great sensitivity. However, such stations as KDKA, WGR, WWJ, WSB, WSAI, WBZ, KFMX, CFCN, WMBF, KGO and KFI are received here, in Ardmore, Okla., with real volume, if one is to believe his neighbors in the adjoining block and compare with their stories. It is to be noted that the list of stations which I am able to receive, with the exception of the last few, are, as the Hired Hand at WBAP would say, 'Quite a fur piece from here.'

"For the benefit of those who desire to construct an underground system such as I am using, the writer will attempt to outline the procedure. The dimensions may be varied. This may be desirable possibly for the particular make of receiver you are using, although in general the specifications given will apply to a great many receiver makes.

"The underground antenna specified contains 132 feet of ¼-inch flat copper ribbon. If this is not to be

Directions for Winding Cylinder

"We are now ready for the winding which is done with ¼-inch copper ribbon or braided tape. Insulate the starting end of this ribbon for about 3 inches, wrapping with electricians' tape, and insert this insulated end in the outlet just drilled so that about ½ inch protrudes from the center hole in the sealing head. Fill the hole with hot paraffin and allow it to harden. You may now begin the winding, which should be spaced 1/16 inch between turns, and continue until the whole 132 feet have been wound upon the form. The finishing end may be brought through the tube head at the reverse end from the beginning and sealed off with paraffin or sealing wax, or fastened in any convenient way as no connection is made to it. The winding finished, dip the whole in a bath of hot paraffin and then allow to cool. Follow this procedure by wrapping on two layers of insulating paper, which may be any high-grade glazed paper, over the wound form and again dip in the hot paraffin bath and allow to cool.

"We are now ready to construct the housing or can for the underground antenna. This will require a sheet of either copper or tin 20 by 28 inches in size, providing the size cylinder specified was used. This sheet should be formed into a cylinder by a tinsmith. Do not solder the seam, but first insert the wound form. Once this is accomplished the seam may now be drawn together tightly over the wound form and securely soldered water tight. This forms a continuous cylinder which should be sealed at the ends by covering with copper or tin discs which are also to be soldered to the enclosing can. Before doing this, however, one of the metal heads (marked 2 in the illustration) should have a 1½-inch center hole made in it for the lead to be taken out. The completed can will now appear with only one center of the winding form visible and its associated ribbon terminal drawn through.

Bringing Out the Lead-In

"To the exposed terminal of the ribbon solder a two-foot length of stranded ignition cable and tape the joint. Covering this cable and soldered to a center hole covering disc of tin should be a two-inch length of metal tubing. When in place this tube and disc are soldered to the end covering disc so as to be water tight and the tube should be filled with sealing wax or hot paraffin. To the exposed end of the cable is then soldered your lead-in which should consist of either number 12 or 14 solid copper insulated lead-covered wire. The connection so made must be well taped with electricians' tape and likewise dipped in hot paraffin. The sheath of the lead cable is to also be soldered with a length of wire to the metal can, but you are warned that considerable care must be exer-

As at first, one may not secure the results anticipated as it takes some time for the total condenser effect to function. There will be many successes and no doubt an equal number of failures. An underground antenna that will work wonderfully in one locality, very often refuses to function well elsewhere.

Mr. Whitchurch's article was not quite clear in some of its statements. However, the specifications in general are quite complete and we are of the opinion that this gentleman would be pleased to correspond with those who would care to write him.

(Another very successful type of underground, static reducing antenna, which has the obvious merit of being simple to make, will be described by Mr. Gurney in the mid-June issue of Radio Digest, out June 14.—Editor's Note.)

IT'S TIME FOR SPRING CLEANING

(Continued from page 9)

C batteries are made only in the dry cell type and range in voltage value from 1½ to 22½ volts. They generally are inserted in the grid circuits of audio frequency amplifiers, although they are also employed in the radio frequency amplifiers of some circuits. Their purpose is to place a negative charge upon the grid of the tube, thereby forcing it to operate with more clarity. In addition, such a negative charge materially reduces the current flow from the B battery, thus lengthening its life. Very often this current reduction amounts to one half of that normally taken by the receiver, hence it is obvious that C batteries should always be used for economy's sake without regard to the improved quality. C batteries have "shelf" life, or from six to nine months.

When testing a wet or storage A battery, the use of a hydrometer is to be preferred. With your storage A battery instruction sheet or with the hydrometer will come a list of hydrometer readings to guide you in the proper charging periods of the battery. In general, however, a wet A battery is fully charged when its hydrometer reading is 1280 to 1300, and it will require recharging when the specific gravity or hydrometer reading has dropped to 1250, the danger line usually being 1225. These values may differ slightly from various instruction pamphlets but in general may be relied upon.

Another test of the state of a storage A battery is to use a voltmeter. When using such a device, do not make the mistake of turning the tube... taking your reading. Your... actual condition of your... when the tubes are turn

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No. 6

For Radio Skeptics

YOU who have friends that still remain skeptical as to the arrival of Radio as an institution, read to them this editorial. Let them be not afraid of investing in a good Radio installation. The day of Radio is here and will stay for many years to come.

Dr. J. H. Dellinger, chief of the Radio section of the United States bureau of standards, Uncle Sam's final authority on Radio, has very recently stated that Radio is now definitely established as a practical, dependable, permanent utility for everyday use.

Dr. Dellinger believes that the newest and most recently designed sets on the market cannot be improved to any considerable extent so far as service is concerned. He thinks future improvements in broadcasting will be in the transmitting rather than receiving end.

The day of rapid changes in Radio models, Dr. Dellinger says, has passed. Following the period of experimental development, during which the market was flooded with scores of "sets" of all degrees of receptivity, the industry has now settled down to the production of a relatively few standard, high class sets, expertly designed and substantially built, which may be expected to give as good results five, ten or fifteen years from now as they do when new.

"There is no longer any more reason for waiting to buy a good Radio set," says Dr. Dellinger, "than there is in waiting to buy a good piano. While there doubtless will be occasional refinements in receiving equipment, these are not likely to affect appreciably the comparative value of the standard sets of today. Tubes, of course, will lose their efficiency after from 1,000 to 2,000 hours of use, but most of these can be reactivated at small cost. The set as a whole, however, will retain its efficiency and value indefinitely."

Tell your doubting friends what they are missing. Tell them what this high authority has said. An investment in good receiving equipment is lasting, profitable and may not be classed as a luxury.

Playful, Joking Stage Hands

NOW the stage hands are gunning for the broadcasters. In Omaha, we learn, the stage hands' local union has been eyeing WOA-W and other stations jealously, and wondering if there isn't some excuse by which the broadcasters can be forced to employ one or more invisible scenery shifters.

We do not laugh at this suggestion because it is a move of organized labor. We honestly believe in organized labor's collective bargaining system where it is of benefit to the welfare of the public. But we laugh at this one originated by the Omaha stage hands because it is so utterly ridiculous from every viewpoint.

The stage hands would find a job where there is no work to do. Perhaps they would go so far as to coerce stations and force them each to employ a high-priced union stage hand to sit around and twiddle his thumbs. Mr. H. H. Bushey, business manager of the Omaha local, who started the movement, evidently suspects the broadcasters of having various concealed "sets" and "drops."

Broadening Religious Beliefs

RADIO and economics together are working one of the greatest changes in the worship of the Deity in the United States that this country has ever known. The broadcasting of religious services, be they denominational or non-denominational, is showing its effect on the various creeds. People are beginning to realize that, after all, every religion is working toward the same general end.

Since the advent of Radio, church memberships have increased in this country far beyond their normal growth.

Radio can be thanked for this broadening of public thought, this widening of the belief of religious minded people. Perhaps the very expanse, the wide reaches

WBSB, New York, covered by this new medium of microphone Watchtower speaker help the minds of the listeners through the air. The Philadelphia voice of the many ways of the Tea Gr

RADIO INDI-GEST

Indi-Gest Poets

The Indi-Gest Poets come and go,
Some give up when ideas come slow;
They sail like a meteor 'cross the sky,
A flash for a minute, then fade and die.

Rhea did well in verses light,
'Till she sponsored one entitled "Night,"
That strain was too much,—the next she cast
Was in primer style, and that was her last.

The Trombone man sarcastic gets,
I judge by his stuff he is one of the Wets.
They say that he lives beside the lake
So should have no trouble his thirst to slake.

This writer has taken a few months' rest,
But is in again as a "Colyum Pest,"
At the start, perhaps, a little bit lame,
But able to play to the end of the game.

GEORGE

George, Indi-Gest's roaming bard, who has the world's largest portable set, is back with us. Greetings! His receiver is in a commissary box car which travels all around the country and is now anchored temporarily at Red Cloud, Nebr. He has just sent in a bunch of lilted rhyme, and Indi is glad to promise you one of George's best, "Railroad Radio," next issue.

To Old King Tutt

My dear Majesty: I wish to express my approval of your poetic protest against the feminizing of Radio Digest. Women are all right in their place. For instance, the hot mamas on the front page and the Hey Hey girls on the Advance Program pages are all right I say. But when the sweet, young things write about the lavender eyes of Oswald Maraschino and the lavender whiskers of Gerald Fromage, it is time that the honest voice of yeomanry be lifted in protest. Whither are we drifting?

In this connection I will say that this "Betty" jane may be on the level. However, I strongly suspect that the "Marcella" kid is the bunk. I don't think she is a she. By this I mean that one of the lads in the office, is grinding this stuff out and kidding the general public. Maybe the bird smokes an ancient corn cob pipe and gleefully rings a bull's eye in the goboon while he pens such gems as "effervescing youth and ambition," "I have did my darndest," "both wear neckties and shoes." I have written to the management but received nothing definite in reply. Maybe "Indi" himself writes this bunk while in a girlish mood.

Again expressing my approval for your manly stand, I am, very truly yours,

THE THIRD TROMBONE PLAYER

HIM!

Who fills my den with awful noise,
Destroying peace and equipoise,
Wrecking nerves and avoirdupois?
The blooper.

Who, playing pinwheels with his dials,
Uncorks each night the seething vials
Of my wrath—though he be distant miles?
The blooper.

Who inspires in once gentle breast
Base impulse of homicide to rest,
Till it seems no crime to kill the pest?
The blooper.

J. E. R.

Intermission Idiosyncrasies

A. C. S. Announcing

"At 9:45 Willie Westfall, the child wonder of New York and New Orleans will render a violin solo, 'Wishes and Wisteria.' One audience called it hisses and hysteria. Willie, we would like to state, has played before many of the crowned heads of Europe, and a few that ought to be crowned—with a two dollar catsup bottle or a stocking full of T.N.T. However, you may enjoy this solo number immensely. We'll be satisfied if you are."

ARTHUR C. STOWELL

Dr. B. G. Clausen, broadcasting his evening church services over WGY recently, surprised his congregation by bursting into song right in the middle of his sermon. His solo consisted of a negro spiritual. Whereupon, we assume, a number of sleeping masculine pewholders and Radio fans were awakened, thinking they had tuned in on WEAP, the Fort Worth Star-Telegram in action.

Static Cure in Six Operations

Dear Indi: I have a static eliminator hook-up well worth your consideration. It is as follows:

(1) Dig up aerial. (2) Climb up on the house and take down the ground. (3) Remove all batteries, placing them in a strong cardboard box made of wood. (4) Disconnect loud speaker horn from unit. Place in a prone position standing up straight in the box. (5) Pack all tubes in the family flivver's tool box, so that they won't get broken. (6) Place a can under the grids to catch all the leaks. (7) Place the set in the box in an oblong position flat on its back, pack in sawdust, and place box in dark attic until next fall.

Results: This is the best method I have ever tried. It eliminates practically all static.

M. G.

FRANQUE'S FILOSOFEE

Every tube has a silvered lining.

INDI

Oh Say Not So!



Condensed

BY DIELECTRIC

The transition has been made from winter schedules to those better suited to warm evenings; where listeners suffer some discomfort if they choose to tune in broadcasting stations on their circuit. No longer do we have the "all classical" programs, though many studios continue to feature classical numbers, instead music of a lighter vein comes into the loud speaker. Continuity programs have lost none of their attraction to the great majority of Radio auditors and we may expect them to continue unabated throughout the season of heat and static. Fortunately, this type of entertainment is provided by local broadcasters in their own studios, or rebroadcast from some metropolitan station.

It is intended to review here the closing concerts featuring works by old masters and presented by well-known artists of this country and Europe. Beginning with that Atwater Kent concert in which Mme. Frances Alda made her Radio debut, there is an inclination to dwell not only on her versatility but Strad quality of tone—bright and silvery. Her choice of songs showed intuitive discernment of the cosmopolitan tastes of the hundreds of thousands listening and a courteous acknowledgment of their right of appeasement. Personally, the violin playing of Mr. Corliagni was received with enthusiasm, as he possesses charm of style, musicianship and a tone quality rich and pure.

While the Schola Cantorum was known outside its immediate home territory before that eventful night when a chain of broadcasting stations introduced it to countless others, still it never could have merited warmer praise than on that occasion. The tonal sweep of the trained body of voices through selections of impressive grandeur, into songs of vivacity and changing mood, attacking contrapuntal fugue-like compositions with perfect rhythmic balance, these were some of the accomplishments which made friends far and wide over the country—and deservedly. No particular distinction should be made between the excellence of one choir and any other, for each helped form the whole.

When at last the final gala concert of the winter series of concerts sponsored by Mr. Kent had come to its close, all those who had followed from Sunday evening to Sunday evening the appearance of one after another of the foremost artists of the world, a feeling of real gratitude was felt toward the man responsible for it. Allan McQuhae's fresh Irish tenor, Maria Kurenko's unapproachable coloratura singing, Albert Spaulding's seasoned art as a violinist, Josef Hofmann's virile masterly pianism; there indeed was a musical feast seldom offered to any paid audience—yet presented gratis to all who might listen.

Rodman Wanamaker is the possessor of a collection of old violins of great value—both intrinsic and commercial—which he graciously permitted members of the New York Philharmonic orchestra to play in the studio of Station WJZ, New York. Fiddles are heard everywhere and quickly discernible to the persons acquainted with the masterpieces of Italy, France and Germany, and a great many more folks now know what music can come from one of these instruments. The cello (noted among collectors of rare old instruments) made one fairly weep as its gorgeous wealth of tonal beauty came through the speaker into the quiet homes of a myriad of listeners. Radio displays these, without fear of damage to their priceless varnished surfaces, before an audience too large to handle otherwise.

A. T. & T. DIVORCES ITSELF FROM WEAF

INTERESTING NEWS BRIEFS AND BROADCASTING BITS

C. B. Locke Leaves WBAP—No Radio Forecasts Yet—"Subpoena" Wendell Hall—Hamm on Air

The broadcasting activities heretofore carried on by the broadcasting department of the American Telephone and Telegraph company, under general designation of WEAF, have just been incorporated under the name "Broadcasting Company of America." Inasmuch as broadcasting service is apart from telephone service in its special problems involved, the separate corporation was deemed advisable. The new company, of course, is owned entirely by the A. T. and T.

C. B. Locke, popular WBAP announcer and Radio editor of the Fort Worth Star-Telegram, has resigned to go into Radio sales work. Roland Perry, a member of the Star-Telegram editorial staff, has been promoted to the positions vacated by Mr. Locke.

A nation which enjoys good music will never turn bolshevik and singing workmen will do better work and lead happier lives, says Powel Crosley, Jr., owner of Station WLW and the Crosley Radio corporation at Cincinnati. This Radio industry leader declares that the musical efforts of the broadcasters are working for the more peaceful spirit of the nation and the greater enjoyment and contentment of its citizens.

At the present time the weather bureau of the department of agriculture will not attempt to make "Radio Forecasts," a service it is often called upon to give. People want to know in advance whether or not the listening will be good or bad on certain evenings, and what parts of the country can be heard best. But at this time, the weather bureau says, the reliability of such forecasts would be very questionable.

Speaking of Radio, Dr. Herbert A. Fricker, Canadian critic and noted choir leader, has made the statement, "The new science is bringing music into her own as perhaps the most valuable of all the arts to humanity at large." The strained nerves of the present generation need a soothing influence, the noted critic remarks, and this is now within reach of even the most humble of our citizens.

Wendell Hall and his wife, when they made their appearance in Fort Worth, Texas, were immediately served with a subpoena by the grand jury, demanding that they stay in Fort Worth. Inasmuch as the Star-Telegram station, WBAP, wanted the "Red-Headed Music Maker" on hand at all times, and WFAA, at Dallas, was close by, WBAP officials decided that the safest way to keep him in Fort Worth was to subpoena him. The grand jury obliging, the plot was carried out, and WBAP listeners benefited to the discomfiture of the touring ukulele songster and his charming wife.

Dedication services of the new East Lansing Peoples' church, erected recently at East Lansing, Mich., and costing \$350,000, were broadcast by Station WKAR, the Michigan State college broadcaster. Four denominations, Baptist, Methodist, Congregational and Presbyterian, took part in the dedication services.

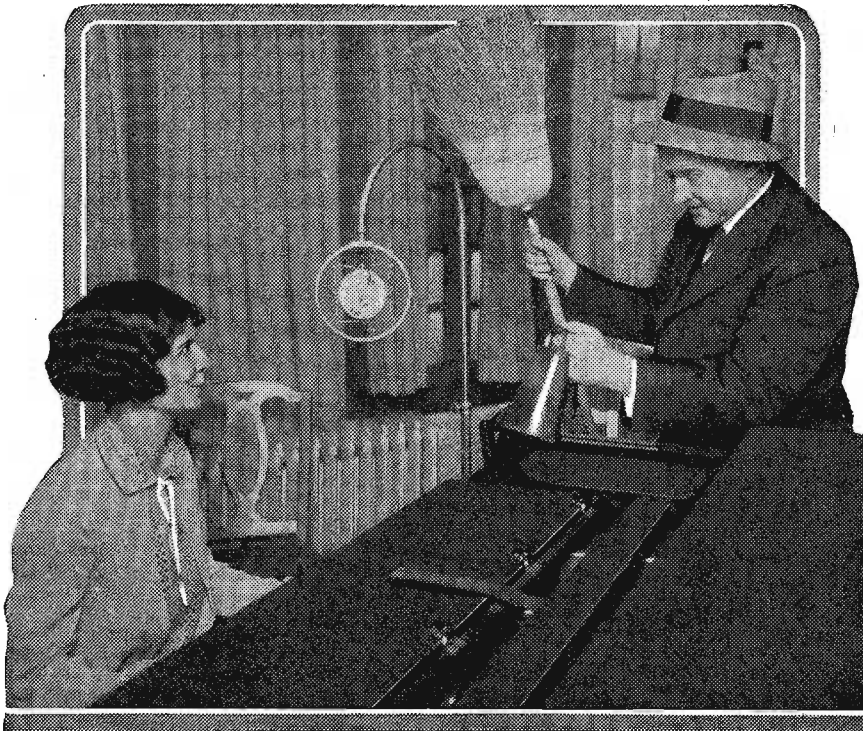
Fred Hamm and his orchestra are back on the air. The original "Bosses' Own" music makers whose litling refrains have been heard during the past two years by millions of listeners from the popular Elgin stations, WTAS and WCEE, recently began an indefinite engagement at the "Purple Grackle" Spanish restaurant two miles East of Elgin, and are being broadcast by WGN and WLIB nightly.

A hook-up of twenty-six of the largest broadcasting stations carried the principal addresses and proceedings of the forty-ninth annual convention of the National Electric Light association which was held in Atlantic City recently.

Prizes announced by Warner Brothers to handom for the best logs submitted covering the two-way conversations on 40-meter waves between 6KY, Hollywood, Calif., and 6XBR, portable broadcaster now on tour of the Pacific northwest and intermountain states, have been increased to a total of \$1,200. The time of the exchange of messages is also changed to 9:30 p. m. Pacific time, or 11:30 Central standard time. The first prize is \$500 in cash. 6XBR will circle the world in its tour.

Americas' first avowed school of instrumental syncope has been opened in

HIRED HAND-SUNFLOWER GIRL DUET



Here they are—both of them—the Sunflower Girl and the Hired Hand. The picture was taken in the studio of WLS, Chicago, where this famous pair from WBAP, the Fort Worth Star-Telegram, had occasion recently to visit. "Just finished sweepin' out the microphone and thought I'd do a little announcin'," draws the Hired Hand, laying down his broom and picking up homes all the way to Texas and the Southwest. The Hired Hand is known to the income tax collector as Harold Hough. He admits he is about 32 years old, his eyes are "sorta" gray, and he has a voice and a way that girls wake up in the middle of the night to remember. His piano playing, crooning team mate is equally famous.

New York city by Ben Bernie, famous WEAF orchestra leader. All kinds of jazz instruments are taught in courses of instruction modeled after the accepted plans used by the standard schools of classical music.

When the 1926 National Balloon races were started recently from Hot Springs, Ark., every one of the ten starting balloons was equipped with a Radio receiving set. This is the first time in history that all have been so equipped. The reason for the popularity of the receivers may be attributed to the success of Pilot Van Orman of the Goodyear IV, who for the past three years has won the races. Station KTHS, New Arlington hotel here, broadcast every detail of the races and gave the pilots periodic weather reports.

A mystery broadcaster whose owners are cursed with a misplaced sense of humor has frightened Los Angeles, Calif., listeners several times recently with fraudulent warnings. Once the news was broadcast that a hurricane was sweeping down the San Fernando valley and threatening Los Angeles. Again, a fictitious warning was given that the big Hollywood dam in the hills was about to burst and flood the northern half of the city. Considerable work was necessary to restore the peace of mind of citizens. Inspectors are searching for the offender.

NEW UX-171 RADIOTRON POWER TUBE APPEARS

Is Designed for Use in Last Audio Frequency Stage

NEW YORK.—In order to provide still greater power from the storage battery receiver, yet without the need for alternating current supply, there is now introduced the new UX-171 Radiotron. This tube, although no larger than the UX-112 type, is capable of supplying an amazingly large volume of undistorted output to the loud speaker; and as is the case with other types of power tubes, it is intended for use only in the last stage of an audio frequency amplifier.

The new UX-171 tube may be operated from a six volt storage battery through a five or six ohm rheostat or if preferred, it may be operated from a five volt source of alternating current. The maximum plate potential of this new tube is 180 volts. The negative grid bias or C battery should be 40.5 volts for the full 180-volt plate potential. The filament current is .5 ampere.

Duke Moves Radio Set First

LONDON.—When the Duke of York, the Prince of Wales' younger brother, moved house here recently, the first thing to be unloaded at his new home from the removal truck was a Radio receiver with square frame aerial.

Radio Club Notes

Station CKY of the Manitoba telephone system has inaugurated a systematic study of receiving conditions throughout the Province of Manitoba. Trained observers in the company's employ have been appointed at strategic points in the province and they are reporting daily on receiving conditions, noting in particular such interference as may exist and its probable cause. These reports are telephoned each morning to CKY, where a summary is made and broadcast at noon. It is hoped that much of value will be learned regarding Radio phenomena as a result of this survey. As CKY is the first station in Canada to undertake a work of this kind, their summaries should be of marked and valued interest.

Radio clubs will be interested in the following tabulation of types of interference encountered by 148 persons to whom questionnaires were mailed.

Induction noises, 58; radiating receivers, 50; spark interference, 17; satisfactory reception, 23.

From the above figures it is apparent that our old enemy the "Blooper," is not to be blamed for everything. Induction noises run a close race, well out in front, while spark trouble comes in for a share of the blame. But why have nearly fifty per cent of the trouble arising from bloopers? Be a good fellow and show your blooming friend how to tune his "getter," as one fan terms his Radio.

City Attorney A. H. McMillan, of Bay City, Mich., recently submitted to his city commission the draft of an ordinance to regulate the operation of Radio receivers and to prevent unnecessary interference. The ordinance provides, among other features, the licensing of all receivers. A two dollar license fee is suggested. We await with interest the final disposition of this draft, as it is somewhat doubtful whether such an ordinance could be enforced.

MANUFACTURERS MEET

(Continued from page 3)

under the direction of President Frost, new officers were elected for 1926-27 as follows:

President, A. T. Haugh, King Mfg. Co.; secretary, L. G. Baldwin, Willard Battery Mfg. Co.; treasurer, P. C. Lenz, Runzell-Lenz Co.; directors-at-large, Carl Boyd, Reichmann Co., Powel Crosley, Jr., Crosley Radio Corp., Vernon Collemore, Atwater Kent Mfg. Co., E. F. McDonald, Jr., Zenith Radio Corp.; directors of eastern division, H. H. Eby, H. H. Eby Mfg. Co., C. C. Colby, Samson Elec. Co., E. M. Squarely, U. S. Tool Co., Godfrey Gort, L. S. Brach Mfg. Co., S. B. Trainor, Amplion Corp. of Am., E. H. Price, Amsco Products Co., H. H. Frost, E. T. Cunningham, Inc.; directors of western division, Leonard Parker, Stewart-Warner Co., Towner K. Webster, Ekko Co.,

LABOR BODY DEFIES U.S. AND NABS WAVE

INSISTS ON HAVING BROADCASTER REGARDLESS

Chicago Federation Threatens Opening Up on 491.5 Meters Now Used by WEAF and KGW

CHICAGO.—Before this is read, the Chicago Federation of Labor has threatened to have its broadcasting station in operation here, on the same wave length as WEAF, namely 491.5 meters.

The Chicago labor body has been attempting for some time to secure a wave length, but has been refused by the commerce department whose officials say there are already too many stations in Chicago, and besides they haven't any wave lengths.

But that has only put the fight into E. N. Nockels, secretary of the Chicago Federation, who says, "We will be within the law, because the law requires the department of commerce to issue a license to any completed station that makes application.

Won't Let A. T. and T. Monopolize
"Dragging through the courts would take too long. The wave length of WEAF is not used west of New York, and we do not feel that the American Telephone and Telephone company should be permitted to monopolize the air."

Here Mr. Nockels erred, for KGW, Portland, Ore., uses the same wave as WEAF. Regardless of the error, however, fans and other broadcasters are interestingly awaiting the fireworks which are bound to occur if WCFD, the labor station's call, opens as scheduled on WEAF's wave. The station is located on the end of the Chicago municipal pier.

Real Wedding to Go on Air June 1 from WHT

USL Honeymoon Winners to Be Married in Studio

CHICAGO.—As often as Al Carney has played the wedding march on the studio organ at WHT, he has never played it for an actual wedding ceremony. So it will be for the first time that he will play it when Charles E. Riddle and Irma O. Schertz are married in the studio on the night of June 1 by the brother of the groom, the Rev. E. M. Riddle.

The studio will be turned into a chapel. Floral decorations will cover the walls and adorn the organ manual at the east end of the studio which will serve as an altar. A choral program consisting of appropriate anthems will be arranged for the occasion.

After the ceremony the couple will be taken to Niagara Falls as guests of the United States Light and Heat corporation. It was this company that offered a week's entertainment in the "honeymooners' paradise" for the best suggestion for a USL program to be put on the air by WHT. The contest ended March 1. Mr. Riddle and Miss Schertz won with their suggestion, which will soon appear on the WHT program.

"La Presse" Records Listeners' Favorites

Enterprising Phonograph Company Then Sells to Fans

MONTREAL, Que.—An entirely novel way of bringing Radio entertainers into more personal contact with listeners has been inaugurated recently by CKAC, La Presse station, here.

Whenever a popular entertainer faces the microphone and renders a special number which has been requested by over 500 fans, arrangements are made with a local phonograph record manufacturer and one or two of these numbers are registered via CKAC through the registering laboratories of the local firm.

The first of these to be most successfully recorded and put on sale the following day were the "Palms" and "Hosanna" as played by Norton H. "Buddy" Payne, popular organist of the Canadian Famous Players Capitol theater in Montreal.

The numbers were played during one of his bi-monthly Thursday night organ recitals. In less than four days over 3,000 of the records were sold in and around Montreal.

J. A. Bennan, Jefferson Elec. Mfg. Co., W. W. Dowdell, Sterling Mfg. Co., Harry Bradley, Allen-Bradley Mfg. Co., Jess Hawley, Newcomb-Hawley Co., Harry Simpson, Maring Wire Co., D. MacGregor, All-American Radio Corp.

The first named director in each of the three groups was... third vice-pres

AN EVENING AT HOME WITH THE LISTENER IN IN CENTRAL TIME

Table with columns: Call, Location, Met., Saturday, Sunday, Monday, Tuesday, Wednesday, Thursday, Friday. Lists various radio stations and their broadcast schedules.

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STATIONS IN ORDER OF WAVE LENGTHS

Table with columns: Meters, Call, Meters, Call, Meters, Call, Meters, Call, Meters, Call, Meters, Call. Lists stations ordered by wavelength.

SERVICE IS KOAC'S AIM

(Continued from page 4) band, Madrigal club and orchestra. Sports are broadcast from the field of action by W. L. Kaddery, official program director and announcer.

"It must be very cold in Quebec," I remarked glancing at her furs.

"Sometimes cold, yes. But Monsieur Cartier say you people have entirely wrong notion. We have very wonderful councree in Quebec. We do not have what you call 'iceclaze' on the end of our noses, no, nevaire. Come and see something for yourself!"

RADIO IN MIKADO LAND

(Continued from page 5) J. Moskovita, 1121 S. Meyler street, San Pedro, California, often listens to the Japanese broadcasting and sends us a typical program from JOBK, which was sent to him from Osaka in confirmation of a report he sent to Japan.

She told of the wonderful concerts by the Capitol Theater Symphony orchestra, of Raoul Duquette and his Windsor Hotel Concert orchestra, of the great opera singers, of the splendid assistance given to Cartier by other members of the staff, Arthur Dupont, Adrien Arcand, Leonard Spencer and A. Lebeau.

"An' so many, many letters from all over the United States as well as Canada," she said, drawing on her gloves. "We even have one from the White House in Washington."

MLLE. DESCRIBES CKAC

(Continued from page 6) hear over Radio and that CKAC gives a prize to the best band. All the people all over Quebec ver' happy 'bout the bands and that started making Radio populaire.

Suddenly she was standing. She put a picture of a band on my desk without telling me what band it was. She had picked up the various other pictures, telling me about each individual.

"Now I must go," she said, "I doan know what you say but please give us a nice story. Mr. Cartier he work ver' hard an' we have such a wonderful station we wan' everybody to listen' who has nevair heard it."

I saw Dave standing at the door, as she flitted by—and, I think she smiled a little at him. His color seemed to take on a rosy hue. And the story? Well, there isn't any story, except just to tell the things she said as nearly as I can remember how she said it. And Dave? Say he's been tuning in CKAC every night that he could get them. Yesterday he told me he thought he recognized her voice and she was singing French but he doesn't understand French. He's planning to go up that way for his vacation this summer.

2LO Star to Movies

LONDON, England.—John Henry, 2LO's leading humorist, has become a movie star. The adventures he so drolly describes before the mike are now being put on the screen by Gaumonts.

Friday, June 11

8:30-9, musical program; 9-9:30, WEAF; 9:30-10, Phantom violin; 10-10:10, Sam 'n' Henry; 10:10-11, musical program, ensemble. WGY, Schenectady, N. Y. (370.5m-790ke), 6:35 p. m., variety orchestra; 7-7:15, comedy, "Tangles," WGY players; 8:30, Oneonta night. WHT, Chicago, Ill. (399.8m-750ke), 7 p. m., Al Carney, Grayling's ensemble; 10-11 (238m-1260ke), Cinderella cafe orchestra; 10-30 (399.8m-750ke), Sunbeam Girls; 11:05, Loftis half-hour presentation; 12 midnight, your hour league. WIBC, Chicago, Ill. (225.4m-1330ke), 6-8 p. m., dinner program, string trio; Charlotte Edwards, contralto; 10-12, popular program; Ted Fiorito, pianist; Dan Russo, violinist; songs, monologues; Tony Corcoran; Hickey and Johnson. WJAZ, Chicago, Ill. (329.5m-910ke), 9-12 midnight, Earl Hoffman's Chez Pierre orchestra; the quips that pass in the night; Walter Lewis, baritone; Betty Cain, violinist; Eulalie Kober, pianist. WJR, Pontiac, Mich. (516.9m-580ke), 7 p. m., Petite symphony orchestra; 7:30, Arctic Specials; 9, Mukley Celebrities; 9:30, Casper Lingsman symphony. WLBB, Chicago, Ill. (302.8m-990ke), 7-9:15 p. m., Old-Fashioned Almanack; 11-11:20, Correll and Gosden; 11:20-1 a. m., Liberty studio ensemble; Ambrose Larsen, organist; Tommy Thatcher's Drake hotel dance orchestra; Purple Grackle orchestra. WLS, Chicago, Ill. (344.6m-870ke), 8:30 p. m., Elsie May Look, organist; 7:15, orchestra; 7:30, Ralph Emerson, organist; 8, popular music; 8:30, Grace Wilson, contralto; 11-12 midnight, Ralph Emerson, organist. WMAQ, Chicago, Ill. (447.5m-670ke), 6 p. m., Chicago theater organ; 6:20, Family Art league; 6:30, Wide-Awake club program; 8, musical program; 8:30, Whitney trio; 9:20, musical program, chimes. WMBB, Chicago, Ill. (249.9m-1200ke), 7-8 p. m., Trianon duo, male trio, Vella Cook, contralto; Frank Bourder, baritone; Norman Hart, old-time songs program; 9-11, Trianon orchestra; Joe Warner, character songs; Krueger and Dillon, banjo barons; male trio. WOK, Chicago, Ill. (217.3m-1380ke), 4:30-7 p. m., Capitol theater organ; studio program; Tip-Top Inn string ensemble concert; 10-13:30 a. m., Tearney's Town club orchestra; Midway Garden orchestra; Capitol theater program. WOOD, Grand Rapids, Mich. (241.8m-1240ke), 9-9:15 p. m., "Schumann"; 9:15-11, classical concert. WOL, Chicago, Ill. (447.5m-670ke), 7-8 p. m., Rainbow Gardens orchestra; R. G. Ball, baritone; Chrystal Eaton Taylor, soprano; Chester Newman; 10-2 a. m., orchestra; Muriel Olson, contralto; Johnny Poat, baritone; Romeo Vincent. WRVA, Richmond, Va. (256.3m-1170ke), 7 p. m., Hotel Richmond orchestra; 8, violin and piano recital; 8:45, mixed quartet, violin and pianist; 10, Hotel Richmond Roof Garden orchestra; 11, Carry Me Back to Old Virginia. WSW, Chicago, Ill. (275.8m-1090ke), 6 p. m., Madeline McGraw, ballads; 8, Terrace Gardens; John Clark, baritone; 10, Terrace Gardens. WTAM, Cleveland, Ohio (389.4m-770ke), 6:15 p. m., Hotel Cleveland orchestra; 8, studio program; 9, WEAF; 9:30, studio program. WTIC, Hartford, Conn. (475.9m-630ke), 7:15 p. m., Naugatuck community program; 9:30, popular songs, Arline Palmadge; 9:45, WTIC mail bag; 10, Emil Heimberger's dance orchestra. WWJ, Detroit, Mich. (352.7m-850ke), 6 p. m., dinner concert; 8, News orchestra; 9, WEAF; 9:30, dance program.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (340.7m-880ke), 5:30-6:30 p. m., dinner concert; 8:30-10:30, Bohemian band. KFXX, Hastings, Nebr. (288.3m-1040ke), 9-11 p. m., Baptist church program. KMA, Shenandoah, Iowa (252m-1190ke), 9-11 p. m., musical program. KMOX, St. Louis, Mo. (280.2m-1070ke), 6:30 p. m., dinner time recital, Mrs. Jacque Landree, organist; 8, orchestra, light opera selections; 9, "Tony Bungay", novel; soloists; 10, Music Lovers' hour, orchestra; Helen Musick soprano; 11, Rendezvous club; A. Snyder, accordionist. KOIL, Council Bluffs, Iowa (277.6m-1080ke), 6:03 p. m., Ukulele Rag-Pickers; 6:30, Randall's Royal orchestra; 7:30, Walter Jenkins, baritone; Mrs. Walter Jenkins, accompanist; Mrs. W. A. Cutler, soprano; Florence Senior Duerr, pianist; 8:30, Jack and Jill; 11, Hotsy Totsy hour. KSD, St. Louis, Mo. (545.1m-550ke), 7:30 p. m., program; 8, music. KTHS, Hot Springs National Park, Ark. (374.8m-800ke), 9:10 p. m., vocal selections, Mrs. Violet Belding; 9:25-10, Indian music, New Arlington Hotel-Meyer Davis' stringed quartet; 10-10:30, Ray Mullins orchestra. KVOO, Bristow, Okla. (374.8m-800ke), 6-9 p. m., Josephine Storey-White. KYW, Chicago, Ill. (335.4m-560ke), 6 p. m., musicale; 7-8, Federal Masters; 9:30-11, Congress carnival. WBAP, Fort Worth, Texas (475.9m-630ke), 7:30-8:30 p. m., Panther Hawaiian trio; 9:30-11, program, H. T. Croft; 11-12, musicale. WDAF, Kansas City, Mo. (365.6m-820ke), 6-7 p. m., Trianon ensemble; 8-8:30, WEAF; 8:30-9:30, varied musical program; 11:45-1 a. m., Nighthawk frolic. WFAA, Dallas, Texas (475.9m-630ke), 6:30-7:30 p. m., Orchard Hill orchestra; 8:30-9:30, Four Hoarse men. WGBF, Evansville, Ind. (236.1m-1270ke), 7 p. m., A. L. Maxwell company; 11, D-X hunting club. WHAS, Louisville, Ky. (399.8m-750ke), 7:30-9 p. m., Bittiek-Benson orchestra. WHB, Kansas City, Mo. (365.6m-820ke), 7-8 p. m., Sweeney Radio orchestra. WHO, Des Moines, Iowa (526m-570ke), 7:30-8:15 p. m., J. Worth Allen, banjo soloist and Banjo club; 8:15-9, Amelia Reinke, soprano; Rall Grigsby, tenor; C. Lee, basso; Iva Hamilton Butler, pianist; 11-12, Philbrek and his orchestra. WOAI, San Antonio, Texas (394.5m-760ke), 8:30 p. m., San Antonio College of Music program, or Walter Dunham Harmonologue. WOAW, Omaha, Nebr. (526m-570ke), 6 p. m., music review; 6:50, Jaffy and Bravoff; 9, M. C. Peters Mill company. WOC, Davenport, Iowa (483.6m-620ke), 5:45-5:55 p. m., chimes concert; 8-9, musical program; Norine Murray, soprano; Mrs. F. Rehling, soprano; John McGreevy, baritone. WSB, Atlanta, Ga. (428.3m-700ke), 8 p. m., concert; 10:45, concert. WSM, Nashville, Tenn. (282.8m-1060ke), 7 p. m., Beasley Smith's orchestra; 8:15, program; Mrs. Eva Thompson Jones, contralto; 10, Dutch Ehrhart, and his orchestra. WSOE, Milwaukee, Wis. (245.8m-1220ke), 7 p. m., dinner music; 7:45, mass singing; 9, Candygram revue.

Mountain Standard Time Stations

KOA, Denver, Colo. (322.4m-930ke), 6:30 p. m., Brown Palace string orchestra; 8, Scheuerman's Colorado orchestra; 8:15, celebration, fiftieth anniversary, Colorado's admission to the Union.

Pacific Standard Time Stations

KFI, Los Angeles, Calif. (467m-842ke), 7-8 p. m., Kanner string trio; 8-9, Aeolian organ; 9-10, Yvonne Gerard, pianist; Walter Menard, tenor and Mutual Mutual night concert; 10-11, Patrick ballad hour. KFOA, Seattle, Wash. (454.3m-660ke), 5:55-6:25 p. m., Atwater Kent boys, Doug and Fred; 6:45-8:15, program; 8:30-10, Times studio program; 11-12 midnight, KGW. KFWB, Hollywood, Calif. (252m-1190ke), 6:30-7:30 p. m., Pontiac Six dinner hour; 7:30-8, program, Panalla studios; 8-9, program, John Wright, The Right Tailor; 9-10, program, Sealy Mattress company; 10-11, Warner Brothers frolic. KGW, Portland, Ore. (491.5m-810ke), 6-7 p. m., dinner concert; 8-9, vocal and instrumental concert; 9:15-10:30, vocal and instrumental; 10:30-12 midnight, frolic, Keep Growing Wiser Order of Hoot Owls, Pan-tages stars, features. KHI, Los Angeles, Calif. (405.2m-740ke), 6:30-7:30 p. m., Uncle John and the children; 8-9, Southern California Baptist Young People's program; 9-10, popular program. KNX, Hollywood, Calif. (336.9m-890ke), 7-8 p. m., Back Egg club; 8-9, Jell-X-Coll program; 9-10, Order of Optimistic Donuts; 10-11, Hollywood American Legion girls; 11-12, Coconut Grove dance orchestra. KTAB, Oakland, Calif. (239.9m-1250ke), 8-10 p. m., studio program. KWSC, Pullman, Wash. (348.6m-860ke), 8-9:30 p. m., Della Crumacker, pianist; Chester Hoffman, saxophonist; songs, Vay Kearns; Esther Olsen, reader.

Saturday, June 12

Headliners Today Atlantic Eastern Central Mountain Pacific 6:30 p. m. 5:30 4:30 3:30 2:30 WGBS (315.6m-950ke), Vincent Sorey concert trio. 8 7 6 5 4 WSW (275.8m-1090ke), Chicago serenaders. 8:15 7:15 6:15 5:15 4:15 WLS (344.6m-870ke), National barn dance. 9 8 7 6 5 CFC (356.9m-840ke), Musical comedy selections, CFC's Summer orchestra. KSD (545.1m-550ke), Lyric Skydome. WLW (422.3m-710ke), Polyphonic music. 9:30 8:30 7:30 6:30 5:30 WHAS (399.8m-750ke), Cardinals. 10 9 8 7 6 WLW (422.3m-710ke), Polyphonic music. 10:30 9:30 8:30 7:30 6:30 WSM (319.9m-940ke), Back to the Land of Memory. 11 10 9 8 7 WRC (468.5m-640ke), Mayflower cruise. 12 m. 11 10 9 8 KFI (467m-642ke), Angelus string trio.

For stations silent tonight refer to first Saturday's list.

Atlantic or Eastern Daylight Saving Time Stations

CFC, Toronto, Canada (356.9m-840ke), 9 p. m., CFC's summer orchestra. WAH, Richmond Hill, N. Y. (315.6m-950ke), 12 midnight, Midnight variety program. WBBR, New York, N. Y. (272.6m-1100ke), 8 p. m., Fred Twarosch, tenor; Joseph Bonaccorso, violinist. WEA, New York, N. Y. (491.5m-610ke), 4-12 midnight, dinner music; musical comedy hits; Eddard Gruen, baritone; Bufalodians; Vincent Lopez and his orchestra. WEEI, Boston, Mass. (348.6m-860ke), 7:45 p. m., Lucerne-in-Maine quintet; 8:10, Pop concert. WFI, Philadelphia, Pa. (394.5m-760ke), 6:30 p. m., Bellevue Stratford concert orchestra; 7, Bellevue Stratford dance orchestra; 9, LuLu Temple Imperial band. WGBS, New York, N. Y. (315.6m-950ke), 6:30 p. m., Vincent Sorey concert trio; 7:10, Sorey concert trio; 7:15, travel talk; 7:50, Arcadia orchestra; 8:45, Clifford Chesley, "Numbology"; 10:30, Arrowhead Inn dance orchestra. WHAR, Atlantic City, N. J. (275.1m-1090ke), 8 p. m., Seaside hotel trio.

WIP, Philadelphia, Pa. (508.2m-590ke), 6:05 p. m., Benjamin Franklin hotel concert orchestra; 8:15, classical period; 9, musicale; 10:05, El Patio dance orchestra; 11:05, organ recital. WJZ, New York, N. Y. (454.3m-660ke), 7 p. m., Hotel Madison concert orchestra; 8, WRC; 11, Hotel Mayflower dance orchestra. WLT, Philadelphia, Pa. (394.5m-760ke), 7:30 p. m., Benjamin Franklin concert orchestra. WMC, New York, N. Y. (340.7m-880ke), 6 p. m., Olcott Vail and his Hotel McAlpin string ensemble; 7, Toppen's orchestra; 10, Norman Pearce, readings; 11, Ernie Golden and his Hotel McAlpin orchestra; 12 midnight, McAlpin entertainers. WOO, Philadelphia, Pa. (508.2m-590ke), 7:30 p. m., Adelphia concert orchestra. WOR, Newark, N. J. (405.2m-740ke), 6:30 p. m., Jacques Jacobs' Hotel Shelton ensemble; 7:30, Van's Collegians; 8, Orange Chamber of Commerce program; 8:45, Copenhagen quartet; 11, Larry Siry's Hotel Ambassador orchestra.

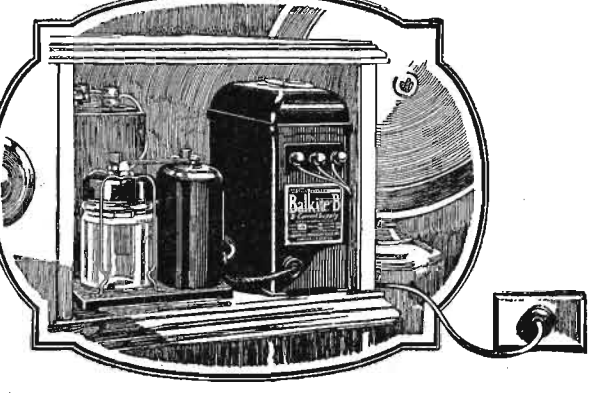
Eastern Standard or Central Daylight Saving Time Stations

WBBM, Chicago, Ill. (225.4m-1390ke), 8-10 p. m., Alemitte orchestra; Ziegler Stars; Tip trio; 10-11, dance period; 12-2 a. m., Matched Unit quartet; Ziegler Stars. WEBB, Chicago, Ill. (370.2m-810ke), 8 p. m., songs, Frank Grelf; 9:15-10, Edgewater Beach hotel orchestra; 11-12 midnight, Edgewater Beach hotel orchestra; Kay Ronayne; 1-2 a. m., frolic. WGN, Chicago, Ill. (302.8m-990ke), 6:45-7 p. m., musical program; 8-8:10, Auld Sandy; 8:10-8:30 musical program; 8:30-9:30, light opera concert; 9:30-10, old-time prize fight; 10-10:10, Sam 'n' Henry; 10:10-11, ensemble. WGY, Schenectady, N. Y. (379.5m-790ke), 6:30 p. m., dinner program, Hotel Onondaga; 9:30, dance music, Hotel Syracuse. WHT, Chicago, Ill. (399.8m-750ke), 7 p. m., Al Carney, organist; 8-8:10, Auld Sandy; Cinderella orchestra; 10:50, Jack Turner; Irene Smith; 12 midnight, your hour league. WIBO, Chicago, Ill. (225.4m-1330ke), 6-8 p. m., dinner program; string trio; Frances Scheibe, George Hancher, Evelyn Elliott, Christopher Hendra. WJAZ, Chicago, Ill. (329.5m-910ke), 9-1 a. m., popular program; Pierre's studio. WJR, Pontiac, Mich. (516.9m-580ke), 7 p. m., Strom-feltz-Loveley serenaders; 9, Jean Goldkette's Victor Recording orchestra; 11:30, Merry Old Chief. WLBB, Chicago, Ill. (302.8m-990ke), 7:15-7:30 p. m., dinner concert; 7:30-8, Drake concert ensemble, Blackstone string quintet; Pattison Coates, baritone; 11:20, Correll and Gosden; 11:20-1 a. m., Liberty studio ensemble; Ambrose Larsen, organist; Purple Grackle orchestra. WLS, Chicago, Ill. (344.6m-870ke), 7:15 p. m., national barn dance.

WLW, Cincinnati, Ohio (422.3m-710ke), 7:30 p. m., meeting, Sekretary Hawkins' Radio club; 8, Polyphonic music, Mt. St. Mary's Seminary choir; 8:45, Katz and his Kittens; 9:30, Henry Theis and his orchestra. WMAQ, Chicago, Ill. (447.5m-670ke), 6 p. m., Chicago theater organ; 6:30, Hotel La Salle orchestra; 8, Daw and Pratt; 8:30, photologue; 9, Chicago theater revue. WMBB, Chicago, Ill. (249.9m-1200ke), 7-8 p. m., Trianon ensemble; Hilda Hinrichs, cellist; Margaret Conrad, violinist; Preston Graves, pianist; Franklin Kidd, tenor; Arvid Anderson, program; 9-11, Trianon orchestra; ensemble; Andy Anderson, Trianon Syncope-tors; Jack Goodwin, Jimmie Eggert, Oxford girls, popular program. WOK, Chicago, Ill. (217.3m-1380ke), 4:30-7 p. m., Capitol theater organ; Tip-Top Inn ensemble concert; 10-11 a. m., Tearney's Town club orchestra; Carl Lorraine's Pershing Palace orchestra; Midway Garden orchestra; Capitol theater program; 1-2, Tearney's Town club orchestra; Midway Gardens orchestra. WOOD, Grand Rapids, Mich. (241.8m-1240ke), 9-10 p. m., Elizabeth Barker Van Campen hour of music; 10-11, Pervis Jeffrey, Roy Clark, Harold DeWindt, Bob and Hazel McOsker, Freddie Gleason, Thelma Dykman, Louie Cunningham, Dorothy Dykman. WSAI, Cincinnati, Ohio (325.9m-920ke), 8 p. m., chimes concert, Robert Badgley; 8:30, Bicycle Playing Card sextet; 12 midnight, popular program. WSW, Chicago, Ill. (275.8m-1090ke), 6 p. m., Chicago serenaders; 8, Gus Edwards' orchestra; Oxford Girls; Jack Ford; John Clark, ballads; Terrace Gardens orchestra. WTAM, Cleveland, Ohio (389.4m-770ke), 6 p. m., Collegian serenaders; 7:30, studio program; 8, Hollenden hotel orchestra; 9, Ev Jones and his gang. WTIC, Hartford, Conn. (475.9m-630ke), 7:30 p. m., Ideal male quartet; 8:15, string quartet; 9, Alice Townsend, soprano; 9:15, Nina Woodbury, cellist; 9:30, Carroll's Palais Royal dance orchestra.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (340.7m-880ke), 3:15-3:45 p. m., Buick Master Six orchestra; 5:30-6:30, dinner concert; 8:30-10:30, Little symphony. KLDS, Independence, Mo. (440.9m-680ke), 8 p. m., Mrs. E. N. Brinkman, soprano; George Howerton, organist; Mrs. Herbert Spokesfield, pianist; E. N. Brinkman, baritone. KMA, Shenandoah, Iowa (252m-1190ke), 9-11 p. m., musical program. KMOX, St. Louis, Mo. (280.2m-1070ke), 6:30 p. m., Mrs. Jacque Landree, organist; 8, Cotton Pickers, soloist; orchestra, light opera selections; 9, Marguerite Schmidt, pianist; 9:30, Mrs. Jacque Landree, organist, harp solos; David Bitner, violinist; 11, Rendezvous club. KOIL, Council Bluffs, Iowa (277.6m-1080ke), 6:03 p. m., "Y" Pioneer Radio club; 6:30, Virginia Fair, pianist; 7:30, Paramount program; 8, Francis Potter and his Banjo orchestra; 11, Hotsy Totsy hour.



Balkite "B" and the Balkite Trickle Charger convert your radio receiver into a light socket set

Operate your present receiver from the light socket. Then you need never again worry about recharging or replacing batteries. Nor will your set ever again be handicapped by weak power. With full even power, always exactly as required, your set will give consistently good reception to be had in no other way. No changes in your set are necessary. You need add only Balkite "B" at \$35* and the Balkite Trickle Charger at \$10.* Balkite "B" replaces "B" Batteries entirely and supplies "B" current from the light socket. The Balkite Trickle Charger, once connected to the

lighting circuit, is left on permanent charge. It keeps your "A" battery always at full power. For maximum convenience, you may also purchase from your dealer a switch that cuts out the charger and turns on Balkite "B" during operation. Both Balkite "B" and the Balkite Trickle Charger are entirely noiseless. They are permanent pieces of equipment with no bulbs or moving parts and nothing to replace or get out of order. Other than a negligible amount of household current, their first cost is the last. Add them to your set and convert it into a light socket receiver. Ask your dealer.

*Prices slightly higher west of the Rockies and in Canada

FAN STEEL

Balkite

Radio Power Units

Manufactured by FANSTEEL PRODUCTS COMPANY, Inc., North Chicago, Ill

Saturday, June 12

KPRC, Houston, Tex. (296.9m-1010ke), 7:30 p. m., Universal Bible class; 8, Frank Hilton, blind wonder boy pianist; 10:30, Harold Oxley's Warwick hotel orchestra.
KSD, St. Louis, Mo. (545.1m-550ke), 7 p. m., Lyric Skydome.
KTHS, Hot Springs National Park, Ark. (374.8m-800ke), 9:10 p. m., New Arlington hotel orchestra.

WEAF, 8:45-10, "Our Music Room—Verdi"; 10:10-10:15, Sam 'n' Henry; 10:10-11, musical program.
WGY, Schenectady, N. Y. (379.5m-790ke), 10 a. m., First Unitarian society, All Souls church; 3:30 p. m., organ recital, Elmer Tidmarsh; 7, WJZ; 8, WJZ; 9, WJZ.
WHT, Chicago, Ill. (399.8m-750ke), 12n-11:30 p. m., Paul Rader.

WFAA, Dallas, Texas (475.9m-630ke), 2:30 p. m., farmers' hour; 6-7, Radio Bible class; 7:15-8, Leland Johnson; 8-9, Schenectady City temple; 9:30-9:35, Willard B. Muse, tenor; Ruth Muse, contralto; 11-12 midnight, Shaw-Smith College club orchestra.
WHE, Kansas City, Mo. (365.6m-820ke), 9:40-10:45 a. m., Lincoln Blvd. Christian church; 11:10-12:30 p. m., Independence Blvd. Christian church; 8-9, Westport Methodist church; 11:45-1 a. m., Morrill Moore, organist; Don Anchors, poet.
WQAI, San Antonio, Texas (394.5m-760ke), 11 a. m., First Presbyterian church; 7:45 p. m., Central Christian church.

Atlantic or Eastern Daylight Saving Time Stations

CKNC, Toronto, Can. (356.9m-840ke), 9 p. m., CKNC Chamber orchestra; Mrs. Harry Houghton, soprano.
WAHG, Richmond Hill, N. Y. (315.6m-850ke), 8:30 p. m., Boy Scouts program; 8, Synchronphase hour; 9, Major Dent Atkinson; 9:15, Janet Bush-Hecht, contralto; 9:30, studio program; 10:20, Ferrucci's Radio Raiders; 11:02, Ferrucci's Radio Raiders; 12, Frank Tremmer's Orientales.
WBBR, New York, N. Y. (272.6m-1100ke), 8 p. m., Syrian music, Prof. Toufic Moubaid, Elizabeth Awad.
WEAF, New York, N. Y. (491.5m-610ke), 6-12 midnight, A. and P. Gypsies; Grand opera; Ben Bernie and his orchestra.

Mountain Standard Time Stations

KOA, Denver, Colo. (322.4m-930ke), 10:55 p. m., Trinity Methodist Episcopal church; 6:30 p. m., Little symphony orchestra; 7:40, Trinity Methodist Episcopal church.

Pacific Standard Time Stations

KFI, Los Angeles, Calif. (467m-642ke), 7-7:30 p. m., Grebe Synchronphase string ensemble; 7:30-8, Jim Jack and Jean trio; 8-9, Aeolian organ; 9-10, Mert Denman

Mountain Standard Time Stations

KOA, Denver, Colo. (322.4m-930ke), 9 p. m., Harmony Peerless orchestra.

Pacific Standard Time Stations

KFI, Los Angeles, Calif. (467m-642ke), 7-8 p. m., Al Wesson's orchestra; 8-9, Angelus string trio; 9-10, popular program; 10-11, Packard Radio club; 11-2 a. m., KFI midnight frolic.
KFOA, Seattle, Wash. (454.3m-660ke), 8:15-9:30 p. m., all-artist studio program; 9:30-11, Jackie Souder and his Club Lido Sederers.
KFWB, Hollywood, Calif. (252m-1190ke), 6:30-7:30 p. m., Pontiac Six dinner hour; 7:30-7:45, Little Ant Man; 8-9, program, Smith Investment company; 9-11, Warner Brothers frolic, Len Nash and his Country Boys.

CLASSICAL CONCERTS INDEX

Table with columns for day (Saturday, Sunday, Monday, Tuesday) and region (Atlantic, Eastern, Central, Mountain, Pacific). Lists station call letters and times.

Table with columns for day (Wednesday, Thursday, Friday) and region (Atlantic, Eastern, Central, Mountain, Pacific). Lists station call letters and times.

Sunday, June 13

Table with columns for region (Atlantic, Eastern, Central, Mountain, Pacific) and station call letters. Lists 'Headliners Today'.

For stations silent tonight refer to first Sunday's list.

Atlantic or Eastern Daylight Saving Time Stations

WBBR, New York, N. Y. (272.6m-1100ke), 10 a. m., Watchtower orchestra; Fred Twarosch, tenor; Bible lecture; 2 p. m., orchestra; Bible lecture; 9, Watchtower orchestra; Bible talk.
WCAU, Philadelphia, Pa. (277.6m-1080ke), 11 a. m., services, First Unitarian church; 5 p. m. recital; 5:15, undenominational church services; 5:45, sermon, Rev. John W. Stockwell; 6:45, Hotel Pennsylvania orchestra; 7:45, Cathay Tea Garden concert orchestra; 8:30, Bonwit Teller ensemble; 9, Lester and F. A. North hour of music; 10, Charlie Kerr and his orchestra.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (340.7m-880ke), 5:30-6:30 p. m., dinner program; 8:30-10:30, Buick Master Six orchestra.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (340.7m-880ke), 5:30-6:30 p. m., dinner program; 8:30-10:30, Buick Master Six orchestra.

Mountain Standard Time Stations

KOA, Denver, Colo. (322.4m-930ke), 8:30 p. m., Brown Palace string orchestra; 8, Flag Day exercises, Denver Lodge No. 17, Elks.

Pacific Standard Time Stations

KFI, Los Angeles, Calif. (467m-642ke), 7-8 p. m., Owen Fallon and his Californians; 8-9, popular program; 9-10, program, Walter M. Murphy Motors company, also broadcast by KPO; 10-11, program arranged by Melklohn Brothers.

Headliners Today

Table with columns for region (Atlantic, Eastern, Central, Mountain, Pacific) and station call letters. Lists 'Headliners Today'.

Eastern Standard or Central Daylight Saving Time Stations

WBAL, Baltimore, Md. (245.8m-1220ke), 7:30-8:30 p. m., twilight program, concert orchestra.
WBBM, Chicago, Ill. (225.4m-1330ke), 12:30-2 p. m., noon-hour of music; 4-6, matinee; 11:59-3 a. m., Nutty club.
WGBD, Zion, Ill. (344.6m-870ke), 9 p. m., mixed quartet; M. P. Barton, J. D. Thomas; Wiedman Sisters; Ida Peterson, soprano; L. J. Hire, violinist; Chester Bagge, trombonist.

Central Standard Time Stations

KFAB, Lincoln, Nebr. (340.7m-880ke), 4-5 p. m., vesper services; 9-11, Sunday evening musicale.

Mountain Standard Time Stations

KOA, Denver, Colo. (322.4m-930ke), 8:30 p. m., Brown Palace string orchestra; 8, Flag Day exercises, Denver Lodge No. 17, Elks.

Pacific Standard Time Stations

KFI, Los Angeles, Calif. (467m-642ke), 7-8 p. m., Owen Fallon and his Californians; 8-9, popular program; 9-10, program, Walter M. Murphy Motors company, also broadcast by KPO; 10-11, program arranged by Melklohn Brothers.
KFOA, Seattle, Wash. (454.3m-660ke), 8:45-8:15 p. m., studio program; 8:30-10, Goodrich Silvertown Cord orchestra.
KFWB, Hollywood, Calif. (252m-1190ke), 6:30-7:30 p. m., Pontiac Six dinner hour; 7:40-8:10, program, Dr. Ralph Mitchell and Associated Dentists; 8:10-9:10, program, Corduroy Tire Stores, Inc.; 9:10-10:10, program, Eureka Vacuum Cleaner company; 10:10-11, Warner Brothers frolic.

Headliners Today

Table with columns for region (Atlantic, Eastern, Central, Mountain, Pacific) and station call letters. Lists 'Headliners Today'.

Monday, June 14

Headliners Today

Table with columns for region (Atlantic, Eastern, Central, Mountain, Pacific) and station call letters. Lists 'Headliners Today'.

For stations silent tonight refer to first Sunday's list.

For stations silent tonight refer to first Monday's list.

STEWART-WARNER IS AIDING SAFETY FIRST

PLAYLETS AND TALKS ARE SUPPLIED TO STATIONS

Purpose Is to Prevent Automobile Accidents to Motorists and Pedestrians
—Marcus A. Dow Is Head

CHICAGO.—An "Oral Safety Chain" is being forged that will extend around the United States. Its links are words which will be welded directly and through the air. Its purpose is to aid in the prevention of automobile accidents to motorists and pedestrians.

This chain is the conception of Marcus A. Dow, past president of the National Safety Council, and director of the Stewart-Warner Safety Council.

Under the comprehensive plan just completed, safety playlets and safety talks will be broadcast by stations scattered throughout the country. Already the following stations have agreed to cooperate with Mr. Dow: WAMD, Minneapolis; WSEF, St. Louis; WMC, Memphis; WHAD, Milwaukee; WRVA, Richmond, Va.; WHB, Kansas City, Mo.; KHJ, Los Angeles, and a station in Wilkes-Barre, Pa. They have been signed up by Stewart-Warner representatives in the cities where the stations are located.

Give Playlets and Talks

Mr. Dow himself has been booked to give a series of safety talks in Louisville, Memphis, Worcester, Mass.; Reading, Pa.; Omaha, Salt Lake City, Oakland, Calif.; Los Angeles, and other cities. These talks are under the auspices of the local safety councils or the safety committee of local associations or chambers of commerce.

In addition, the safety playlets or talks will be broadcast over Station WBBM, Chicago, the studio of which is located in the corporation's offices. The playlets are worked out from Mr. Dow's ideas by the studio staff of WBBM. Copies of the playlets are then immediately forwarded to the other stations in the chain where they are released for broadcasting on Thursday of each week.

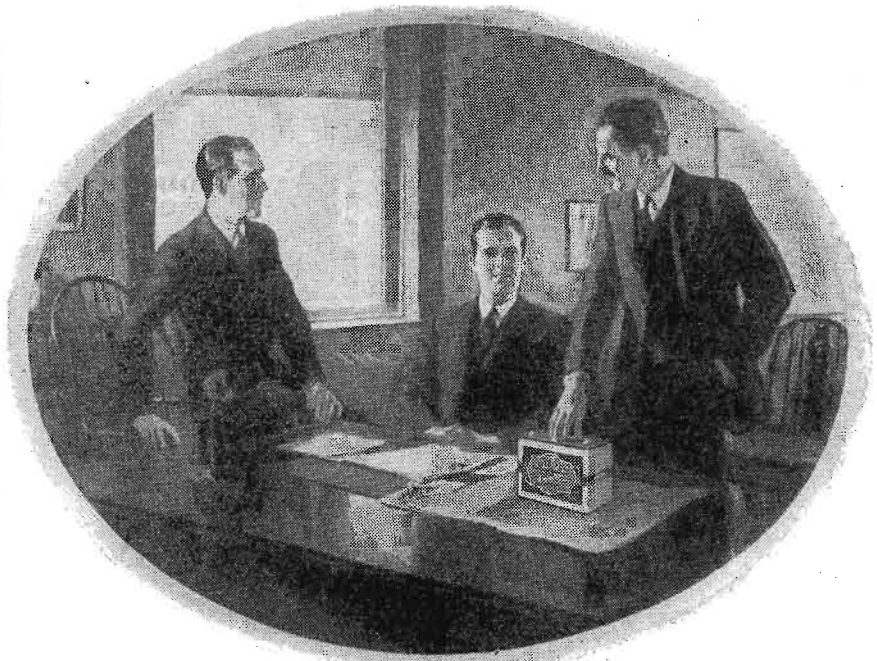
It is Mr. Dow's plan to make as many safety addresses as time will permit. Associations of commerce or safety councils

BLINDNESS DOESN'T BLOCK HIS SUCCESS



NEW YORK.—Arthur Stone, considered America's best blind pianist, has entertained WEAJ's audience on many occasions. In addition to being a pianist and despite his handicap, Mr. Stone is a master of the piccolo and an orchestra leader of exceptional ability. He enjoys the distinction of being among the first to introduce orchestras in vaudeville. Several years ago Stone's orchestra was considered the best of its kind.

in the United States are advised to write him at 1826 Diversey parkway in the event they desire his services.



"I've just had a lesson in radio economy, and, believe me, it's illuminating"

"I WENT into my radio dealer's this noon for a couple of Eveready 'B' Batteries and said, 'Tom, give me a pair of Eveready 45-volt "B" Batteries, No. 772's.'

"How many tubes in your set, Jim?" he asked.

"Five," I answered.

"Then what you want is a pair of Eveready Layerbilt No. 486's."

"Why?" I asked.

"Because the Eveready 772's are meant for sets having one to three tubes. With average use of the set, and used with a "C" battery*, they should last a year or longer. But on a five-tube set, with average use and with a "C" battery, they will only last about four months. Anyone with a four or five tube set should buy a pair of Eveready Layerbilts No.486. Used with a "C" battery they should last eight months or longer."

"Yes, but the 772's cost only \$3.75 each,' I said, 'and the Layerbilt \$5.50. There's some difference.'

"Well, figure it out for yourself," said Tom. 'Two sets of 772's should last you about eight months, and will cost you \$15.00. One set of Eveready Layerbilts should last about eight months, and will cost you only \$11.00.'

The simple rules for this satisfaction and economy are:

*NOTE: A "C" battery greatly increases the life of your "B" batteries and gives a quality of reception unobtainable without it. Radio sets may easily be changed by any competent radio service man to permit the use of a "C" battery.

On 1 to 3 tubes—Use Eveready No. 772.

On 4 or more tubes—Use the Heavy Duty "B" Batteries, either No. 770, or the even longer-lived Eveready Layerbilt No. 486.

On all but single tube sets—Use a "C" battery.

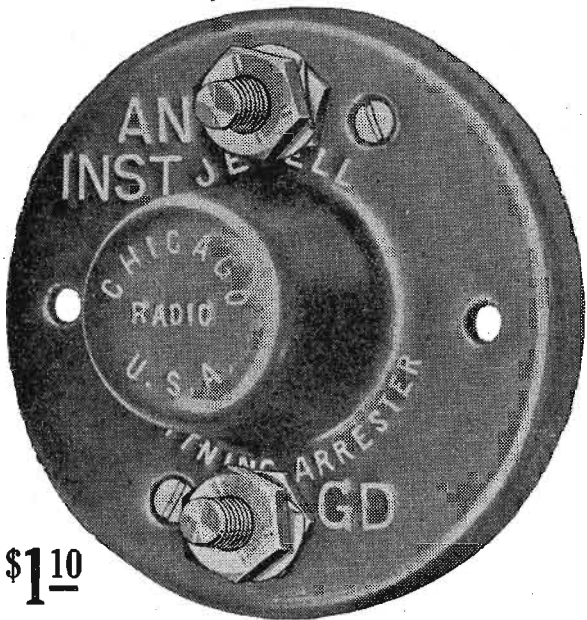
When following these rules, the No. 772, on 1 to 3 tube sets, will last for a year or more; and the Heavy Duties, on sets of 4 or more tubes, for eight months or longer.

We have prepared for your individual use a new booklet, "Choosing and Using the Right Radio Batteries," which we will be glad to send you upon request. This booklet also tells about the proper battery equipment for use with the new power tubes.

Manufactured and guaranteed by NATIONAL CARBON CO., Inc. New York San Francisco Canadian National Carbon Co., Limited Toronto, Ontario

Tuesday night means Eveready Hour—8 P. M., Eastern Standard Time, through the following stations:

WEAF—New York	WSAI—Cincinnati
WJAR—Providence	WTAM—Cleveland
WEEL—Boston	WWJ—Detroit
WTAG—Worcester	WGN—Chicago
WFL—Philadelphia	WOC—Davenport
WCR—Buffalo	WCCO—Minneapolis
WCAE—Pittsburgh	WCCO—St. Paul
	KSD—St. Louis



\$1¹⁰

Jewell Lightning Arrester

APPROVED
by UNDERWRITERS
for INDOOR and OUTDOOR INSTALLATIONS

Don't take any chances. Comply with National Board of Fire Underwriter's code which calls for installation of a lightning arrester with all outdoor antennas.

JEWELL ELECTRICAL INSTRUMENT CO.

1650 Walnut St., Chicago

"26 Years Making Good Instruments"



LEFT—No. 486, for 4, 5 or more tubes, \$5.50.

RIGHT—Eveready Dry Cell Radio "A" Battery, 1 1/2 volts.

EVEREADY
Radio Batteries
longer

DIRECTING MOVIE AT SEA REAL PROBLEM

THEN PARAMOUNT'S TECHNICIANS FOUND RADIO

Pirate Battle of "Old Ironsides" Filmed Under Direction of Special Broadcasting Station

LOS ANGELES.—Radio has again come to the rescue and fans of the silver sheet will be able to see scenes on the screen that would have been impossible to film without the help of Radio.

Several months ago when the Famous Players-Lasky company conceived the idea of another epic photoplay picturing the conquest of the old frigate "Old Ironsides" against the pirates of Tripoli, which holds such a romantic place in our national history, it was realized that for the filming of the big sea battle most of the boats engaged in the fray would be out of range of the human voice. Direction by a thought-out plan, supplemented by wigs, as well as field amplifiers soon proved to be practically worthless.

Broadcast Station Is Solution

It was decided that some means of utilizing Radio would be the solution, and the technical staff of Paramount's west coast organization was set to work, the result of which was the building of a 110-meter broadcasting station of low power and twenty-six receivers fixed to tune but to one wave length.

The receivers were installed on the various vessels in the directing of the picture and it was only necessary that Director James Cruze talk into a microphone in an ordinary tone of voice in order to command the movement of twenty-six ships and more than 2,000 actors aboard them.

Effort Believed First of Kind

It is thought this is the first time a motion picture has actually been directed by Radio. The movie companies have long used field amplifiers, or public address systems as they are better known, to control large mob scenes but the field amplifier with its necessary connecting cables was useless on the high seas where the various ships at times were separated by miles and it was necessary to make a practical application of the broadcast station do the work.

The call letters of the station used in the filming of "Old Ironsides" are KFP. The sea scenes were all taken near Catalina Island off the southern California coast.

WDAF Adds New Studio

KANSAS CITY, Mo.—One more studio has been added to the string from which entertainment is supplied for the listeners of WDAF, the broadcasting station of the Kansas City Star. It is the one installed by the Ivanhoe Masonic Lodge in the Ivanhoe temple. It will be used for a series of Radio concerts by the Ivanhoe band and glee club.

Isbell Town Crier at KNX

HOLLYWOOD.—Harold Isbell, for the past year staff announcer of KYW and who conducted the Insomnia club broadcasts from that station for many months, has once more felt the urge of California and has returned to Los Angeles where he is taking over the job as Town Crier of the Night Watch for Station KNX.

CANADA TURNS DEAF EAR TO COMPOSERS

MONTREAL.—Although confirmation is not available, rumors are strongly gaining ground to the effect that Canadian legislature will flatly refuse to give further hearings to Societies of Authors and Composers with a view of amending the copyright act bill to enable the societies to collect fees from broadcasters, theaters, churches, etc. This is the result of combined efforts on the part of the Canadian Association of Broadcasters, the various Radio listening clubs, the theater and moving picture organizations and church bodies.

COOLIDGE BROADCASTS WILLIAMSBURG SPEECH

WRVA Handles Sesquicentennial of Virginia Convention

RICHMOND, Va.—The celebration of the sesquicentennial anniversary of the passage by the Virginia convention of 1776 of a resolution instructing its delegation in congress to declare the United Colonies free and independent from Great Britain, took place at Williamsburg, Va., May 15, with President Coolidge making the address, which was broadcast by WRVA, here.

The bell of Old Bruton church rang as it did 150 years ago, when it announced to Colonial Williamsburg that the Virginia convention had taken the first definite steps towards the independence of the United Colonies.

Radio Franks Now Become Movie Actors on Phonofilm

NEW YORK.—The Radio Franks, leading favorites among broadcasting artists, made their metropolitan debut as motion picture actors recently in a De Forest Phonofilm at the Rivoli theater, here. The Phonofilm of the Radio Franks, one of the most recent produced at the De Forest studios shows the popular singers broadcasting.

The voices of the two Franks, perfectly synchronized with the movements of their lips, are reproduced in this Phonofilm in a most faithful manner as the picture is screened. The illusion created is that of the pictures actually singing.

Izaak Walton Worshipers Begin Fishing for WAMD

MINNEAPOLIS.—WAMD, the Radisson hotel station, here, is now broadcasting every Monday and Friday, authentic fishing reports from the fishing regions in Minnesota and Wisconsin. The reports are given at 7:05 p. m. Central time.

The reports contain information as to the abundance of fish, the best method of catching them in the different parts of the state and the kinds of fish to be caught.

Photogravures of Your Favorite Artists

GALLERY OF RADIO STARS

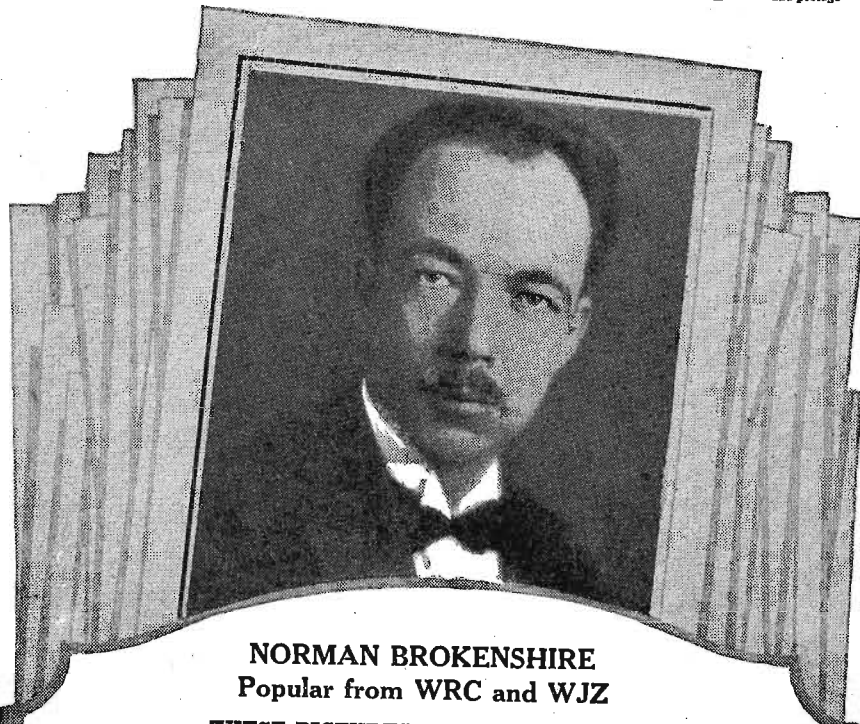
SUITABLE FOR FRAMING OR PLACING IN YOUR ALBUM

BY SPECIAL arrangement, Radio Digest is able to offer its readers a great opportunity to secure fine photogravures of their favorite Radio stars at practically no cost.

Radio fans will be able now, by this very special offer, to have pictures of their favorite artists and announcers before them when they listen in.

All that is necessary to secure photogravures from the Gallery of Radio Stars is to send the coupon published each week in Radio Digest, accompanied by ten cents to cover the cost of mailing and postage. Where a series of three photogravures is desired, it will only be necessary to send twenty-five cents and three consecutively numbered coupons clipped from Radio Digest. Remittance must accompany the coupon. Cash at your risk. Add 5 cents to personal checks for exchange.

WITH COUPONS Only 10c Each -- 3 for 25c To cover cost of mailing and postage



NORMAN BROKENSHIRE
Popular from WRC and WJZ

THESE PICTURES ARE 11 x 14 INCHES

Select Your Favorites from the Gallery of Radio Stars

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|--|--|
| 1 Wendell Hall, king of ukulele ditties | 23 Art Gillham, "The Whispering Pianist" |
| 2 Graham McNamee, 1925 Gold Cup announcer | 25 Harry Ehrhart, "Dream Daddy" of WLIT |
| 3 Jack Little, popular wandering balladist | 26 Correll and Gosden of "Kinky Kids Parade" fame, at WEBH and other stations. |
| 4 Billy B. Van, the Sunshine Man | 27 Norman Brokenshire, popular at WRC, WJZ |
| 5 Coon-Sanders' "Nighthawks" at KYW | 29 Jane Novak, Blues Singer of Twin Cities, WCCO |
| 6 George Hay, 1924 Gold Cup announcer | 30 Jean Sargent, the original, now at WHT |
| 7 Harmony Girls, Edith Carpenter, Grace Ingram | 31 Ralph Emerson, popular organist at WLS |
| 8 Ford and Glenn, Lullaby Boys of WLS | 32 Edna Adams, of KPRC |
| 9 "Roxy" Rothafel of WEAf chain fame | 33 Pat Barnes, vaudeville announcer at WHT |
| 10 The Hired Hand, famous "Substitute Announcer" of WBAP | 38 Walter Wilson, "Uncle Bob" of KYW |
| 12 Bob Emery, Big Brother of WEEI | 40 Ray-O-Vac Twins, known country-wide |
| 13 "Bill" W. G. Hay, ex-KFKX, now of WLIB | 41 Art Linick, KYW's Mrs. Schlagenhauer |
| 14 Happiness Boys, jovial singers of WEAf | 42 Fred Hamm of WTAS, now WLIB, fame |
| 15 Lambdin Kay, "Little Colonel" of WSB | 43 Meyer Davis' Le Paradis orchestra of WRC |
| 16 Leo Fitzpatrick, "Merry Old Chief," WJR | 46 D. R. P. Coats, 1925 Silver Cup announcer |
| 17 Henry Field, 1925 Gold Cup runner-up | 47 Gene Rouse, WOAW's popular announcer |
| 18 Al Carney, organ favorite at WHT | 49 Iris Ruth Pavey, KOA's invisible stage beauty |
| 20 Vincent Lopez, No. 1 Pennsylvania orchestra | 51 Ipana Troubadours, on the WEAf Chain. |
| 21 E. L. Tyson, pleasing voice at WWJ | |

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RADIO INVENTION IS DEADLIEST WEAPON

MAY DESTROY CITIES AND FLEETS MILES AWAY

British Government Buys Air Torpedo from Young New Zealander; Apparatus from Ground

LONDON, Eng.—An invention that will add indescribable terrors to the air warfare of the future has just been purchased by the British government from Captain A. J. Roberts, a young New Zealand inventor.

Captain Robert's invention is a secret method of Radio control, proof against interference. With it he has produced a weapon with which entire cities can be torpedoed and air fleets defeated without one man risking his life in the air.

A man on the ground will be able to torpedo a city 80 to 100 miles away, or fight a raiding air fleet single-handed.

Looks Like a Miniature Plane

Official experiments have conclusively proved that no other apparatus except that controlled by Capt. Roberts can have any influence on the torpedo in the air.

The invention takes the shape of a miniature airplane built on the usual lines. Once in the air it can be sent in any direction from the ground and can be used exactly like the torpedo fired from warships. During the official tests Captain Roberts demonstrated the torpedo on the ground, using a control apparatus of only one-half the power of the Radio apparatus with which experts endeavored in vain to jam or influence the torpedo.

The new torpedo is capable of dealing destruction within a radius of 100 miles. Its cost is comparatively low, and it can be landed in perfect safety should it misfire in the air.

London Voice Reaches Mexico with 15 Watts

Birmingham Man Claims No Antenna Is Used

LONDON.—Derek Shannon, of Birmingham, England, has invented a new Radio-telephony system which dispenses with the use of aerial and earth connections, it is reported.

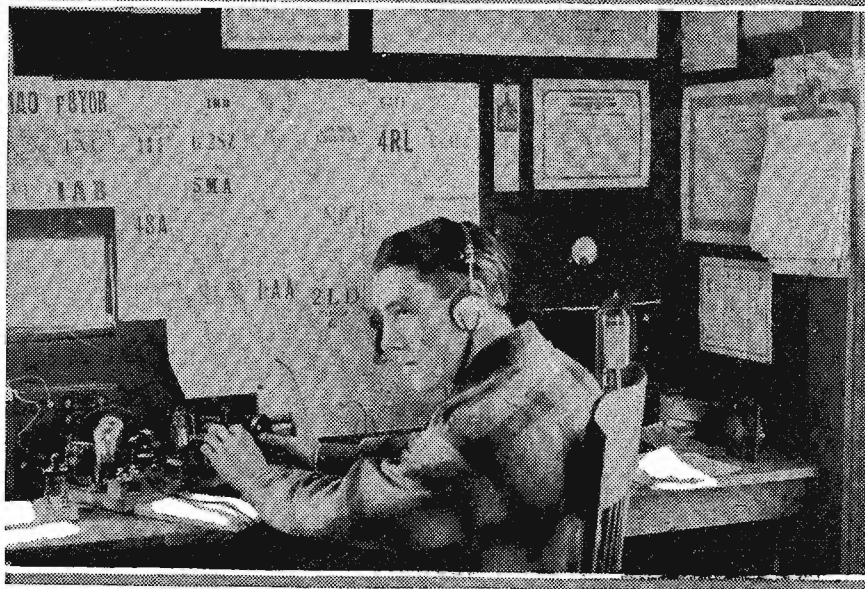
Recently conversation was successfully maintained by his system between a ship in the English channel and a private house in Guernsey, one of the channel islands.

Mr. Shannon has succeeded, according to the announcement, in speaking to Mexico City, Mexico. To accomplish this feat the inventor states that the input power to the transmitter was only fifteen watts, as compared with 200,000 watts, the power used by the Rugby phone station when communicating in tests with New York recently.

Radio-Paris on Market

PARIS, France.—Rumors are current here that broadcasting station "Radio-Paris" is in the market, and that an offer by the present owners to sell for 200,000 francs has been made to two different interests.

LOCATES LOST BROTHER IN AFRICA



To Crockett Ellis, above, an amateur Radio operator with a homemade short wave transmitting and receiving set, located at Memphis, Tenn., Mrs. Lydia Nelson, of San Francisco, Calif., owes credit for getting into communication with a brother who had been missing for 25 years, and who was located finally in South Africa.

By Aubrey Betts

TO CROCKETT ELLIS, an amateur wireless operator with a homemade short-wave transmitting and receiving set, Mrs. Lydia Nelson, of San Francisco, Calif., owes credit for getting into communication with her brother Sigfred Yenson, who had been missing for 25 years, and who has finally been located in South Africa.

Ellis, who lives at 976 Oakview street, Memphis, Tenn., was listening in at his homemade set the other day when he heard a message to the effect that the sender was operating in Capetown, South Africa, and that Sigfred Yenson was present.

The message also requested any listener in to relay the message on to Yenson's sister in San Francisco. A thrill of elation shot through young Ellis as he comprehended the significance of the message.

Detectives Search in Vain

Nerves taut, he pressed the head phones tightly against his ears, so that not a word would he miss. And when he had received the entire message, he leaped from his chair to the telephone and soon a telegram was speeding over the wires—a telegram for Mrs. Lydia Nelson, of San Francisco, Calif., and containing information which her heart had hungered for over a long period of years.

Yenson disappeared 25 years ago. When five years had passed and Mrs. Nelson did not hear from her brother she became somewhat uneasy about him. High-priced detectives were employed by her, and expeditions were sent out whenever she could find a seeming trace of him, but all to no avail.

Woman Queries by Radio

Still the years sped, but slowly for the grieving sister. Radio began to come into prominence, and Mrs. Nelson appealed to broadcasters, and they did all that they could—they broadcast her message for news of Sigfred Yenson.

One night a man in far-off Capetown,

South Africa, heard the appeal. He knew Yenson. He got busy with his transmitting set, and the message which he sent flashing through the ether was:

"Yenson is found. Notify sister, Lydia Nelson, of San Francisco, Calif."

And that was the message that young Ellis, in Memphis, Tenn., picked up with his set.

Operator Elated but Modest

Ellis is very modest about accomplishing what he did in this matter.

"I merely happened to be the fortunate one to hear the appeal," he said. "Anyone else would have done the same thing."

Ellis has one of the best homemade stations in the United States. He has been in communication with Brazil, Argentina, Chile, Mexico, Belgium and Hawaii. Other foreign countries or far-off places which he had been in communication with are: Canada, New Zealand, Australia, Porto Rico and many others—twenty-four in all, outside of the United States.

Sister Is Proud

Ellis is 20 years old, and has been interested in Radio for about three years. He has a sister who is attending the University of Tennessee, at Knoxville, and with whom he keeps in communication via Radio. And she is quite proud of her brother and his little homemade station, and their being the connecting link, as it were, that brought a brother and sister together again after a quarter of a century, and where private detectives, hundreds of telegrams, scores of cables and several expeditions had failed.

Pup Is Thrilled by Announcer's Voice

Young Boston Bull Creates Rumpus When He Hears Master Talking Through Radio Receiver

BERRIEN SPRINGS, Mich.—Modern collections of animal stories would be quite incomplete without a Radio animal story, so Trix, young Boston bull, belonging to John E. Fetzer, chief engineer and announcer at WEMC, "The Radio Lighthouse," located here, would like to add his chapter.

Trix lives back home in Lafayette, Indiana, and every time John goes home, his faithful terrier registers fits of joy in his efforts to extend a hearty welcome.

But the folks at home always make it a point to tune in WEMC, especially when Mr. Fetzer announces. Although Trix is a Radio fan and member of the I Won't Bloop Club, yet the announcement, "This is WEMC, the Radio Lighthouse, at Berrien Springs, Michigan," recently aroused the dog from his sound twilight sleep on the parlor rug.

In Which No John Is Found

In an instant he was up, and the wag of his tail and the twinkle in his eye indicated that there is more truth than poetry to the slogan: "His Master's Voice." First he thought he would try the front door, then the back door, but nobody was there. Then pell mell into the parlor he went again—and upstairs—but no "master" could he find.

Again, "The selection you just heard from WEMC was—" and through the house again Trix tore in frantic search for his master whom he simply knew must be there. As the strains of orchestra music died away, Trix, tired and discouraged, found his way back to his restful corner a disappointed, but we hope a Radio wiser dog.

"Sam 'n' Henry" Are Sought For Phonograph Recording

CHICAGO.—"Sam 'n' Henry," WGN's famous comic strip characters, who make their appearance each night at 10 o'clock, Central time, in one of their humorous adventures, are being eagerly sought by the representatives of several phonograph companies in an effort to put their delicious dialogue into permanent form. Sam 'n' Henry, however, have managed to elude all of the Radio fans who are seeking to learn their true identity.

Practically every listener within range of the powerful WGN transmitter is acquainted with the whimsical and care-free Sam, and sagacious Henry. Many of their sparkling expressions are being heard more and more frequently in public places. Sam's "ain't that somethin'?" Henry's "Don't argue wid de gent'man," and his expressive "Oh, oh," that greets each faux pas on Sam's part, are among the most popular.

For Your Garden

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"BIG RABBIT"

(Continued from page 8)

branches far out, half roofing the cleared space.

The sawdust covered ground had been packed by the tramp of thousands of feet. Evidently it was an island, slightly higher than the swamp, for all along the sides, water showed between the trees. Gigantic live oaks, cypress and between them huge magnolias, now in full bloom, towered. The trees seemed rooted in the water itself, or the swamp slime.

The spreading limbs of the oaks formed a roof, open in the center as if a section had been thrown back—and through this stars shone. Moss hung like filmy drapery from the limbs. Giant pendants of fragrant jasmine trailed downward through the interstices of foliage. Along the sides of the weird forest nave at intervals the pink of the Judas trees and the white, feathery bloom of the wild plum added the color touches to the decorations.

Strange and weirdly beautiful as the scene was, it was forgotten at sight of the congregation gathered within it. Almost a thousand negroes, half wild men and women from the turpentine camps, the lumber mills, and the fisheries were congregated.

THERE were sullen, beastial human animals from the lumber camps, graduates of the convict labor system of slavery, mingling with the river negroes; their rivals in strength, their superiors in intelligence. Hundreds of them were deformed by years of lifting, hauling and sawing, and from the abuse of brutal overseers.

The women, brazen, screaming, chattering, circulated through the throng; wilder, freer and more terrible in their utter abandonment of the shackles of semi-civilization than their males.

Almost every man bore a huge pine torch. The flaring lights and the resinous smoke added to the weirdness of the scene, such as none but an insane Dante could have pictured. A low, growling undertone filled the air, above which pierced shrill screams and savage, snarling voices. At intervals the wild screeching of women, rising in anger or in more terrible mirth, broke the monotone.

Danforth and I, bewildered at first, were becoming able to think clearly and distinguish individual scenes. As our eyes pierced through the red glow of pine knot flames and the fog of resinous smoke, we discerned at the opposite end of the natural woodland cathedral, a crude, stage-like structure. It was open at the side facing the clearing, and occupied almost half the width of the swamp-island.

It was built of rough lumber and was set on piling which raised it almost five feet above the level of the ground. Set on the ground at either side of the stage were large kettles, discarded by some turpentine still, and now filled with turpentine chips which blazed furiously, sending up two columns of fire and smoke, rising straight in the still air with such volume of heat as to set the moss hanging from limbs fifty feet above them swaying. A large chair, rudely carved, occupied the exact center of the stage and at the right of it was a smaller chair which was elevated on a small dias. We could not distinguish objects clearly from our station near the rear of the assemblage because of the heaviness of the smoke and the glare of flares and torches.

"Come on," Danforth said. "We're safe. Lets get closer. The show is about to commence, I think, and we want seats closer to the stage. We may want to take part in the performance."

I started as if he had struck me. The wild scene, the constant motion of the people, the surf beat of sound from human throats, the moving panorama of hideous faces, had hypnotized me. For several minutes I had forgotten the object of our presence and Danforth's voice close to my ear aroused me from the spell.

"**C**OME on then," I said quickly. The spell was gone. A shiver of repulsion came with the realization of what it meant to the girl to behold such a scene. I drove a hand nervously into the side pocket of my coat and made certain the automatic was safe, then led the way.

We pushed steadily forward through the throng, avoiding the denser groups, and moved toward the stage. No one appeared to give us even the slightest attention and, reassured and emboldened we went forward until we were near the front, gazing upon the stage itself, as our amazement increased.

Wide stairs led from the floor of the stage down to the ground and at each end of these stairs narrow platforms extended four or five feet out from the stage itself and at the same level. These platforms were made of hewn railroad ties. Two gigantic negroes, naked to the waist, stood one at each end of the stairs, each holding a huge torch. Lying upon the railroad ties, with heads toward the crowd, were two immense alligators, their eyes blinking. Heavy chains had been welded around their necks and the chains were fastened to the ties by railroad spikes driven deep into the wood.

Suspended over the throne chair in the center of the stage was a thing which made me start back shuddering with horror and disgust. A bundle of writhing, twisting rattle snakes, bound together by wires looped around their necks, hung by a chain from the cross beam of the canopy. The snakes hung but a few feet above the chair itself and the constant whirr of their rattles could be heard over the din of the crowd.

"Don't go any further," Danforth said in low tones. "Don't cross that line drawn there. Evidently the hol polloi isn't permitted to go nearer the stage than that."

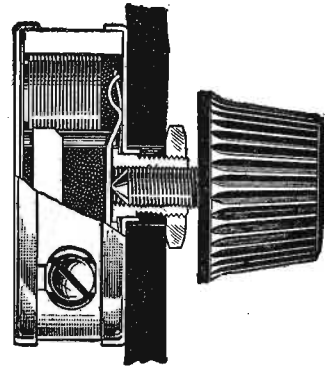
"What is it all about?" I asked. "I can't make out what the object of all this is."

"Don't know. It's something big. The negroes are intensely excited. Wait here. I'm going to find out."

DANFORTH sauntered away carelessly and presently I saw him walk into the edge of one of the largest groups, where two men appeared to be the center of some fresh excitement. Then I remembered with sudden terror that, disguised as we were, it was probable neither of us would be able to recognize the other in that throng, even if we should chance to meet.

Fear that we would be unable to locate each other in case of sudden need disturbed me. Separating had been a mistake. It was too late to rectify it, and I determined to remain near where I was standing for a time at least, hoping he would return. The consciousness that I was accomplishing nothing, learning nothing, doing nothing to aid the girl we sought caused me to writhe inwardly.

Suddenly there was a seemingly spontaneous movement in the crowd, a murmur of expectancy. My ears had become accustomed to the din and were able to distinguish words and sentences from the jumble of noises. In that babel of voices I heard; "Big Rabbit," "White Gal," "Big
(Continued on next page)

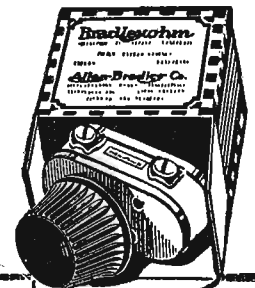


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"BIG RABBIT"

(Continued from page 28)

Rabbit done cotch 'em in de trap." A surge of bitter remembrance of my ridicule of Borton's 'superstition' came to me. A savage fear, a wild desire for action, seized upon me. The idea of waiting for Danforth was abandoned. I could not remain standing a futile spectator, while the girl I loved was in danger.

Danforth could shift for himself. I felt certain that, somewhere on the other side of that dead line, probably at the rear of the stage, Miss Tonneson was captive with her uncle, and that the giant negro, Trimble, was their jailer.

I determined to get behind the scenes and spoil the drama about to be staged. To attempt to cross the open space meant exposure and destruction, so I determined to make the effort to reach the rear of the rude structure by a flanking movement. No guard had been placed and it was evident the swarm of savages were being held in check by awe and superstition rather than by force.

SKIRTING along the fringe of the crowd I reached the side of the clearing without attracting any attention, stopped for an instant in the deep shadows of a live oak to see whether anyone was watching me, and hurried out of close range of the flaring lights of the open.

I found myself on a hard, beaten path, perhaps the extension of the one upon which we had entered the open glade, running close to the edge of the swamp water. Almost straight ahead, perhaps fifty yards back of the stage-like structure, was a single flaring light, and near it could be discerned by its flames, some sort of a structure.

Toward that I moved cautiously, holding my automatic ready for action, and keeping as closely as possible in the darkness of the tree shadows. I had almost reached the spot where the flare was burning when I stumbled and half fell over a body huddled at the base of a tree. Startled, I sprang back, and an exclamation burst from my lips.

"Who dar?" a frightened voice asked in a tense whisper. "Tain't no niggah—I heerd yo' voice."

"Don't move, or I'll shoot!" I hissed, raising my gun with a feeling of desperation that my voice had betrayed me, and, perhaps ruined all our plans.

"Doan shoot, mistah, doan shoot!" It was the voice of a woman, hysterically sobbing from fright and nervousness. I groped with my hand and touched her. Her body shook and quivered with sobs.

"Who are you?" I whispered. "I'm desperate. Better answer quickly and don't scream."

Sobs and unintelligible words formed her reply. I seized the huddled figure and shook her. She was slight and her face was buried in her hands, as her body shivered with dry, gulping sobs. I dragged the hands from her face, half lifted her to her feet and at that instant the faint glare from the pine torch imbedded in the soft ground, illuminated her features.

"Tillie! Good Lord, is it you?"

IT WAS Tillie, Roberta Tonneson's colored maid. As I spoke her name her entire attitude changed. She sprang at me, alert and tigerish, grasped my arm so hard the nails bit into the flesh and in a hoarse, frightened whisper asked:

"Who is yo'? How cum yo' hyah?"

"Dey'll kill you."

"Where is your mistress, I've come to save her," I said, shaking her again, fearing a return of her hysterics.

"Dey'll kill you! De Big Rabbit'll kill you," she whispered in terrified tones.

"Where is she?" I repeated, shaking her again and again. "I must find her."

"Oh mistah, take us away, take us away," she implored. "Miss Bob she locked up in de cabin wif de majah, back yan."

She pointed back past the pine torch in the ground.

"Big Rabbit, he gwine hurt dem," she went on, clinging to me with the strength of terror. "He say he gwine humiliate dem. He gwine show dem who is de massah."

She sobbed again, and suddenly flared with anger.

"He tol' me he ain't gwine hurt dem," she said. "He done tol' me he gwine make me queen, dat's why ah help him. Now he say he all gwine whip de majah, and make Miss Bob bow down to him."

She was angry now; inspired with the fury of the woman scorned.

"Who is this Big Rabbit? Where is he?" I urged rapidly. "If you want to save your mistress help me."

"King Solomon, de Big Rabbit," she said cryptically. "Dat niggah, Trimble, he King Solomon. He say he was King ober in Afriky and he gwine be King hyah. He gwine whip de majah, and he gwine make Miss Bob tell de people he am de King."

Her love of her mistress, her indignation and jealousy were conquering her superstitious dread of the negro, and her fear of him.

I was almost as excited and upset as she, but steadied myself with an effort and drew her deeper into the shadows of the trees.

"TILLIE," I said as calmly as possible, "you must help us. There are three of us here to save the major an' Miss Tonneson and you. You must show me where they are. If possible you must tell your mistress that help has arrived and that she must keep her courage. Trimble must not suspect we are here."

"He slap my face and say I ain't fit to be queen," she said sullenly.

"He say I ain't good enough to 'sociate wid him. I'll git even."

Her hysterics were gone. The knowledge that white men were present nerved her, and her desire to revenge herself upon Trimble for the manner in which he had treated her, steeled her. She led me rapidly back of the stage structure, which cut off most of the light from the clearing, and into a smaller clearing, in the center of which stood a small log cabin.

Telling her to hide close under a clump of underbrush I scouted, crawling forward until my hand touched the logs, and crept around two sides of the cabin striving to peer through chinks, from which faint light emerged.

Voices sounded inside, and, crouching low and pressing my ear to the logs, I strove to hear what was going on inside. It was impossible to distinguish words, but there were three voices, one deep and scornful, one high-pitched as in anger.

Suddenly I thrilled and started, as I recognized the clear, ringing laugh of Roberta Tonneson. The utter contempt of that ringing, scornful laugh told the story. There was a quick exclamation of anger which sounded like a curse, followed by the voice of Trimble raised in threats and imprecations.

I crawled around toward the front of the cabin, with some wild idea of trying to burst through the door, but before I could reach it the door suddenly was flung open, Trimble emerged, and, jerking the door shut, turned to lock it.

He never before was closer to death than at that instant. I crouched lower, the revolver clutched in one hand, ready to spring, the desire to kill making me see red. Before Trimble turned, strong hands grasped me from behind, a hand went over my mouth and a voice, which I recognized instantly as Borton's spoke tensely into my ear.

He held me quiet until Trimble, springing down the steps, hurried away.

"Don't make a fool of yourself. Do you want us all killed?" Borton whispered. "Can't we pry the lock, get them out and make a run for the boat?" I asked excitedly.

"I'VE been working at it for half an hour," he said. "It is fastened with a log chain and a padlock. We can't even dent it. I've been laying for a chance to knock Trimble out with a club, while the door is open—but can't reach him while he is at the top of the steps."

"What'll we do?" I asked, helplessly. "Go back out into the crowd, keep near the front and to the side nearest the path. If the worst comes to the worst shoot Trimble, and try to get the girl to the boat."

He crawled away into the darkness while I crept back to where Tillie was crouched under the bushes waiting. She was calm and revengeful. The knowledge of the present of white men had restored her courage and I knew we could rely upon her.

"Can you get near Miss Bob?" I whispered.

"Trimble gwine let me be Mammy Bammie," she replied.

"Mammy Bammie?" I repeated, puzzled. "What's that?"

"Dat mean I'll be on de stage wif him," she said. "I'll be dar."

"Stay as close to your mistress as possible," I said. "If anything happens help her to this path and move toward the river. We'll be there to help you."

Rapidly as possible I told her of the boat, and of our plans.

"I'll be dar. I'll show him," she repeated threateningly.

Completely restored to calmness she arose and walked boldly toward the back of the stage, to seek Trimble. I crept back into the path, dodged along it and mingled again with the blacks. I felt a sudden chilling fear that the perspiration would wash the black from my face and expose me. I found a point of vantage at the position designated by Borton.

The blacks, now showing signs of rising excitement, were pressing closer and closer to the deadline and all attention was centering upon the stage. If my color had run no one observed it—as I maneuvered into a position from which I could most rapidly extricate myself from the pressing throng.

Three white men against 3,000 black fanatics! That is the situation with which the next installment of this enthralling story of "Big Rabbit" will begin. Will Roberta step out on this barbarous stage and face that mob? What will happen to her? Will it be a battle of bullets or wits? See Radio Digest Mid-June number.

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The Reader's View

(Continued from page 15)

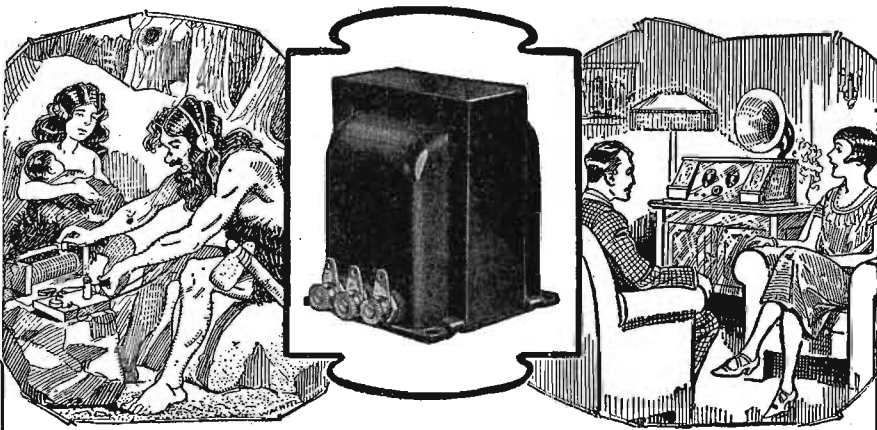
rest if they receive it. Some people have gone so far as to discard their sets entirely. I know of one instance where a beautiful 7-tube super was relegated to the attic because of this. I believe this to be representative of thousands of working people, to whom Radio would be more beneficial than to any other class. A good 7 to 9 p. m. program would be highly appreciated by them, I believe.—R.S.R., Louisville, Kentucky.

Hoggish Stations Main Trouble

The responsibility for the vitally important WJAZ decision rests neither with Judge Wilkerson nor with the "offending" Radio station. Sheer hoggishness on the part of station owners who insist on broadcasting during the entire twenty-four hours may be blamed for the present chaotic and unsettled conditions.

Despite all the noise being made concerning silent night violations and "blooping," the paramount issue in Chicago may be summed up as follows: Shall the twenty odd Radio stations now operating in the Chicago district be permitted to clutter up the atmosphere without any regard for each other's, or the listening public's, rights or desires in the matter?

Newspaper advices are to the effect that a score of applications for broadcasting licenses in the Chicago district are now on file in Washington. If any considerable percentage of the applicants are successful, Chicago set owners may get ready to throw their sets in the lake.—J. D. C., Chicago, Ill.



Modernize Your Radio Set!

THORDARSON
Autoformer

Trade-Mark Registered

All Frequency Amplifier

From the majestic roll of the grand organ to the high flute like tones of the coloratura, every note—every harmonic—is faithfully reproduced in the Autoformer equipped receiver. No note is too low—and none too high to receive full amplification.

It encompasses the advantages of transformer, resistance, and impedance coupled amplification with the disadvantages of none.

Write for descriptive bulletins.

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Transformer specialists since 1895
WORLD'S OLDEST AND LARGEST EXCLUSIVE TRANSFORMER MAKERS
Chicago, U.S.A.



Fred W. Stein.

Steinite Low Loss
Interference Eliminator

No Radio Set Complete Without It

Select stations at will. With music and voices crowding the air the average set fails to bring in the desired stations properly. The **Steinite Interference Eliminator** shuts out local and other interference. You get one station at a time, the one you want, and tune in loud and clear. Operates on any set—attach to aerial wire and to set—no changes—no extra tubes or batteries. Greatest Dollar Value in Radio Today.

OVER 300,000 SOLD

Improved Results With Tube or Crystal

Try entirely at my risk the wonderful improvement this inexpensive little device will make in the reception of your set. Improves results on both crystal and tube sets that use any kind of aerial except loop antenna. Clears up reception wonderfully, increases volume, and partially absorbs static. **MONEY-BACK GUARANTEE.**

Mfrs. Famous 1,500-Mi. Steinite 1-Tube set \$6. Long distance Crystal Set, \$6. Steinite Crystals, 50¢—3 for \$1. Write for complete illustrated literature on all Steinite Radio Products.

Put this interference eliminator on your set and note amazing improvement. No tools needed—install in a moments time. Connect with set and follow simple instructions. Money back promptly if not delighted. \$1.00 postpaid anywhere in U. S. when cash with order.

References: Exchange National Bank, Atchison Savings Bank. Order today—a dollar bill will do.

STEINITE LABORATORIES,

PATENT PENDING

\$1 Postpaid If you are not delighted with results you get your dollar back

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How about that new set you want to buy? What are you going to do with the old one? A Radio Digest classified advertisement will sell it for you.

Rates are twenty cents a word for each insertion. Five per cent discount for four insertions, 10 per cent discount for six insertions, 15 per cent discount for twelve insertions, 20 per cent discount for twenty-four insertions (each issue for 1 year). Name and address are counted. Two initials count one word. Cash must accompany order. Minimum of ten words. Objectionable and misleading advertisements not accepted.

Copy reaching us not later than June 14 will be in time for our July 1 issue.

BLUE PRINTS

NO MORE BATTERIES—Build "A" and "B" eliminator—operates any set on AC or DC, no hum, satisfaction guaranteed. Complete plans, \$2. Engineers' Service Company, 25 Church St., New York.

Just Out—Actual size template for Radio Digest's latest set—Super-Torodyne, 25c. Instructions appearing in April 10-17-24 and May 1 issues.

Super-Het, Ryan's Simplest Possible 7-Tube Set. Complete instructions, actual size template. How to make a loop. All for 50 cents. Book Dept., Radio Digest, 510 North Dearborn Street, Chicago.

DOGS

Beautiful registered bull pups, \$15. Bulldogs, 501 Rockwood, Dallas, Texas.

FOR SALE

Here is your opportunity to obtain a real good buy on 1/4-HP, 110-volt, 60-cycle, single phase, AC, enclosed dust proof new electric grinders and buffers, 6-inch emery wheel on one side and 6-inch buffer on the other, with cord and plug, at a low price of \$15.75 each. Special price on brand new 1-KW or 1000-Watt, 32-volt, 1150 speed, late design, Westinghouse light and power generators with pulley, ready to run at \$48.00 each. Largest dealers in new and used motors and generators in the Northwest. Send us your inquiries. General Distributing Co., Security Storage Bldg., Duluth, Minn.

MISCELLANEOUS

Photos of Your Favorite Radio Stars. Ten cents and coupon appearing on another page of this issue will entitle you to one of the photos from Radio Digest gallery of stars. Radio Digest, 510 North Dearborn Street, Chicago.

Radio Fans—A year's subscription to Radio Digest is only three dollars. Send your order now. Fill out coupon on page 28.

PATENT ATTORNEYS

PATENT ATTORNEYS
PATENTS. Booklet free. Highest references. Best results. WATSON E. COLEMAN, Patent Lawyer, 644 G Street, Washington, D. C.

RADIO

600 Mile Radio \$2.95. 200,000 satisfied customers already. Don't require any batteries nor tubes. Write today. Picture and particulars Free. Crystal Radio Company, Wichita, Kansas.

For Sale—2 Willard B's, 48 volts each, \$15.00 each. Good as new. 6-volt, 110-ampere Eveready A battery, \$10.00. S. C. Lehman, 109 Galena Ave., Dixon, Ill.

For Sale—I want to dispose of all the surplus parts around my laboratory. Now is the time to start that new set you want to build. Send 2c stamp for my list. Box 752, care of Radio Digest, 510 No. Dearborn St., Chicago.

Closing out all of my Radio stock. 200-ohm potentiometer with silver knob and dial, 10 cents; Howard rheostats 6 1/2, 6 3/4 or 25-ohm, 75 cents; Filkostats, 50 cents; set eight lettered binding posts, 25 cents; variable condensers with dial and vernier, 13-plate, \$1; 23-plate, \$1.50; 4-inch black dials, 3—50 cents; 3-inch, 3—35 cents. Bronsteins Pharmacy, 4600 Lincoln Ave., Chicago.

For Sale—Limited number of \$3 Electric Soldering Irons for \$1.39. E. H. Ives, 2625 Hollywood Ave., Chicago.

REAL ESTATE

Sell your property quickly for cash, no matter where located, particulars free. Real Estate Salesman, 509 Brownell, Lincoln, Nebraska.

S-O-S RECEIVER PANEL LAYOUTS

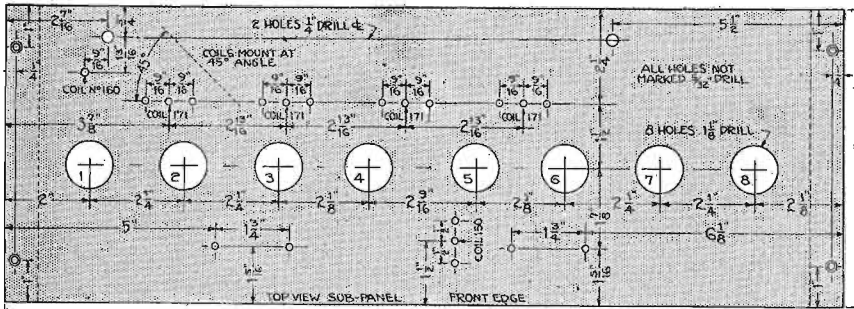


Figure 4. Sub panel drilling layout. Note wooden panel supports.

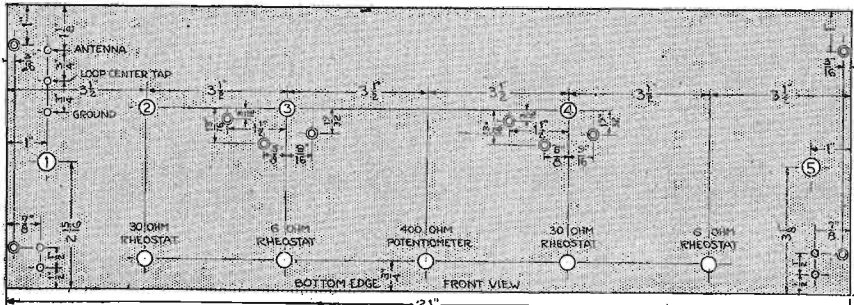


Figure 5. Layout for drilling front panel. Careful measurements are required.

S-O-S PORTABLE SUPER

(Continued from page 10)

possessed both primary and secondary resistance together with turn ratio which left little to be desired. In addition, its selection by a great many manufacturers of receivers also carried much weight, while the fact that it was possible to secure them in a mechanical design which permits sub panel mounting made their selection final. The transformers thus selected were the No. R180 Thordarson Super Amplifiers of 3 1/2 to 1 ratio.

Figure 1 is a front view of the portable case in which the receiver is mounted. It is shown with the cover removed ready for operation. Figure 2 represents a bottom view of the sub panel assembly indicating the method of mounting the

Benjamin sockets. The C battery, and also the fixed condensers which are used in this circuit, have been intentionally omitted in order that this sub panel view may be made as clear as possible. The constructor will note a series of numbers upon this panel which are placed upon the photograph for your greater convenience when the wiring instructions are given. Figure 3 is another view of the sub panel as taken from the top of the re-

Salesmen Wanted IN EVERY COUNTY All or Spare Time
Transparent handle Knives and Razors. One side shows name and address, the other any individual photograph, or any kind of design preferred. Blades finest steel, handles clear as glass and unbreakable. Position worth \$100 to \$200 per month. We train you.
Novelty Cutlery Co., 524 Bar St., Canton, Ohio

A & B Battery \$2 Charger ONLY

Satisfaction Guaranteed
Charges any type of storage A or B battery, using a few cents worth of ordinary house current, either alternating or direct. Cannot injure battery. Tested and approved by Radio News Laboratories. Complete directions enclosed. Anyone can operate. No expensive "extras" to buy. Why pay \$10.00 to \$15.00 for a charger when you can get this splendid GUARANTEED R. B. Charger by mailing us two dollars (bills, money order, check or stamps) plus ten cents in stamps or coin to pay mailing costs. Charger will be sent postpaid. If you are not satisfied, return within five days and we will refund your money. Order at once—TODAY.
R. B. SPECIALTY COMPANY
Dept. A-19, 308 East Third Street, Cincinnati, Ohio

The Radio Song Books

Over 300 old-time songs are contained in The GOLDEN BOOK and GRAY BOOK of Favorite Songs, the books the big broadcasters use. They contain many of the songs used in WLIB's "Million Sing" and most of the songs that were prize-winning "Old-Time Favorites." Think of it, over 300 songs complete with words and music for only 40 cents, post-paid! Get a set by writing your name and address across this ad and mailing it in with 40 cents.

(Five Sets for \$1.50)

Hall & McCreary Company
428 S. Wabash Ave., Chicago

ceiver and showing clearly the general arrangement of the parts used both upon the sub panel and operating panel. These, with the exception of the audio frequency transformers, are likewise numbered for your added assistance. The audio frequency transformers were omitted from this view so that the constructor might secure an accurate view of the sockets as they protrude up and through the sub panel.

In figure 4, the sub panel drilling layout, all dimensions are given for the correct assembly of the parts listed. Just below this layout is shown the two wooden supports for the sub panel which are located at its ends. Their height is 1 13/16 inches and length, 7 inches. Figure 5 is likewise a detail plan layout for the front panel. It is important that each location be followed with care and exactness. Full size blue prints covering both sub and front panel are available for those desiring them at 25 cents each or 50 cents for the pair.

It has been the author's experience that constructors attempt to make changes in the apparatus specified, not realizing that the total success of the receiver depends largely upon the correct correlation of the parts used. One therefore should use only the parts listed and appreciate that space factors and efficiency have been carefully considered. These are not flexible enough to permit substitution if one would secure a pleasing success in the construction.

(In the next issue the circuit used and the entire wiring instructions will be given. This concluding article will also embrace hints on operation.—Editor's Note.)

Following the instructions of the Columbus (Ohio) Radio club, bids have been requested and received from two consulting engineers for conducting a Radio interference survey of the city. It is estimated that the expense will total \$1,200.

Yale GROUND HOG
The Perfect Ground
DOUBLES POWER AND DISTANCE
Marvelous newly-invented ground gives 100% improved reception. Doubles power and distance. Stops leakage. Reduces static. Stops jangling even in mid-summer. Results never before equalled, users say. Satisfaction Guaranteed.
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Still Well in Advance

Grebe Developments Keep the Synchronphase in the Lead in Quality of Reception

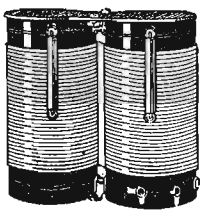
THE quality of Grebe reception is still the standard. Exclusive Grebe developments — *Flexible Unit Control*, *"Colortone"*, *Low-Wave Extension Circuits*, *Binocular Coils*, *S-L-F Condensers*, etc.—keep it far in the lead.

The way to satisfy yourself of this is to

Ask your dealer to demonstrate the Synchronphase in comparison with other sets.

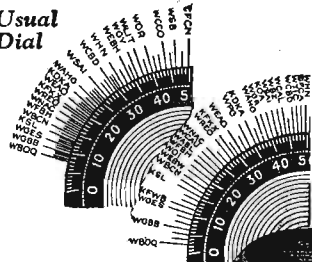
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 Western Branch: 443 So. San Pedro St., Los Angeles, Cal.

This Company owns and operates stations WAHG and WBOQ; also low-wave rebroadcasting stations, Mobile WGMU and Marine WRMU.



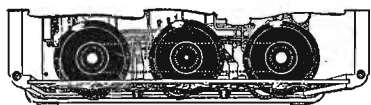
Grebe Binocular Coils
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Flexible Unit Control

Grebe "Colortone"



It is written:

"A gem is not polished without rubbing, nor a man perfected without trials."

The perfection of the Synchronphase has come from past years of ceaseless study and experiment.

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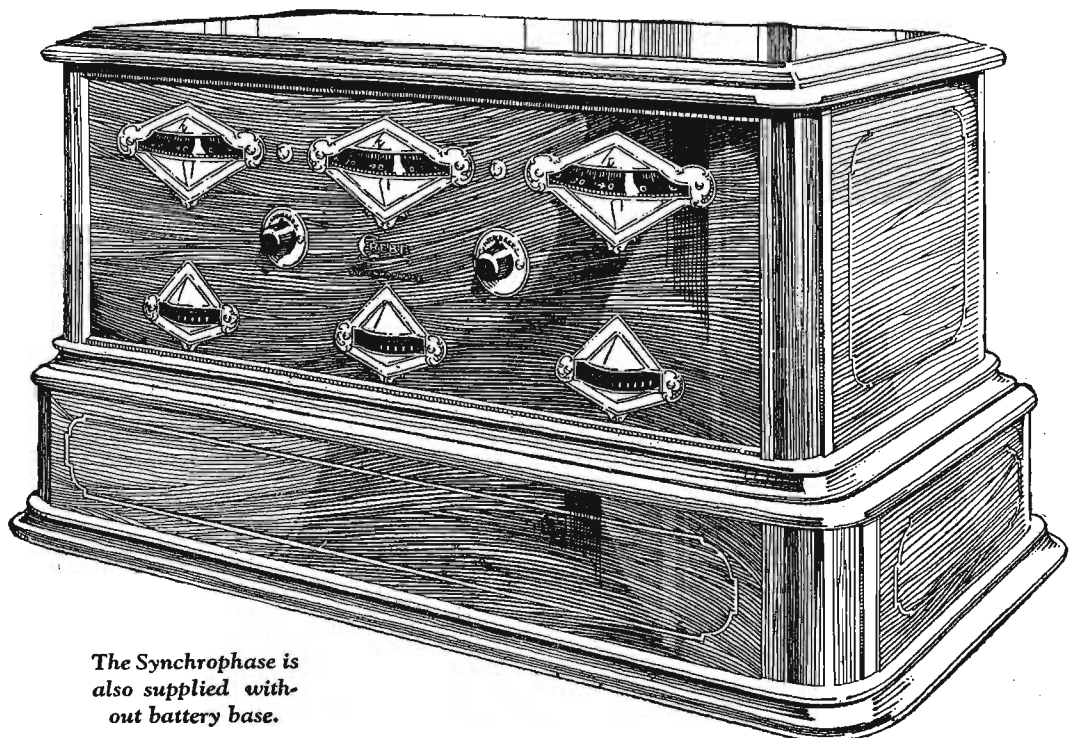
THE GREBE SYNCHIROPHASE

Trade Mark Reg. U. S. Pat. Off.



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All Grebe apparatus is covered by patents granted and pending.



The Synchronphase is also supplied without battery base.