THE OMAHA BEE: SATURDAY, MARCH 28, 1925.

E WORLD OF RA

Patent Office Change Lauded

Radio Men See Benefit in Transfer to Commerce Department.

New York, March 27 .- The executive order of President Coolidge transferring the United States patent office the Department of the Interior the Department of Commerce thereby placing it under control of Secretary Herbert Hoover, was defined by Dr. Lee De Forest, "father of radio," as "the most forward step in the history of the patent office since its creation in 1790.

The importance of the patent system. Dr. De Forest pointed out, is based on the first article of the constitution of the United States and takes precedence over the clauses in the constitution giving congress the right to declare war, to raise and sup-port an army and navy, or to constitute inferior federal courts below that of the United States supreme court.

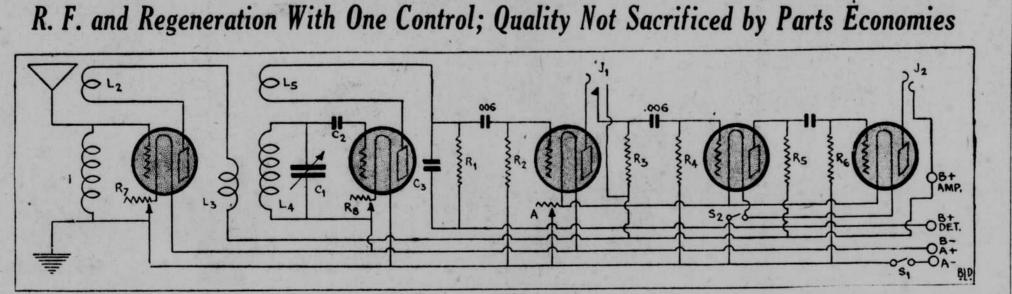
"That indicates how important the single-control regenerative progress and protection of science to authors and intake recognition that it is pitifully undermanned and pitifully underpaid, it will have rendered a service to the advancement of science and art in no further need of varying them. this country the value of which is They remain fixed for all time. inestimable," Dr. De Forest said.

Slow Progress.

"This blindness of congress is rebstacles to modern progress created because it does not seem to understand the tremendous volume of work the bureau is required to do. Though ing over 50,000 patents and trade marks each year, it requires 12 months ore to get an application through. finally passes to bring this about will higher wavelength stations. much toward the etching of his

the hall of fame and have siness men in the United States."

Samuel E. Darby of patent unlike any other, permits the audi ounsel for the De Forest Radio com- bility of signals in a regenerative cir any, and Dr. De Forest, former chief cuit over the entire erk of the United States patent of range below that of resonance. When member of the examining other tubes are used the signal us ed that, while the patent ually disappears as soon as division was in effect an independent tickler is detuned slightly. bureau, the change to the Department over, the combination of circuit and the center for the two colls. of Commerce was a step for greater tube makes for such sensitivity that



Tuned radio frequency plus regeneration and resistance coupled amplification all on a single control. The two feedback coils are adjusted to the operating point and felt without further adjustment.

Those desiring to make their own

winding the primary 1/2-inch or more

By SIDNEY E. FINKELSTEIN. A. M. I. R. E.

transformer type. The great purity of the signal qual mally 23 plates, and should be of continued for 13 more turns, making The rheostats need not be adjusted When one employs regeneration it usually means a two-control set, ity led to the desire to preserve it good construction, along genuine low, a secondary with a total of 53 turnseven when no radio-frequency is in all its beauty, hence resistance loss lines. For best results on dis 1. e., 30, 10 and 13. Likewise the RF though perhaps distance reception used ahead of the detector. However, coupled audio-frequency amplification tance a vernier dial is necessary, but coil might be of the Lorenz type, each may be cleared up a little by testing was used by the designer. However, for local reception the vernier will not comprising 28 turns of the No. 18 wire, these filament resistances for best reit actually is possible to have a

the circuit is entirely satisfactory if be necessary. framers of the constitution considered cluding a stage of radio-frequency the usual two stages of transformeramplification. Such a receiver is duce the number of tubes to four shown in Fig. 1. Both plate ventors. Now, if this congress will coils, L2 and L5, are variable, in that somewhat lessening the quality, but not reducing the volume their position may be adjusted until The R. F. inductance, L1-L2, is as possible to the primary in the is to start with tight coupling, due the last two audio tubes when you're best results are obtained, but once most easily wound on two spider-web interest of greater stability. If great. to the unlikelihood of being required listening on earphones. that position is determined there is forms of any convenient size, say, er selectivity is found vital this to change that.

5-inch outside diameter with about coupling may be made looser by rea 11/2-inch hub. The size is not im-The two semi-adjustable ticklers are interrelated in their action, the portant, except that it be large enough to accommodate the winding the primary at least 1 inch from one actual effect of the RF tickler being which in each instance nsible for long delays and other of the detector stage tickler. It is that of a sort of vernier adjustmen true indeed that regeneration doubled up, an unsatisfactory and unstable combination where both constantly require control. But in this circuit the tickler, L5, is so placed that it gives best regenerative or more to get an application through. This could be accomplished with in-tion to be received. Thereby the set creased pay and personnel, and the will not spill over on any of the

have been able to tune in the local

Sodion Is Advised. The success of the circuit is mad

More-

to insert two dowels in each coil, at would be the same as if the coil were adjacent turns, and glue these dowels into the baseboard, where holes of all forward-looking possible largely by using the new have been drilled at a slight angle for Sodion tube as a detector. This tube. this purpose. the second coil support are drilled. of course, the best inductive position

setting of the coils should be determined. This

usually will be one of tight coupling.

The plate of the RF tube is con-

al language is destined to play in the

future development of radio. They

and the stands to be the the strate and the second second

The tickler is wound on each and the spokes pulled out, the diameter and consists of 24 turns of is connected to the outside spring of the like. wire being tied with linen thread laced No. 24 single silk covered wire. If a down the points where the wires a primary of seven turns, secondary cross. This performance is easily vis. 32 turns and a tickler of 20 turns on salized when the coll is being made, a 3-inch diameter tubing. In either case the tickler may be spider web or plate is connected to one side of the like the ordinary ones. It has a novel When the time comes to mount! hese spider web colls it is convenient basketweave. The number of turns

wire.

wound on tubing. **Basketweave Most Efficient**

consists of end of the form. The secondary con

sists of 43 turns of the

path. plugged in for earphone service. the leakage to some extent.

ooked arm of the jack, the "B" plus

pring on the inside making contac

maximum capacity of .0005 mfd., nor- completed the secondary winding is machine is set for speaker operation

long for this coil, then both L1 and

vario-coupler may wind 10 turns of L2 may be wound on the same form sets that really have two controls.

No. 20 double silk covered wire on and their inductive relationship shift the rheostat critically governing re-

a 312-inch diameter tubing, 4 inches ed right on that form by sliding the generation.

pearance of the set.

tween R1 and R2.

The single closed circuit

high, and begin the secondary as close top coil up or down. The easiest way

If the dowel sticks are five inches sults.

The Lorenz or basketweave typ Before the holes for of coil may be used to good advan-15-ohm rheostat controlling the R tage. For home construction it is pref the values stated or variable leaks deed, it might be rale to wind the after 15 dowels have been erected on pere, like the 201A and 201A and de the RF inductance on a single spider web, a 3-inch diameter at right angles texts as well as the soft tubes that consisting of 52 turns, cutting it at to the base of a 4-inch square board. draw one whole ampere each, The These dowels are % inch apart, resistance A is an amperite, type Measure on a straight line from D-12, which eliminates one minor connected to one end of one of these point to point. This renders easy di- trol.

for this circuit are purchaseable in a of friends. circuit may be purchased mulate (Daven). In that case it could be easier to put the tack J1 in It is connected, one side to the detector output instead of the first

audio output.

variable one, for

- every time the receiver is used, al-

Switch S2 enables you to put out

C1 is the variable tuning condenser

It's indeed odd that a tube that

The Audio Amplifier.

For those desiring to build their own



HN, New York (351.2); 5:30, health , 5:35, orchestra; 7:30, dance; 5 ,serv-

(Couriesy of Radio Digest.) By The Associated Press. WEEL Boston (silent). WGR, Buffalo (319), music. WEBH, Chicago Post (376.2); 7, con-cert. Sunday school lesson, violin; 5, tong: WMAY. Chicago News (447.5); 6, pro-gram; 8, Russell Pratt, Fred Daw; 8:30, photolog; 9, Chicago tribune (376.2); 6, ornert; 10, orchestra; 11:30, organ; 10, orchestra; 11:30, organ; 10, orchestra; 11:30, organ; 10, orchestra; 11:30, organ; 11, orchestra; 11:30, organ; 12, organ; 6:35, ensemble, string quinte; 8; KYW, Chicago G350; 7, coneet; 8; KYW, Chicago Shews (447.5); 6, pro-gram; 6:30, ensemble, string quinte; 8; KYW, Chicago G350; 7, coneet; 8; WIAS, Chicago G350; 7, coneet; 8; KYW, Chicago G350; 7, coneet; 8; WIAS, Chicago G350; 7, coneet; 9; WIAS, Chicago G350; 7, coneet; 8; WIAS, Chicago G350; 7, coneet;

WLW. Cincinnati (422.3); 6, concert. WLAM, Cleveland (389.4); 8, orchestra, rish tenor. WFAA, Dallas News (475.9); 6, recital; WFA, Dallas News (475.9); 6, recital;

Fish (effort)
WFAA, Dallas News (475.9); 6, Fecitar, 30, humorous; 11, dance.
WOC, Davenport (484); 6:20, Sandman; 5:50, religious discussion; 9, musical; 11, prehestra.
KOA, Benver (223); 10, orchestra.
WBZ, Springfield (1313.1); 6:15, naval history; 6:30, trio; 6:50, talks, concert, bartione, girl scouts corps; 5:05, tenor.

|radio-frequency amplification of the of that coll. This condenser has a ondary. After the 10-turn primary is on and off when, as is most usual, the

Saturday, March 23. Saturday, March 23. March 24. Ma Barting Angeles (405.2); 8, concert;
Children; 10, features; 13, orchestra; ed
WHAS, Louisville Journal (899.8); 7:50, of pression

oncert. WCCO, Minneapolis-St. Paul (416.4); 1, WCCO, Minneapolis-St. Paul (416.4); 1, ireside philosophics; 8:30, Rotary club; 0, dance, quartet, songs. CKAC, Montreal (410.7); 5:30, concert; 30, variety; 9:30, dance. WBBR, New York (272.6); 7, violinist, Bible questions, answers. WJZ, New York (454.3); 6, orchestra; dens. 6:45 p. 1 deis store 5....... bert. teno 10:45 p. 10:45 deis store restautant. 9 p. m.: Program arranged by Carl Sib-bert, tenor soloist and instructor. Will Hetherington, violen; Grace Deni-son, piano. 10:45 p. m.: Frank Hodek, fr., and his Nightingale orchestra at Roseland gar-dens.

RADIO DEVELOPS center of a 7x24-inch panel and under denser, C3 a .001 or .002 mfd. fixed HIGH COST OF AIR from the secondary. Therefore, start a Dalco dial pointer. The pointer is by-pass condenser. The optional grid not only useful, but improves the ap leak would be connected from the G NEW VOICE TYPE IN LITHUANIA post of the detector tube to the filament plus post of that tube, and, if

Radio has developed an entirely It ought to make American fans feel wound in the same direction. may be a double circuit jack, with one used, should be variable, such as the new type of vocal artists whose good to read the tariff imposed upon nside contact to be ignored. The plate Bradleyleak, Fil-Ko-Leak, Turnit and voices surpass in sweetness those of listeners in Lithuania, which is as some of the more famous concert follows:

stars, according to Franklin C. E. Yearly tax for amateur receiving at right angles to the winding up and 4-inch diameter tubing is handy, use 90 volts to the other outside arm, this functions without any leak will, when Lundquist, muscal director of sta- sets in private homes, and newspaper demand a tion WHT, which is preparing to offices where news received will the leakage is then open in Chicago. ublished for the eiving sets used by banks and other

to the booked arm that went to the critical. The tube, however, is not Lundquist explained voices, because of their lack of volinstitutions for commercial uurposes ume, could not have been given to \$200; for receiving sets in cafes, mov-006 mfd. fixed condenser that lies be filament, with an extra heating wire This jack may be and evidently a good internal leakage ing picture theaters, restaurants and the public without the radio The filament heating controls most part, he said, they would not fill places of amusement, \$100; for receiv even a small hall, but have a quality ing sets installed in places where an

of delicate sweetness impossible to be admission fee is charge for each apparatus installed is \$2.50. found in a voice of greater carrying Dealers in radios who install repower.

ceiving sets in their places of business tried for R1, 2, 3, 4, "Before radio broadcasting swept are required to pay a yearly tax of should be of approximately the country, these voices were what

For registering and sealing each largely to home and a small and ported or locally produced receiving producer or buyer amplification in radio the power and volume necessary to must pay \$1.50 for each receiver, \$1 make them heard in every corner of for each amplifier and 10 cents for the world, and the 'radio voices.' as each lamp.

nightly Radio receiving sets or part

timate than with the Department ing either aerial or ground. of the Interior

Requirements High.

The requirements for appointment to tance reception, although not as The only control is the variable the primary for 10 turns, simultane- ohms), R6.25 megohm (250,000 ohms). I agree, whose distortion can be con-

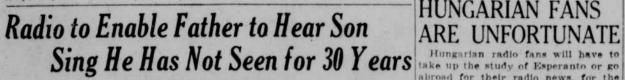
and practically none but graduates from technical schools can find a TRAINING COURSE place upon the staff. It requires a

brought about, increasing the burden ness men and raido editors has been tion of their headphones and preof the bureau without adequately in formed to pass upon this important cision instruments. question. Phonograph records have creasing the staff to handle it.

"Elimination by Secretary Hoover been made of the speeches of radio of the burdens imposed upon Ameri- unnouncers at every important broad SPEAKER CAUSES can patentees in other countries that casting station east of the Missisare not imposed on their citizens in sippi. These records will be run off this country will mean much to in- for the benefit of the committee, who ventors and manufacturers of the will judge which is the best. The United States, and every support committee is expected to meet at an to rundown is batteries, detective of his transmitter. Each evening at 7:15 Williams starts should be given by industry and com- early date. merce to bring this about."

Test "B" Batteries.

and find that one is dead, discard it its transmission of propaganda in available. Time and strong signals concocted the formula, "Will Christ Dy all means. If you do not take it foreign tongues as well as its own, are likely to throw any unit out of Be Glorified." out of the circuit, it will shorten the is a new steel tower for wireless adjustment. As soon as this critical life of the other batteries. Many fans transmission which is being con-purchase one battery at a time and structed in Berlin. It will be built sure to be the result. Therefore NAVAL STATION place it in the circuit with the older on the plan of the Eiffel tower, but when looking for trouble check up ones. This is also poor judgment, will be much smaller, as it will be the speaker and be sure you have anless you wish to purchase batteries only 430 feet high, as compared with correct polarity. the former's 975 frequently HUNGARIAN FANS



Out in the little town of Pocatello, by his grandparents on a cattle ranch Out in the little town of Pocatello, by his grandparents on a cattle ranch. Idaho, a man, bowed with advancing years, is watching the dials of his years, is watching the dials of his was announced recently. tered the commercial world in San publishers of this periodical, the Hun- doing business at the old stand. radio set.

For on next Tuesday at 8 p. m., Francisco, but was drawn eastward garian Radio Review, say that they sastern standard time, this set is to by larger opportunities and at present have adopted Esperanto because of be the means of bringing to him the is an advertising director in New the great part which the internationsinging voice of his only son, a voice York.

he has not heard for over three Throughout the three decades that passed the son maintained an almost also point out that interpreters and decades.

The son is Victor Larsen, now a continual search for his father. Last To now in every country in the world. New York advertising man, and a month a clue came to the son. talented concert and oratorio baritone his amazement the mail brought a singer. The father is Emil Larsen, letter from his father, the first word Fame Comes Through Radio, of over the air as "A Lesson in Enga furniture dealer of Pocatello, Idaho. he had ever received, and the first Nick Luca's began broadcasting lish," received her first notice of word Thirty years ago, when the son was time he had ever seen his father's from a powerful station in Chicago. speeding. 3 months old, the elder Larsen's wife, the boy's mother, died. The father, were exchanged rapidly, but the intithen a newcomer from Norway, left mate touch to make the reunion com- Listeners in immediately recognized a this part of the world at large. The will prove a reminder in making con- celpt of a letter from R. C. Brad-

Father Loses Son.

Expediency led Grandfather Robi mountain time will tune in either popular Lucas. son to move his family by prairie station WOC at Davenport, Ia., or Today. Lucas is one of the most Beware, the jail is yawning for you schooner to Arkansas. Due to this WCCO, Minneapolis. popular Brunswick record artists. His at the second offense."

move Emil Larsen lost track of his move Emil Larsen will sing are: first record, "Dreamer of Dreams," Broken Windshield for Panel. the siving off, or radiating, of energy While WGBS has been in receipt Holes. Holes in a bakelite panel can be and "My Best Girl," has been a nations in Arkansas, the Robison family Gloaming," "Friend o' Mine," "The tion wide sensation. moved to western Kansas, where they Barefoot Trail" "Drink to Come Bark bars attracted that the form of electro- of Canada, this is the first verified all directions in the form of electro- of Canada, this is the first verified that fush and the entire panel then sand- connections of a receiver will cause settled.

In this country Victor was reared to Erin."

vision of the circumference into 15 battery minus, the other side to the of that coll goes to the primary of a equal parts, each chord automatical filament minus posts of all three audio The set produces signals of excel- three-circuit variocoupler. The end by 24 degrees.

German Radio Material. RADIO PREACHER

lent quality, functions over the en- of the variocoupler primary goes to Wind 30 turns of wire, under two grid leak, as the Sodion tube nor-successive nights, and, each night "As Dr. De Forest has said, the tire broadcast band without notice- "B" plus amplifier voltage, in this and over two-that is, over alternate mally does not require one. R1 is one brought greater delight than its predfact remains that the personnel of the able radiation, produces great volume case at least 90. The variocoupler, dowels-then pick up about 10 feet megohm (1.000,000 ohms), as are R3 ecessor. I used my Western Electric patent office is woefully underpaid. and is capable of considerable dis- 1.3-L4-L5, may be any standard one. of the same kind of wire and wind and R5. R4 is five megohm (500.000 cone speaker, and there are few sets.

tube sockets. There is no detector surprise to many. I tried it for 10

the examining corps are quite severe great DX as the regulation tuned condenser, tuning L4, the secondary ously and side by side with the sec- Switch S1 is used to turn the set cealed from this speaker.

The single dial may be placed in the C2 a .00025 mfd. fixed grid con

one the right angle. The leaf or it does require a leak,

Italian Radio Hampered. The latest report from Italy seems RADIO OPERATORS

aggregate 170 lire. After this is paid

Williams has a 10-watt broadcasting he must pay an annual tax nearly as station which he sets up at one end of large for the right of listening in.

vival meetings. He talks to the audi-ence in the well-known Billy Sunday MARCONI WILL style, while before him is a large POOR VOLUME horn with a microphone, through which his voice is carried to thou-

Lack of volume is not always due sands of other listeners within reach radio stations to communicate re-

spectively with England and with Shenandoah may look forward to eat-Canada, will be erected in Australia ing meals while a mile in the air fully point at which trouble of this nature his services here and broadcasts them under an agreement by the Amalga- equal to their regular fare on the is liable to crop up is in the loud on a wavelength of 268 meters. Sun-New German Radio Tower. speaker unit. It is difficult to locate days he starts at 7 and on Mondays mated Wireless Ltd., and the Mar ground. Before the stove was de-What may turn into a modern such trouble unless another unit, or the station is silent. The call letters coni company, Ltd., according to re- signed coffee heated over the engine When you test the "B" batteries Tower of Babel, if Germany continues at least a pair of head phones is are WCBG, for which Williams has ports to the Department of Commerce. exhausts constituted the only hot

> has guaranteed that the station for English traffic will have a capacity of 43,000 words duplex daily. The IS POWERFUL stations are to be in operation 12 months from date of signing of the

There is class to Uncle Sam in contract. The sum involved is said batteries in parallel will give approximate and the parallel will give approximate approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved in the sum involved is said batteries in parallel will give approximate the sum involved in the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will give approximate the sum involved is said batteries in parallel will

radio as well as everything else. to be f120,000. This is brought home by the fact This is brought home by the fact of a world-wide reception of signals AIR MEDICAL on 71 meters from the high fre-

quency set at the naval research It has heretofore been considered positive (-) terminal of one is con-Hungarian radio fans will have to laboratory, Washington, D. C. It Hungarian radio fans will have to laboratory. Washington, D. C. It take up the study of Esperanto or go abroad for their radio news, for the abroad for their radio news, for the abroad for their radio news, for the barteries does not change the vice has been transmitted by radio abroad for their radio news, for the land, the British isles, China, India, vice has been transmitted by radio only radio magazine in Hungary has Hawaii and Samoa. This serves as a vice has been transmitted by radio neeting batteries does not change the tion WHAD, the Marquette univer-

Radio Speed Cop. Radio has a speed cop-F. C. Parks, ignated to furnish free medical ser-Portage, Wis. He twirls his dials, vice by radio to ships at sea: New terminal of another. When connected clocks his victims and sends out no-Vork City, Stapleton, L. L; Key in this way the voltage of the com-bination is equal to the sum of the tices for first offenses. Wilda Wilson West, New Orleans, San Francisco, voltages of the individual batteries tion says the average fan will not city. readers of Esperanto are to be found Church, at KGO, who conducts a Mon- Chicago, Sault Ste, Marie and Maday night radio hospital for English nila. language ailments, which is spoken

then a newcomer from Norway, left make totel to make the father to make the father form Norway, left make totel to make the father form Norway, left make to the father form Norway and the father form Norway and the father form Norway and the father form to the father form the words are father form to the father form the words are father form the words are father form to the father form the state of the father form the state of the father form the words are father form the words are father form the words are father form the state of the father form the state of the father form the words are father form the words are father form the words are father form the state of the father form the words are father form Machattan and the father at 6 p. m. forward to hearing a concert by the rily at over 200 words per minute.

What Radio Means.

ta good popular song well interpreted. Windshield. visible medium filling all space other side of the Atlantic

in thousands of homes." The circuit, once built, will prove a

which are not licensed will be con fiscated and proceedings will be taken against the owner.

CANADA STATIONS BOTHER OTHERS ANNOUNCERS ARE ORGANIZED Washington, March 27 .- Several in-

stances of serious interference by Ca-Kansas City, March 13 -- Leo Fitznadian broadcasters with United states programs have been reported WDAF, broadcasting station of the

from technical schools can find a place upon the staff. It requires a state of use tails a state tails of the use tails of the use tails of the use of the use tails of the use tails a state of use t of course. Sparks will not actually loopholes in the wave band for Ca-do the cooking. But it will be in-cluded in his duties to switch on and of the current to an electric range cases reported was the heterodyning of WHB of Kansas City and Mr. off the current to an electric range cases reported was the heterodyning which recently was installed aboard of CNRO, Ottawa, with WJZ, New Fitzpatrick

Mr. Fitzpatrick was nominated to the presidency by "The Solemn Old Judge" Hay of Chicago. There was on other nomination.

BUILD STATIONS Washington, March 27.—Two beam because some wise person to supply the DEAF WOMAN NOW HEARS SERMONS The purpose of the organization HEARS SERMONS will be to foster a movement for a Oakland, Cal., March 27.-Accord-central time announcers.

ing to George W. Phillips, minister of the Tenth Avenue Baptist church PENMANSHIP IS gregation, with failing hearing, moved up toward the haptistry, seat after

seat, trying vainly to hear the servtre. Then she moved 50 miles away. Life of Radio Batteries.

A battery on a 0.25 ampere tube operating to an end point of 1.0 volts his church clearly. "I even, heard That's the way they're learning to

imately 250 hours. In other words EX-OMAHAN IS NOW After this is over, geography, two batteries connected in parallel EX-OMAHAN IS NOW These two subjects have been IR MEDICAL ADVICE TO SHIPS will give more than double the ser-vice of a single battery. Batteries are connected in parallel when the ser connected in parallel when the set one is connected in parallel when the set of a single battery. Batteries are connected in parallel when the set one is connected in parallel when the backing of the set one is connecte

Nother New Tube.

other words, the hours of service.

Thus a 4.5 volt "A" battery is com- listen to a single feature for more posed of three individual "A" bat- than 12 minutes. Many of them will teries connected in series, each cell not let their dials alone longer than having a voltage of 1.5. a minute or two, he says, except

the dirigible. All this falls on Sparks York.

just because some wise person be-

With the new stove the crew of the

batterles in parallel will give approx-

which often result in the burning out WGBS Heard in Liverpool. dancing to radio music.

and sent his log record for confirma- therefore to be more efficient than

tion. Engineers 'nt WGBS checked those now in existence. The word "radio comes from the up his report with the station's log Plugging Panel Holes. Latin "lus" and means in this sense and verified Mr. Bradshaw's report.

With Thine Eyes" and "Come Back has attracted those who like to hear can be made from any old broken magnetic waves into the ether, an in report to come from a listener on the papered until it has a dull finish the fluctuating signals or perhaps be the

TAUGHT BY AIR Oakland, Cal., Mar. 27 .- Take out With a radio set and extra amplifi- your writing pads, children, poise

under usual intermittent service will give over 100 hours of service; two batterles in parallel will give approx-

Young Ranft is a student in the Miss Palmer has what is called a Better to lead her unusual class,

three children, with pencil and paper, taking her instructions, so that the Can't Let Dial Alone. can see at a glance how fast her

An analyst of radio program recep- pupils are working throughout the

Listeners Thank Navy.

Washington, March 27 .- Many letwhen they are staging a party and ters of appreciation have been received by the Navy Department from broadcast listeners because of action taken to reduce transmission A. W. Hull, formerly of the radio on Annapolis are during the "listening" hours. A great deal of former Annapolis traffic at night is now handled by the high frequency set at the Naval Research laboratory, Navy Press is still dispatched by Annapolis but the schedule has been advanced

from 10 p. m. to after midnight,

Loosened Soldering.

patch will be scarcely preceptible. cause for no signals being beard.

Label the Leads. Mistakes in making connections,

tress has now become recognized.

It is announced that United States Batteries are connected in series engineering department of Mar-"control class" directly before her in marine hospitals in the following when the positive (--) terminal of quette university. He announces the the studio. This class consists of