RADIO LORE FOR NOVICE AND EXPERIENCED FAN

Signal Augmentation System Has Unusual Selectivity and Range

Receiver Designed and Used by Engineer for Recording Trans-Atlantic Stations Phonographically Uses Two Tubes on Detector.—Tuning Simplified

In spite of the fact that developments mentation system may be of some assist-in the science of radio have been so rapid ance in dispelling these illusions. that it has been difficult for the specialist to keep abroad of the art there have to keep abreast of the art, there have coupled to the secondaries LA and LD, been very few, it any, really new circuits would cause a corresponding voltage varior systems of reception perfected. The atten across the terminals of these secprogressive evolution of the art has upparently mitigated against independent on- of two tubes. This voltage would be of deavor along lines other than refinement of established circuits and principles.

The tendency of the designer has been is everywhere apparent in the modern reof a your ago-under present conditions of wave-length congestion—to appreciate tube is simultaneously rectifying or tector tube is simultaneously rectifying of the tector tube is simultaneously rectifying of the tector tube is simultaneously rectifying or the simultaneously rectified in the simultaneously rectifying or the simultaneously rectified in the simultaneous receivers are to retain the quality we now

parture is found a system of radio re-ception which apparently satisfies all the conditions—the most severe requirements—which can be imposed by present-day broadcasting, and with an ample margin to spare. Selectivity and range have been combined in a practical receiver to a remarkable degree, and with it all unusual conomy from an operating as well as a structural point of view.

SOME VITAL FACTORS

The demands made upon modern re-ceivers necessitates its inherent ability to meet certain prime regulaites, chief among these being selectivity, sensitivity and ease of operation. In the system of Signal Augmentation these requirements are all met to an astonishing degree. The tuning is necomplished in the most complicated of its applications, that is, in multiple tube sets, through the use of two dials; these dials are perfectly chronized—that is, a station located at 60 on one dial will be found on 60 on the corresponding dial, and, when a station is once logged or found at a specific reading, this station will always appear at exactly the same calibration. The use of two dials, as contrasted to three in the conventional recoiver, and the perfect

the conventional receiver, and the perfect co-ordination of these two makes for ease in tuning and particularly facilitates the tuning of distant or DX stations.

The selectivity and sensitivity of the augmentation principal cannot be gainsaid when attention is called to the fact that this was the circuit employed by Mr. Hoyt during the recent transatiatic test when he successfully recorded nine of the Dimograph records about which so much has appeared in the press. The selectivity of this receiver is well portrayed in this of this receiver is well portrayed in this Fluropean recording when a number of phonograph records were undo of station PTT in Madrid, Spain, while an American station within 30 miles of the recording apparatus was on the air with broadcast programme on a wave length only 10 metres different from that conpleved by that of Madrid.

Another striking feature of this olr-cult, in fact one of its inherent qualities is the total absence of body capacity effects and the entire absence of re-radia-

THE FUNDAMISMTAL CIRCUIT

The fundamental augmentation circu bears a striking optical resemblance to two familiar types of radio circuits. This resemblance has led to its being confused

with those circuits by the casual observer.
Pirst: The variable coupling between
the "Booster" and the grid cell (designated LD on the diagram in Pigure 1)
bears an outward similarity to the tickler form of regeneration; and, second, the parallel disposition of the two tubes, one at either end of the secondary inductance, superficially appears to approximate to "push-pull" circuits. The following decoription of the operation of the aug-

ondaries which are connected to the grids opposite polarity or phase at opposite ends of the cols. Consequently the grid of one of these tubes would receive a to reduce losses and otherwise render the positive charge, while the other would be existing methods of reception more efficlient. The effectiveness of these efforts one of these tubes is connected as an ampliffer and the other as a detector (having ceiver. It is only necessary to compare a grid condenser in its grid circuit, there the radio receiving set of to-day with one fore, when the amplifying tube is noting fore, when the amplifying tube is noting to magnify the positive impulse the de-

charge appearing in the plate circuit of the amplifying tube passes through the In the new system of radio reception developed by Francis R. Hoyt, and called by him "signal augmentation," custom has been laid aside and the systems of the past ignored, and in this radical departure is found a system of radio re-

CIRCUIT AS ORDINARILY APPLIED The feeble radio frequency currents ravelling through the augmentation or amplifying tube do not begin to load this tubo to even a small degree of its amplification possibilities. It was therefore a logical conclusion that the tube should be so connected in the circuit that it could

perform additional duty.

By the circuit combination shown in Figure 2, the augmentation tube is made to function both as a radio and as an audio frequency amplified. This may be called a reflex arrangement, although the performance characteristics are somewha

After the signal has been detected in the way, audio frequency voltage variations lead to simplify the wiring while conform-taking plage in the primary of the transformer are transferred to the grid of the transformer are transferred to the grid of the transformer after having been magnified or HOME CONSTRUCTION "stepped-up" by the transformer. Upon reaching the grid of the augmentation ube these voltages cause an increased cle to specify particular makes of ap-

To-day's Hook-Up



Just as He Tuned in a New Station

detector tube and changed from a radio to an audio frequency impulse, it is communicated to the primary of an audio frequency impulse, it is communicated to the primary of an audio frequency in a rangement is correct where only two quency transformer whose secondary has tubes are used, but where radio and audio been connected in series with the grid frequency stages are added, the rheostats lead of the augmentator tube. In this can be placed in the negative A battery

HOME CONSTRUCTION

While it is not the purpose of this articurrent to flow in the plate circuit and paratus for use in the Augmentation systhia is accompanied by an increased re-

the tube. These currents would otherwise be retarded by the choking effect of the be preferred for use in this system, it has secondary winding.

In this diagram, Figure 2, as well as in the diagram of the fundamental cirable the home constructor to wind these receivers is legal or not.

In the diagram of the fundamental cirable the home constructor to wind these receivers is legal or not.

coils often leads him into almost insur-

mountable difficulties. Therefore, a substitute winding for the coils which places

their construction within the realm of the

average fan and adequately efficient for all ordinary purposes is given herewith.
The illustrations, Fig. 3A and Fig. 3B,

are complete in themselves, although it will not be amiss to describe them to some

extent and to issue one or two cautions,

together, perhaps, with a suggestion for correction of dimensional error in locating

he augmentor or booster coll.

The augmentor coupler has been de-

algued around standard dimension tubing,

Continued on Page Fifteen.

China Has Twenty Broadcasting Stations

Despite existing doubt as to the legality of importing radio receiving sets into China, that country have 20 privately the phones.

A small condenser is connected across the terminals of the secondary of the transformer to permit the incoming radio frequency currents to reach the grid of the schematic wiring diagram.

They are a correspondent of the American transformer to permit the incoming radio frequency currents to reach the grid of the wiring diagram.

They are a correspondent of the American Radio Reiay League. "The Chinese schematic wiring diagram, admits of the readers admits." Press," after making a thorough investiunuse got into China, or how they were
conting an hehalf of its readers, admits obtained by local companies. The assumpgation on behalf of its readers, admits frankly that it does not know whether

It is reported that the Chinese Governnent issued an edict against the importalien of "military" confirment, and in somquarters this term has been applied t

EFFICIENT RADIO SETS

Recommended by Frank G. Hull, licensel Radio Engineer and for the past seven years with the Department of Commerce and Bureau of Navigation. We specialize on The BROWNING-DIAICE set, proven by performance to be easier in tuning, greater in volume and in perfect, pleasing quality of tone. Come in and see this ng quality of tone, come in taid set units set operate to-day. If your BROWNING-DRAKE is not giving you rent results—see us. Also other Radio Sets, built on order. We carry a distinctive line of Radio accessories and also do high-grade OPEN EVENINGS

WILLIAM S. HULL 122 Empire Street.

THE HANSCOM

EASY TO BUILD

EASY TO OPERATE
A second harmonic super heterodyne is the utmost in selectivity. Why bother with less efficient sets? Price of unit alone \$37.50 (tested on at least three distant stations.) Entire set of parts about.... \$80.00

Marshall & Co.

Where they know the neutrodyne DORRANCE STREET
Opp. Narraganacti Hotel



Fig. 2-Schematic Diagram of Hoyt's Augmentor Receiver

What Radio Users Have Been Looking For For those who have had Interference Troubles this new auxiliary tuning device will trap out the undesired stations.

Select Your Stations at Will The air is so crowded with music and voices that ever one you want, and can tune it in loud and clear,

Improved Results with Tube or Crystal Try for yourself entirely at my risk the wonderful improvement this inexpen-sive little device will make in the reco-tion of your set. Sold on absolute guar-antee of satisfaction or money back and the greatest dollar's worth eyer offersel



Amazing Satisfaction or Money Back

STEINITE LABORATORIES, 1024 Radio Bldg., ATCHISON, KANSAS

TRF50

Complete

-With the

equipment de-

and built-in loud

scribed

speaker,

cuming in on one of the stations that was as that. to broadcast an exceptionally fine programme that Smith ran into a few diffi- 100m to-day. culties. It was one of those nights when radio waves were not spanning the ether suggested that I come over and help him locate the trouble, I made no mention

His trouble appeared to be difficulty in getting old."
Smith kne ing him I found he was not trying for anything more than 200 miles away.

"Why don't you try for some station at 700 mile or a thousand?" I suggested "There are a few more distant stations that are so much more powerful than the near-by ones you're trying to get that they should come through very well. Don't condemn your set just because a few stations are not up to par. Tune in on as many as possible and judge conditions from the average. Not only must you figure on variations in the efficiency of the stations, but also on variations in the atmosphere, the earth and many other things that are still a mystery.

"Even your aerial makes a difference Brown down the street tried swinging his aerial in a different direction and discovered that some of the stations he used to get very distinctly became faint. thought he was having radio trouble, but when he tried tuning in for unfamiliar stations he found he could pick up a number of programmes he never had been able to hear before. That, of course, was due to the direction in which the aerial/ran." "That's all very interesting," Smith admitted; "but it looks like a gentle way of telling me that I've got real trouble to-night. I haven't touched the aerial and I neither get the old stations clearly Somethin's wrong. nor any new ones. Now, where do we start looking for it?"
"We start with the easiest things first,

refused to admit assembled sets, and it tuning you must have discovered how delicate a thing your receiving set is, for the slightest position of one of the dials draws he line between getting a station and losing it. The same thing applies to any trouble with the set. That's why the simple things are the basis of most radio troubles. Major troubles with any of

WALTER W. MASSIE

Consulting Radio Engineer

Charter Member Institute of Radio Engineers Consultant to manufacturers, dealers and users of radio apparatus. Shop and laboratory facilities for manufacturing, repairing and testing.

Phone Broad 0507_

It was while getting a little practice in that they make the set inoperative."

"Well, were're in no such predicament connections. They cleaned

the wires. "There's an easier way to look for the radio waves were not spanning the ether trouble than that," I reminded him, "The up to the usual standard, but when he fact that your set is actually working tonight, but does not get the stations with the usual volume, suggests three things: radlo energy reaching the set is weak; the batteries are weak, or the tubes are

> Smith knew how to decide about the He went to the shelf, where he carries a few spare parts, so as not to be caught during a worth-while concert programme and returned with two new tubes. These he inserted first as audio amplifier tubes, then as radio amplifiers. He even changed the detector tube. But the tubes revealed no apparent inefficiency.
> "Now, how are we going to measure the

strength of the incoming signals?" he asked.

"We'll decide that point reads." I explained. -

"Our heads?" Smith puzzled. "Simple enough. Disconnect the aerial connection. Plug in the loud-speaker and lowly turn up the filament control rheostat until we get the customary sound of rushing air, or frying. Note the read-ing on the rheostat dial for the point where you first begin to hear it.".

Smith tried this and found he had to

airn the rheostat dial to 80 before the set vas ready for work. Ordinarily the usual perating point was around 60. "What does that prove?" he asked. "It proves that your 'A' battery-the

torage battery—is way down. 'It needs echarging. "But why was the set working fairly

well last night?" "That was because the ether was more favorable to radio transmission. Also beause a battery gives out faster as it be-onres discharged. You've both condiions to contend with to-night." Smith made a note of the fact that the read is an indispensable part of any good receiving station.

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Radio Cabinets

Why not a genuine Mahogany, little

Robert P. O'Brien

86 Calverly St. Wood and Metal Patterns Cabinet Making, Jobbing

Bronze and Castings Bronzo or at a Few Hours Atuminum Pattern Plates

DOWN delivery of any set. balance payable \$10 Monthly

radio sets. The customs authorities have

is rumored that a considerable stock has

been selzed and held by them. However,

several companies in Shanghai are selling

receivers openly upon instructions of con-

sular and diplomatic officials that the

Government cannot possibly classify radio

The number of persons interested in

radio is increasing constantly, according

to "The Press," which states that it re-

ceives inquiries upon the subject almost

daily. It does not attempt to explain how

the several thousand receiving sets now

tion is that the parts have been imported as "electrical materials" and assembled

In order to keep up with the public demand, which is insistent, magazines and

newspapers, following the example of those in the United States and many other

countries, are printing hook-ups and in-tructions for building home-made sets.

sets as military equipment.

by the dealers themselves.

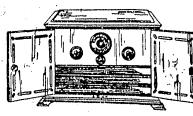
RADIO STORE

Mail **Orders** Promptly Filled

Now-For Dollars and Dollars Less!-Actually Own and Enjoy

The Magnavox

5-Tube Radio Set With the Single Dial Control



T R F-50 With Built-In Loud Speaker At the

Amazing 69.50

The marvelous Magnavox needs no praise. So highly scientific that it brings in distant stations with tonal clearness and richness, yet, so simple with its single dial control that a child can operate it. This model T R F-50 is the home favorite of the two Magnayox

Sets. We sell about 3 of these to 1 of the T R F-5. Every sale is backed up by the service and the guarantee of The Shepard Radio Store, owners of Station WEAN, Rhode Island's first broadcasting station.

Magnavox TRF5

without reproducer at the amazing price-

\$45 Same set with the

latest Magnavox reproducer M 4-

\$57 PLEASE NOTE:

that the M 4 loud speaker is included not the M 1, which is a discontinued number selling regularly at a much lower price than the M 4.

See The High Quality Equipment Included

Compare It With That Which is Offered in Radio Stores Elsewhere

1 Willard A Battery

This is a ninety ampere hour battery.

2 Burgess B Batteries

Regular price of this equipment alone is \$41

These are the largest size 45 volt batteries. Genuine R C A Tubes

TRF5

Complete

-With the

equipment de-

and M 4 re-

scribed

producer.

E. N. RAULAND, Prosident

ALL-AMERICAN

Fartherand faster than the famous Carpet

of Bagdad you can travel with your ALL-AMAX SENIOR. ALL-AMAX Sets are mounted at the factory but not wired, saving you half the price. Wire your ALL-AMAX in one evening and take your first tour the same night.

WIN an ALL-AMAX by submitting a SLOGANask at your favorite radio store. ALL-AMERICAN RADIO CORP.



Fig 1-Fundamental Circuit of the Signal Augmentation Receiver



AUGUMENTATION SET HAS WIDE RANGE

continued from Page Fourteen. and in fact there are on the market one or and in fact there are on the market one or two makes of vario-couplers, which can of No. 28 D. S. C. wire on a piece of three-inch outside diameter tubing of any

The side view, showing the three wind- builder, has on the stator, is shown in Fig. 3A. Careful study of the complete wiring the member of the coupler is made of diagram will instantly show that it is inch length of three (3) inch outside but an evolution of the "Fundamental cir-

and the spacing and gauge of wire are shown on this drawing.

An assembled view of the coupler is the boester or augmenter coil in its position of minimum coupling. This illustration shows the boester or augmenter coil in its position of minimum coupling. This illustration gives the direction of the turns, the proper connections for the plate and 'II' hattery to the boester coil (incidentally this connection is in just the reverse direction to that which it would take were the circuit a single tube regenerator). The argumentation is fundamentally a new circuit to which radio or audio frequency stages of amplification may be added at the will of the construction. The diagram shown herewith is that of the five-tube stages of radio frequency amplification.

It will be seen from the foregoing that the home constructor can construct the fundamental circuit and then add to it either radio or audio frequency amplification may be added at the will of the construction may be added at the will of the construction. The diagram shown herewith is that of the five-tube stages of radio frequency amplification.

It will be seen from the foregoing that the home constructor can construct the fundamentally a new circuit to which radio or audio frequency amplification. ambled coupler unit, showing the proper progress with his experiments,

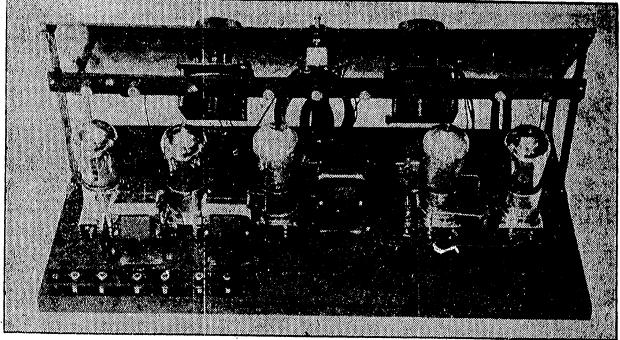
relation of the boaster cell winding to the I.D. or detector winding. This relation is very important, and in the event of an error of consequence the booster may fall to operate, usually this can be compensated by removing a few turns therefrom. But it is highly desirable to avoid the necessity of this adjustment.

The tuned transformer for the radio frequency tube has not been shown in an illustration. This was not deemed necessary because of its simplicity.

length which best suits the purpose of the

diameter tubing-bakelite. The number of cult as ordinarily applied. It should be ums, proper connections for the leads, born in mind that the system of signal and the spacing and gauge of wire are augmentation is fundamentally a new cir-

proper booster turns are also shown here, editier radio or audio frequency amplifi-rig. 4 is a cutaway section of the as-cation as rapidly as it, pleases him to

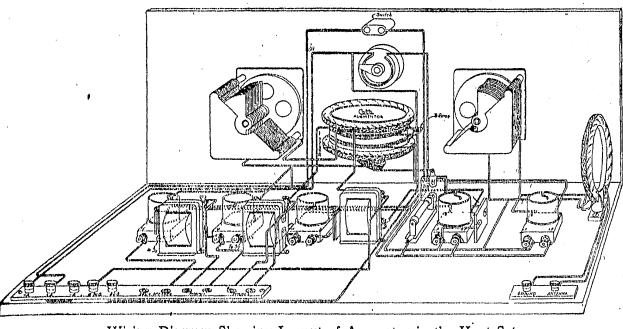


Layout of Hoyt's Augmentor on Circuit

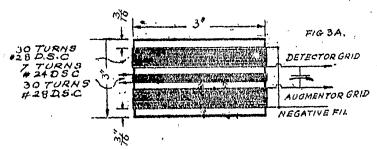
ALL WINDINGS ARE IN COUNTER CLOCKWISE DIRECTION LOOMING ON THIS END. THIS REFER TO ROTOR WHEN AT MAXIMUM COUP

TO AUGMENTOR PLATE

TO "B" 90 VOLTS



Wiring Diagram Showing Layout of Apparatus in the Hoyt Set



RADIO PROGRAMMES

The week's special radio programmes department, Providence Gas Company. announced by local stations begin to-day) with two celebrations in connection with the 150th anniversary of the Battle of Laxington which will be put on the air by WEAN. Additional exercises and concerts will be broadcast by that station to-morrow, 'Saturday, WJAR offers three special programmes, a meeting of the Southern New England Textile Club at which Senators Metcalf and Moses will speak, the opera "Pagliacel" and the testimental dinner to Gen. Pershing, the list two events being relayed from New York. WDWF schedules a concert for

WEAN, THE SHEPARD STORES (270 METRICS)

TO-DAY 11:00 a. m .- Service from Grace Church 1:30 p. m.—Concert from Young's Chi-ness-American Restaurant, relayed from station WNAC.

3:00 p. m. Broadcast direct from the been at Lexington, relayed from WNAC. Auniversary Colebration of the Battle of Loxington, relayed from station WNAC. 1:30 p. m. Broadcast from Lexington Town that of 150th anniversary celebra tion of Battle of Lexington, relayed from

MONDAY. QU 11:55 a. m .- Timo signals.

12:00 m. Colonial Concert Orchestra. Harold Sheffers, director. 12:10 p. m.--Weather report, 12:15 p. m.--Musical programme.

3:30 p. m.—Broadcast direct from the Green at Lexington, Mass. Exercises in observance of the 150th aniversary of the Battle of Lexington. Concert by the Aleppo Temple Fife and Drum Corps (Shriners' Band), relayed from WNAC.

8:00 p. n.—Concert by "The Lamson Entertainers."

9:00 p. m.—Orchestra, glee club and soloists of Mount Ida School, relayed from Matton WNACL TUESDAY. V

10:00 a. m.—Message to housewives by Miss Gladys J. L. Peckham, Home Serv-Department, Providence Clas Com-

11:55 a. m.-Tline signals. 12:00 m.-Colonial Concert Orchostra. 12:10 p. m .- Weather report.

12:15 p. m .- Musical programme 4:00 p. m.-Colonial Danco Orchestra.

4:10 p. m.-Incidental music by the acry Theatre Concert Orchestra, William J. Funcher, director, broadcast from the Emery Theatre.

4:30 P. in.-Weather report.

4:05 p. m.-Colonial Dance Orchestra. 8:30 p. m. Shepard Colonial Orchestra. 6:45 p. m.—Hofman Battery String Trio. 7:15 p. m.—Colonial Dance Orchestra. 7:30 p. m .-- Musical readings by M. Louise Leopotd.

7:45 p. m .- Colonial Danco Orchestra. 8:10 p. m.-Orchestra, relayed from sta-Hon WNAC, Boston,

WEDNESDAY. UV 11:55 a. m. Thuo signals.

12:00 m .-- Colonial Concert Orchestra. 12:10 p. m.-Weather report. 19:15 p. m.-Musical programme, 4:00 p. m .- Colonial Danco Orchestra.

4:30 p. m .- Weather report. 4:35 p. in.-Colonial Dance Orchestra. 6:30 p. m .- Dinner dance from Checker Inn, Cheeker Inn Orchestra, relayed from

8:10 p. m.—Programme arranged by White relayed from the hotel. Mary Delancy Boal, relayed from WNAC.

9:30 p. m.—Dance music, Rhodes Or-

11:65 a. m.—Time signals. 12:00 m.—Colonial Concert Orchestra.

12:10 p. m.—Weather report. 13:16 p. m.—Musical programme. 4:00 p. m.-Colonial Dance Orchestra. 4:30 p. m.—Weather report, 4:35 p. m.—Colonial Dance Orchestra.

6:30 p. m.—WEAN dinner dance, "Icalua Hawalian String Quartet," Ep Westcott, Ev Allebaugh, Dick Barker, Red

FRIDAY 2 11:55 a. m.—Time signals. 12:00 m.—Colonkal Concert Orchestra. 12:10 p. m.—Weather report.

4:00 p. m .- Colonial Dance Orchestra. 4:30 p. m.—Weather report. 4:35 p. m.—Talk, "Book Brevities," member of the Providence Public Li-

8:00 p. m.—Programme to be announced.

0:15 p. m.--Criterion Concert Company.

10:00 p. m.—Emery Theatre Concert Or-chestra, William J. Faucher, director. SATURDAY

10:00 a. m.—Message to housewives, by Miss Chadys J. L. Peckham, home service department, Providence Gas Company, 11:55 a. m.—Time signals.

13:00 p. m.-Colonial Concert Orchestra. 12:10 p. m.-Weather report. 12:15 p. m .- Musical programme.

4:00 p. m.—Colonial Dance Orchestra. 4:30 p. m.—Weather report. 4:15 p. m.—Colonial Dance Orchestra. 0:30 p. m.—Dinner dance, Shepard Co-

lonlal Orchestra. 8:00 p. m.—Orpheus Malo Quartet. 9:00 p. m.-Children's Hospital benefit. broadcast from Cadot Armory, extensive programme of bands, orchestras and entertainers, relayed from Station WNAC.

WJAR, THE OUTLET COMPANY. (800 METRES.)

7:20 p. m.-Musical programme by "Roxy and His Gang" direct from the Capitol Theatre, New York city, by courtesy of the Capitol Theatre management and S. L. Rothafel (Roxy). The first part of the programme will be taken direct from the stage of the theatre and will consist of music by the featured artists and the Capitol Grand Orchestra. The second testimental to Gen. John J. Pershing, part of the programme will consist of a commanding General of the American Expecial presentation by Mr. Rothafel, of peditionary Forces during the World War, vocal and instrumental artists direct from relayed from the New York Hippodrome. the broadcasting studio in the theatre. 9:15 p. m.—Organ recital direct from the studio of the Skinner Organ Company, Now York city. MONDAY.

10:00 a. m .- Housewives Radio Exchange. A department conducted by Mrs. Wood on all matters of household interest. 1:08 p. m.—Juliana Allon, soprano; Carl Agornick, Miss Allco McHugh, reader. 7:45 p. m.—Mrs: George Hall, speaking under the auspices of the National Federation of Music Clubs on the biennial convention of the federation to be held in

Portland, Or., in June.

8:00 p. m.—Programme under the direction of Marguerite D. Enstwood, contracto,
Vora. Enstwood Miller, accompanist, as-

by Frank G. Stroetor.

9:00 p. m.—A. & P. Gypsy String Ensemble relayed from New York studio. 10:00 p. m.—Frank Mayo, sereen star in "Six Days," will talk through the courtesy of the Fays Theatre management.

TUESDAY.
1:05 p. m.—Providence Biltinore Hotel Orchestra under the direction of Brwin

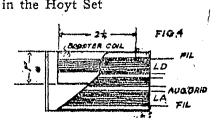
7:30 p. m.—Borine Selgel, violinist; J. Emmett Kolly, Dublintanor.
8:00 p. m.—H. F. Zambrano, speaking under the auspices of the Providence Safchestra, direction Charles E. Cuivorwell.

THURSDAY

THURSDAY

Liss Gladys J. L. Pockham, home service

Sanmett Korry, Manhamano, speaking under the suspices of the Providence Saft, oty Council. Subject, "Good Housekeeping in Industrial Plants."



8:05 p. m.—Fred C. Dettz, bass solois 8:15 p. m.—Roy Partington, tenor solo 8:30 p. m.-Gold Dust Twins direct from

cur New York studio.

9:00 p. m.—"Eveready Hour."

WEDNESDAY.

WEDNESDAY.

10:00 a. m.—Housewives Radio Exchange. A department conducted by Mrs Wood on all matter of household interest.

1:05 p. m.—Studio programme.

7:30 p. m.—Programme from our New York studio. Concert by the United States Marine Band under the direction of Capt. William H. Santelmann, direct from Ma-rine Barracks, Washington, D. C.

9:00 p. m;—Chalmers Ensemble assisted by Easton Kont, tenor, and Raymon's O'Brien, baritone.

10:00 p. m.—Spanish programme with Knickerbocker Trio, William Tucker, baritone; Thomas Fletcher, tenor, and Vera Madine, contratto.

THURSDAY. 1:05 p. m .- Studio.

7:30 p. m.—Engene P. McKenna, tenor soloist.

S:00 p. m.—Beethoven Quartet consisting of Mrs. May Evans Scott, Harry C. Webb, Mrs. Grace E. Johnson, Mrs. Carolyn Bongarty.

0:00 p. m. William H. Lippmann, baritone; George B. Dowd, bass, and Robert W. Field, organist and director.

3:15—Broadcast, direct from Faneuli Hall, Boston, commemoration of the state of t lyn Bongarty.
0:00 p. m.—"Atwater Kent Radio Art-

10:00 p. m,-"The Silvertown Chord Orunder the direction of Joseph

10:00 a. m.-Housewives Radio Exchange. A department conducted by Mrs. Wood on all matters of household interest. 1:05 p. m.—The Woodstock Orchestra inder the direction of Martin J. Casey. 8:00 p. m .- Programme under the direction of Florence Mulvoy Vanesse. 0:00 p. m.—"The Maine Creamery

11:00 p. m.-Providence Biltmore Hotel Danco Orchestra under the direction of room of the Providence Blitmore Hotel.

2:30 p. m.—Southern New England Tex-tile Club dinner from the ball room of the Providence Biltmore Hotel. Speakers, Senator Jesse H. Metcalf of Rhode Island, "Some Experiences of a New Sena-tor;" Senator George H. Moses of New Hampshire, "Taxation in Its Relation to

the Enterprise of the Country."

10:00 p. m.—Programme relayed from our New York city studio. Leon Cavallo's "Pagklacel," conducted by Casare So dero, will include grand opera performers with 30 picked men from the American Orchestral Society.

Speakers, Gen. Drain, National Com

COLLINS AWNINGS Union 4683-W

291 Dyer St.

Prov., R. J.

BOOSTER COIL 40 TURNS # 30 D.S.C mander of the American Legion; Hon Newton D. Baker, ex-Secretary of War,

and Augustus Thomas, master of ceremo-WDWF, DUTEE W. FLINT, INC. (441 METRES)

and Gen. John J. Pershing. The enter-

taining features on the programme will include Mme, Jeritza, Mme, Schumann Heink, John McCormack, Reinald Wer-

rentath, George M. Cohan, Al. Jolson, Ed-

die Cantor, Marilyn Miller, Julia Arthur

TO-DAY 5:00 p. m.—Concert, Venetian Serenaders; John Fitzpatrick, organist.
THURSDAY. 7:30 p. m.-Organ recital by Aurele For-

WGBM, T. N. SAATY

(284 METRES) WEDNESDAY, 6:30 p. m .- Violin recital by Max Mill-

man, pupil of Miss Evangeline Lawy. 8:00 p. m .-- Concert by Sullivan's Or-

0:00 p. m.-Announcement of programmes of classical music, and concerts arranged.

WCTS, WORCESTER, MASS. (208 METRES)

7:20 p. m.—"Roxy and His Gang." 9:15 p. m.—Organ recital.

WBZ, SPRINGFIELD, MASS.

(388.3 METRES)

TO-DAY 10:55-Church services from the Church of the Unity, the Rev. Charles A. Wing, pastor. Music by the Philharmonic Male quartet, Raymond C. Hodge, first tenor; William H. Lippmann, baritone; George

American revolution. Speakers will include Gen. Pershing, city and state offi-

cials. 7:00 P. M.—Concert by the Copley-Plaza orchestra, under the direction of W. Ed-ward Boyle, with assisting soloist. 8:00—Concert by Elizabeth Bates, contralto, accompanist by Juliette Houll.



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Pawtucket Rendering Company PAWTUCKET, R. I. Branch of Consolidated Rendering Co., Tel. "Pawt. 8005"

8:30—Patriotic talk by Col. Branton 9:00-Concert, broadcast direct from the Estey organ studio of organ solos by John

FIG 3B

WHN, NEW YORK CITY

(861 METRÉS) TO-DAY.

1:00 p.,m.—Organ Recital, Loew's Lexngton theatre. 3:00 p. m.—Queens County Christian

Endeavor program.
4:00 p. m.—Silvio Volpe, baritone. 4:15 p. m.-Music Lovers' Association, 5.30 p. m .- Olcott Vail and His String

10:00 p. m .- Gem Razor Entertainers.

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CLEARTRON

10:45 p. m.-Janssen's Hofbrau Comnanders Orchestra. 11:16 p. m.-Standing by for DX fans.

WNYC, NEW YORK CITY (526 METRICS)

11:00 a. m -- Communion breakfast of the Catholic Daughters of America, Court St. Catherine, 779, direct from Hotel St George, Kathryn J. Smith, presiding speakers, Mgr. John B. Belford, Mrs William H. Good, Grover A. Whalen, Judge V. Bernard Vause, Judge Alonzo G. McLaughlin and Edward T. O'Lough-

lin, park commissioner. 9:00 p. m .- Programme from the stage and studio of the Brooklyn Mark Strand Theatre, direction of Edward L. Hyman

KDKA, EAST PITTSBURGH, PA. (800 METRES)

TO-DAY.

11:00 a. m.—Services of the First Unitarian Church, Pittsburgh, Rev. C. Walter Mason, pastor. Dr. Kirsopp Lake of Harvard University, will preach, the subject being "The Religion of To-morrow."

2:30 p. m.—Concert by the Westinghouse Symphony Orchestra, conducted by Victor Saudek.

4:00 p. m.—Organ recital by Dr. Charles Heinroth, director of music of Carnegle Music Hall, Pittsburgh, broadcast directly from Carnegle Music Hall, Pittsburgh. 4:45 p. m.—Vesper services of the Sha dyside Presbyterian Church, Rev. Hugh Thomsono Kerr, pastor.
6:30 p. m.—Dinner concert by the Pitts-burgh Athletic Association Orchestra, un-

der the direction of Gregorio Scalzo.
7:30 p. m.—Services of the Calvary
Episcopal Church, Pittsburgh. Rev. E.
J. Van Etten, pastor.

KGO, OAKLAND, CAL. (861 METRES) TO-DAY 2:00 p. m.—Service of St. Luke's Epis-

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copal Church, San Francisco, Rev. W. W. Jennings, rector. 6:30 p. m.—Concert, KGO Little Symphony Orchestra, Carl Rhodehamel, conductor; Arthur S. Garbett, musical interpretative writer; guest artists.
11:00 p. m.—Service of St. Luke's Episcopal Church, San Francisco, Rev. W. Jennings, rector.

KGW, PORTLAND, ORE. (491 METRES)

m.—Service from First Presbyterlan Church, Dr. Harold Leonard Bowman, pastor. 9:00 p. m.—Church services provided by Portland Council of Churches. 10:00 p. m.—Dinner concert by Colburn

Continued on Page Sixteen.

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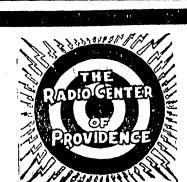
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7:30 p. m .- "How Granny Told the

WLS, CHICAGO, ILL.

(345 METRICS)

TO-DAY.

7:30 p. m Organ recital, Ralph, Em-

WOAW, OMAHA, NEB.

(526 METRICS)

TO-DAY.

associates of the Omaha Cospel Taher

4:15 p. m.—Matinee programme, ar-ranged by W. C. Kuchn. 8:00 p. m.—Bible study hour, under the

personal direction of Mrs. Carl R. Gray, 11:00 p. m.—Musical chapel service,

WOO, PHILADELPHIA, PA.

(508 METRES)

TO-DAY.

afternoon session of Bethany

organ by Clarence K. Bawden,

Dr. A. Gordon MacLennan.

10:00 a. m .-- Chimes from

Congregational Church.

cathedral.

7:30 p. m.—Evening services Bethany Presbyterian Church.

2:30 p. m.-Musical exercises opening

m.-Sacred recital on

casting will include an organ recital from

7:30 to 7:45 with Miss Caroline Quigg at the console; sermon by the pastor, Rev.

WREO, LANSING, MICH.

(285 METRES)

TO-DAY.

10:30 a. m.—Servical from Mt. Paul's Episcopal Church. Rev. Virgil Boyer, pastor; Bruce E. Hartsuch, organist-choir director.

WWJ, DETROIT, MICH.

(358 MICTRES)

11:00 a. m.—Services at St. Paul's Episcopal Cathedral, broadcast from the

2:00 p. m .- The Detroit News Orches-

tra, Charles A. Payne, speaker.
7:20 p. m.—"Roxy and His Cang."
9:15 p. m.—Organ recital.

Sunday

Benson Methodist Episcopal Church.

Twentieth and Douglas streets.

Bible Stories" by Dream Daddy.

OPERATES RADIO WITH ONE HAND

Disabled War Veteran Tunes in on Distant Stations.

Five-Tube Receiver Means of Bring-

was a member, led him to the bureau and set, about obtaining the affidavits and other in the world." Is the title claimed for Robert F. Birmingham, a disabled World War Veteran in the United States Veterans' Bureau Hospital at New Haven Classics.

tean stations.
"Here again, the beneficial effects of

"Here again, the beneficial effects of radio are to be noted," Dr. L. B. Rogers, medical officer in charge, said regarding the case, "for Birmingham's condition is formed invaluable service.

Although the beneficial effects of salight discontent which often overcomes even the most cheerful disposition under similar circumstances, the radio performed invaluable service. such that rest and contentment are two

Legion, James A. Drain, will deliver an address, through a national tie-up of stations, on the needs and purposes of the pital, he states, will be to obtain his final American Legion Endowment Fund for the papers as a citizen of the United Stines.

disabled veterans and the orphans of for iner service men.

Birmingham onlisted in Battery F. Three Hundred and Fifth Field Artillery, Seventy-seventh Division, and was sent overseas one month after he entered the service. He served in all the engagements of the Seventy-seventh Division until September of 1918, when he was sent back the lines suffering from amoebia hystolitica dysentery, contracted in Camp

DeSough, France, Birmingham was gradually invalided back to the United States, and upon discharge returned to his pre-war job as a salesman. He then became manager of an art department in a New York city store. Although his physical condition was not good he stuck to his work for two years, consulting with doctors almost continually

in an endeavor to cure the allment.
Finally A. L. G. Fritz, Commander of Richmond Hill Post, No. 212, of the American Legion, of which Birmingham was a member, led him to the bureau and

Note that the United States Veterans' Bureau Hospital at New Haven, where Hureau Hospital at New Haven, Conn.

Birmingham learned to operate his radio receiving set with one hand during two years he has lain in the hospital, his body and right hand encased in a plaster cast. He owns and operates a five-tube neutrodyne set with a loud speaker attached that brings the entertainment of the air to several bed patients in a surgical ward.

Making one-handed adjustments and tunings, Birmingham has picked up Call-

Making one-handed adjustments and tunings, Birmingham's steady improvement during the last two years. With the fornia, Cuba, Porto Rico and stations throughout the United States and Canthroughout the United Sta that he was given no time to become dis-contented and restless. In eliminating that

Although he now is looking forward most important factors, in fact, rest is by far the most important."

April 25 will be a big day for Birming-ham, when a national tribute will be paid to tien. Pershing by the American Legion and the programme broadcast from New York. The National Commander of the last of the programme broadcast from New York. The National Commander of the last of the programme broadcast from New York. The National Commander of the last of the National Commander of the National Co

RADIO PROGRAMMES

Continued from Page Fifteen.

KNX, LOS ANGELES, CAL. (887 METRES)

1:00 p. m. First Presbyterian Church of Hollywood. 8:00 p. m. Itadio sunset service, Wil-shire Congregational Church, conducted Rev. Charles F. Asked, D. D., Lin D., and Rev. Frank Dyer, D. D.

10:00 p. m. -Pirst Presbyterian Church 11:00 p. m. Ambassador Concert Or-hestra, Josef Rosenfeld, leader. 12:00 Midnight—Programme by R. C.

KOA, DENVER, COL.

(333 METRES) TO-DAY 1:00 p. m.—Service of Trinity Methodist Episcopal Church, Denyer, Roy, Loren M.

Edwards, D. D., minister. 6:00 p. m. Sunday afternoon music hour; organ and Trinity Orchostra recltat from Trinity Methodist Episcopal Church, Denver; Shad J. Tinsley, organ-1st and director.

9:30 p. m. Service of Trinity Methodist Episcoped Church, Denver, Thomas B. Greene, Chaplain General, National So-ciety of the Sons of the Revolution, WEMC, BERRIEN SPRINGS, MICH.

WEAF, NEW YORK CITY

3:00 p. 10...."Sunday Hymn Sing," under the auspices of the Greater New York Pederation of Churches, Dr. William B.

Millar, presiding officer.

4:00 p. m,-Interdenominational services under the auspices of the Greater New York Pederation of Churches, Address by Roy, E. W. Miller, pastor, Flemington Baptist Church, Flemington, N. J. Music by the Federation Radio Group and Male Quartet, consisting of Louis Calon, tenor; Edith Hallett Frank, soprano; William H. Brewster, pass and organist: Mildred Bryars, contraite; Arthur Billings Hunt,

Vause, accompanist, and Aldo Brass Quar-Concert Orchestra of Hotel Portland; Intermission solos.

7:20 p. m.—"Roxy and His Gang." 9:15 p. m.—Organ rocital.

KYW, CHICAGO, ILL. (536 METRES) TO-DAY

Noon-Central Church service 12:00 from Orchestra Hall, Chicago, Rev. Dr. Pleadilly Theatre. P. P. Shannon, pastor. 9:30 p. na.—Verd!

5:00 p. m.—Studio concert. 8:00 p. m.—Chicago Sunday Evening Club service from Orchestra Hall, Chicago. The musical programme will be under the direction of Edgar Nelson. The speaker of the evening will be Henry Van Dyke, Princeton, N. J.

> WCAE, PITTSBURGH, PA. (461 METRES)

10:15 A. m .- Services from Rodef Shalom 3:00 p. m.-People's Radio Church serv-

4:00 p. m .-- Plano recital by Prof. Otto Kalleis. 6:30 p. m. Dinner concert transmitted

(285 METRES)

12:00 noon-Studio Chapel service: Miss 3:35 p. m.-WGY Symphony Orchestra, Opal Hoover, saxophonist: Miss Mary Leo Kilwen, conductor? Mary C. Nally, Lainson, reader; sermon, Pastor, W. R. contraito, soloist. French.

house Choir: sermon, Pastor John Knox.

WCCO, MINNEAPOLIS-ST. PAUL (416 METRES) TO-DAY,

10:20 a. m .-- Plymouth Congregational

Church, Minneapolls, Roy H. P. Dewey, D. D., pastor, 3:30 p. m.—Surprise programme, 7:45 p. m.-Hennepin Avenue M. E.

To-day's Programmes in Brief

For the convenience of radio fans, the following hourly schedule of broadcasting to-day is given in brief form, the complete programme being given under the regular listing of announcements. The hours are based on Bastern Standard time.

LOCAL STATIONS 11:00-Church, WEAN. 1:30 -- Concert, WEAN. 3:00- Patriotic programme, WEAN. 5:00-Recttal, WDWF. 7:20-Rosy, WJAR.

7:30--Patriotic programme, WEAN. 9:15-Organ recttal, WJAR. . .

OUT-OF-TOWN STATIONS 9:00-Children's hour, WJZ.

10:20 - Church, WCCO, Chimes, WREO. 10:30-Church, WGY. Church, WRIGO.

10:45-Ghurch, WIP. Church, WCAE. 10:55 -- Church, WBZ. Church, KDKA Addresses, WNYC. Church, WCAP.

Church, WJZ. Church, WOAW. Church, WWJ. 12:00 Church, KYW. Chapel, WEMC 1:00-Church, KNX. Church, ROA.

Organ recital, WHN. 1:30 - Church, KCIV. 2:00~Church, KGO. Concert, Whir. Orchestra, WWJ 2:30 - Bible class, WJZ. Music, WOO.

Concert, KDKA. - Church, WCAE. Church, WHN. Hynns, WEAR. Vespers, WGR.

Vespers, WGR.

3:15---Patriotic exercises, WBZ.

8:30---Music, WGBS.
Specialty, WCCO.
Concert, WIP.
Tection, WJZ.

3:55---Vespers, WJZ.

4:00---Organ Fectial, KDKA.
Rectial, WBZ.

Recital, WBZ. Plano recital, WCAE, Church, WCAE, Church, WEAF. Organ recital, WGR

4:15—Concert, WOAW. Music, WHN. 4:45-Vespers, KDKA.

5:00—Concert, KYW. Vespers, WIAS. Orchestra, WHN. 5:30-String trio, WHN

6:00—Organ recital, WOO. Concert, KOA. Orchestra, WLTT. 0:30 -- Concert, KDKA. Concert KGO. Orchestra, WFHI., Concert, WCAE.

7:00—Orchestra, WBZ. Orchestra, WJZ.

7:15-Organ rooltal, WGR. 7:20—Roxy and His Gang, WEAF, WEEL, WCAP, WWJ, WCTS. 7:30-Church, WGY. Church, WOO.

Church, WGR. Church, WREO. Bible story, WLIT. Church, KDKA. Recital, WLS.

7:45-Church, WCCO. 8:00-Church, KNX. Religious service, KYW. Concort, WBZ.

Bible study, WOAW. 8:15—Orchestra, WJY, Concert, WJZ, WGY, 8:30—Patriotic talk, WBZ, 9:00—Organ recital, WBZ,

Specialty, WNYC, Church, KGW, 0:15--Organ rectiol, WCTS, WEAF, WEST, WCAP, WWJ. Concert, WCCO. Chapel, WEMC.

P:30-Concort, WBGS. Recttal, WJZ, WGY. Church, KOA.

Church, KNX. Talk, WJY, Music, WHN.

10:45-Orchestra, WHN. 11:00-Church, WOAW, & Concort, KNX. 12:00 -Concort, KNX.

Brings In DX With One Hand



Tuning Record Claimed for Robert F. Birmingham, Disabled Veteran in New Hayen Hospital

Church, Minneapolis, Rev. Lucius H. Bugbee, D. D., pastor, 9:15 p. m.—Classical concert—Miss Evelyn Hanson, planist; Miss Ingeborg, Olund, planist; Paul Davin, tenor; Mrs. Eleanor Freemantel, accompanist.

> WEEI, BOSTON, MASS. (476 METRES)

7:20 p. m.—"Roxy and His Gang." 9:20 p. m.—Organ recital."

(489 MERIOS) TO-DAY. 11:00 a. m.-Service from Church of Christ, Scientist, of Washington, Elmer I. Baldwin, first reader; Mrs. Gertrude K. Fullaway, second reader. Sub-Ject; "Doctrine of Atonement." Mrs. Flora McGill Keefer, contralto soloist; C.

WCAP, WASHINGTON, D. C.

1. Ashton, organist.
4:00 p. m.—Service Chapel of the National Episoopal Cathedral at Mt. St. Alban, Washington. The Rt. Rev. James E. Preeman, bishop of Washington, will deliver the sermon. 7:20 p. m.—"Roxy and His Gang." 9:15 p. m.—Organ recital.

> WFBL, SYRACUSE, N. Y. (252 METRES)

6:30 p. m.-Bob Aldnich and his orches-

WGBS, NEW YORK CITY (816 METRICS) TO-DAY

ne-Musical programme from 9:30 p. na-Verdi's "Traviata," by Corriero D'America. Complete chorus and or-

> WGR, BUFFALO, N. Y. (819 METRES) TO-DAY

8:00 p. m.—Vesper services by the Lay 7:30 p. m.—Services from First Baptist Club.
4:00 p. m.—Organ recital by Robert tor. Mrs. Henry Chambers, organist. Evangelist Club.

7:15 p. m .- Pre-service organ recital, direct from Central Presbyterian Church, William Wall Whiddit. 7:30 p. m.—Evening service, Rev. R. J MacAlpine, D. D., minister.

WGY, SCHENEDTADY, N. Y. (879 METRES)

10:30 a. m .- Service of Madison Avenue Reformed Church, Albany, N. Y., Rev. Dr. Richard Locke, pastor.

9:15 p. m.—Rose Room Studio Chapel Reformed Church, Albany, N. Y., Rev. Bervice: Brosst Hurd, tenor; Radio Light-8:15 p. m.-American Orchestral Society

9:30 p. m -- Violin recetal by Godfrey

WHAS, LOUISVILLE, KY. (400 METRES) TO-DAY

10:57 a. m.—Organ music. 11:00 a. m.—Church service, under auspices of the Broadway Christian Church, the Rev. Dr. W. N. Briney, pas-H. W. Long, organist.

5:00 p. m. Vesper song service, under the auspices of the Mrst Unitarian Church, the Rev. Dr. Lon R. Call, minister; soprano soloist, Velda Grant Kelleher; baritone soloist and accompanist, Reginald W. Billin.

WIP, PHILADELPHIA, PA. (500 METRES) TO-DAY

10:45 a. na.—Morning service, broadcast direct from Holy Trinity Church, Rittenhouse square, Philadelphia, Rev. Floyd W. Tomkins, D. D., rector. 3:30 p. m.—Concert, under the auspices of the Philadelphia Music League, broad-

> WJY, NEW YORK CITY (405 METRES)

Arts, Philadelphia.

TO-DAY 8:15 p. m.-Bernhard Levitow's Hotel Commodore Concert Orchestra. 10:00 p. m.—"Remindscences of a Re-corter," William H. Crawford.

> WJZ, NEW YORK CITY ' (455 METRES)

9:00 a. m.—Children's hour: Original stories by the authors, music by the composers; comic stories by the originators 11:00 a. m.—West End Presbyterian Church services; sermon by Dr. A. E.

2:30 p. m.-Radio Bibly class, under auspices of Greater New York Federa. tion of Churches; Church Community Chorus, under direction of Clarence W.

8330 p. m .- Edith Connor, harpist. 3:55 p. m.-St. George's Episcopal vesper services; Sixteenth street and Stuyvesant square; rector, Dr. Karl Reiland; organist and cholmaster, George W. Kemmer; Mozelle Bennett, Rolland: 7:00 p. m -- Nathan Abas's Hotel Penn-

sylvania Concert Orchestra, 8:00 p. m.—Viola K. Sherer, seprano, 8:15 p. m.—American Orchestral Ro-dely, direct from Cooper Union, 9:30 p. m.—Godfrey Ludiow, violinist.

WLIT, PHILADELPHIA, PA. (894 METTEES) 2:00 p. m. Special concert by the Ar-

cadla Concert Orchestra, Prof. Feri Sar-6:00 p. m.-Benjamin Franklin Hotel TRANSOCEANIC 'PHONE

London-New York Service Within Yea:

Predicted. Scarcely a month ago two eminent American radio experts made the prediction that within a year telephone sub-scribers in New York would be able to ring up London from their own homes; and now experiments being carried out by the British Post Office at its plant at Rugby seem to indicate that that proph-

ecy will soon materialize into fact.

The main difficulty in establishing a line of this sort is the problem of maintaining a reliable service during the daytime when heavy atmospherics have made long-distance wireless telephony impossible. But with the recent invention of the thermionic tube, and the addition of improved apparatus which is now in ise it is thought that this difficulty may be almost entirely overcome.

Clear two-way telephone communicaion has already been accomplished by the Rugby station with America; and it is the ilm of the Post Office to establish a service by which subscribers may be con-nected with New York within five minites, while calls for Chicago and other cities will be relayed from New York.

COMPOSERS WIN

German Stations Must Give Percentage Concert Orchestra, W. Irving Oppenheim to Writers.

> The German broadcasting system has eccived an adverse decision in the verdict given by the Court of Appeals against the high governmental authorities behind the wireless programmes in a case brought by Germany's greatest dramatic author and novel writer, Gerhardt Hauptman. At the same time Hauptman complained that bits from his works were being read by actors, the librettist of Richard Strauss's operas, Hugo von Hoffmann-

sthal, ran a parallel case.
The court has decided in favor of the writers, who stand to lose too much in the 11:00 a. m.—Radio chapel service, conducted by Rev. R. R. Brown and his way of royalties, it is claimed, while the broadcasting companies make too much out of their talents if radio performances are given free of all percentages to the riters of plays, songs and books. The authors' standpoint in the contro-

versy was that every actor is paid, and every member of an orchestra who engage in broadcasting, so that they saw no reason why the brains behind the whole should be the only losers.

Battery Causes Fading. Fading of distant stations may be cused at the receiving end through slight drop in the voltage of the "A" "B" battery. This condition may be recognized by tuning when the signal begins to fail, indicating battery trouble if the

signal can be brought back immediately.

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Ever spend the day fishin 'way up in Maine, then come back to camp and hear them sizzle in the frying pan? Even the wife who linter to cook won't let anyone else prepare the

GET THE BOOK

"In the Maine Woods 1025." It proves that women do fish in Maine. More than that it gives the principal waters—the rates for guides—holds—camps—distances from R: R. stations, It assures you that you and your family can be as safe and as cosy in the shade of old Mt. Kathadia as you are at home. It answers your vacation problem.

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FRUIT

The Clearance Sale of our high-grade California Fruits and Hawaiian Pineapple the past week has greatly reduced our stock. Of the 50 items there may be 35 items remaining that we can safely reduce a bit further. For the benefit of customers who did not have the opportunity to stock up at the reduced prices, we will continue the Sale Monday Only.

California Asparagus. We have several hundred cases of Canned Asparagus packed by the same concern who packs our high-grade Fruit, the Pratt-Low Preserving Co. We are going to offer the whole line at 10% to 25% cut for the next few days. Stock up. It will 💂 pay you.

500 dozen of No. 2 Canned Sauerkraut, a 40c seller. Will sell to-morrow and while it lasts at 8c, or 87c dozen.

MONDAY SPECIALS

FRESH CAUGHT MACKEREL 25c lb FRESH PORK BLADE STEAK. 34c lb 1000 lbs SMALL SMOKED SHOULDER, 17c lb PACKAGE LARD, 1-lb cartons......20c

PORTO RICO PINEAPPLES.

25c, 35c, 40c each POTATOES20c peck

R. I. ASPARAGUS DAILY PLENTY OF CALIFORNIA ASPARAGUS FINE CAROLINA STRAWBERRIES MONDAY AT MUCH LOWER PRICES

380 PERFECTION BLEND TEA 340 lb 35c PURE CIDER VINEGAR.....25c gallon 12c MACARONI AND SPAGHETTI...3 lbs 25c 6c ROLLED OATS40 lb

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BALDWIN TOMATOES 3 cans 40c—6 cans 75c Reg. 14e each

A PAIL OF SOAP 2 bars IVORY SOAP 15c pkg IVORY SOAP FLAKES 10c bars P & G WHITE NAPHTHA SCAP 1 pkg CHIPSO . pkgs STAR NAPHTHA WASHING POWDER. 10c

1 10-qt GALVANIZED IRON PAIL

Pies Snaps 18c each 2 lbs 23c

25c lb Best Green Mountain Maine Potatoes - - 20c pk

Cucumbers ...15c each 2 for 29e

Rhubarb 12c lb

Florida Cranges 45c doz Grapefruit 4 for 25c

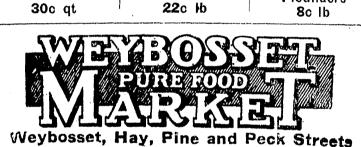
Wrapped Pennut

Nougatines

Best Rhode Island Eggs - - - - 2 doz 79c

Fresh Ground Hamburg Steak Stewing Beef Stewing Lamb 12c lb 13c lb 6c-8c-10c lb

... **30**c jar Boiled Ham Olives Reg 35e Fresh Opened Strictly Fresh Block Clams Haddook Spawn Flounders



SPECIALS FOR MONDAY

DOMINO Granulated SUGAR 10 lbs. for 55c

(In Sanitary Cloth Bags) Sold at the Store Between the Hours of 9 to 12 in the Morning and 2 to 4 in the Afternoon, Delivered Only

With Other Goods

EXTRA FANCY Green Mountain Potatoes - - - - 20c pk

2-Bu. Sack for \$1.49

Genuine Spring Lamb Chops...39c to 65c lb Fancy Veal Chops......25c to 49c lb Fresh Pork Chops......20c to 38c lb Fresh Ground Hamburg Steak . . 2 lbs for 25c Fresh Cut Lamb for Stewing . . . 3 lbs for 25c Best Creamery Tub Butter....2 lbs for 93c Providence Cured Finnan Haddie 9c lb Fresh Opened Clams30c qt

There is nothing unusual in the fact that the Billmore Market is crowded every day. We've got the goods and our prices are right—that's why shoppers patronize the Biltmore Market. Then, we are conveniently located -just a step from your trolley car. Ask anyone who trades here to name the leading market in town.

"If It's a bargain, It's at the Biltmore Niarket."

