

PE-DILIN

For Stomach Catarrh

Help your stomach to get rid of poisonous gases and fermenting foods. Master that catarrhal condition of the digestive tract with the remedy which has proved its usefulness over a full half century.

PE-RU-NA
A Splendid Tonic For Spring and Summer
Sold Everywhere
Tablets or Liquid

There are bones and bones, but the man with the chronic explanation habit is in a class by himself.

Weak and Miserable?

Are you dull, tired and achy—bothered with a bad back? Do you lack ambition, suffer headaches and dizziness—feel "all worn out"? Likely your kidneys are to blame. Lameness, sharp, stabbing pains, backache and annoying urinary disorders are all symptoms of weakened kidneys. Don't wait for more serious trouble. Get back your health and keep it! Use **Doan's Pills**, a stimulant diuretic to the kidneys. Thousands of folks tell their merit. Ask your neighbor!

A North Carolina Case

Mrs. B. L. Jenette, 105 E. Williamson St., Mount Olive, N. C., says: "I had a dull, tired, achy feeling and sometimes sharp pains cut into my back. My kidneys weren't acting just right, either. I had headaches and dizzy spells which left me weak and worn out. I used Doan's Pills and all symptoms of kidney trouble left."

DOAN'S PILLS
60c
STIMULANT DIURETIC TO THE KIDNEYS
Foster-Milburn Co., Mfg. Chem., Buffalo, N. Y.

MOTHER!

Child's Best Laxative is "California Fig Syrup"



Tongue Shows if Bilious, Constipated

Hurry Mother! Even a fretful, peevish child loves the pleasant taste of "California Fig Syrup" and it never fails to open the bowels. A teaspoonful today may prevent a sick child tomorrow.

Ask your druggist for genuine "California Fig Syrup" which has directions for babies and children of all ages printed on bottle. Mother! You must say "California" or you may get an imitation fig syrup.

FOR OVER 200 YEARS

haarlem oil has been a world-wide remedy for kidney, liver and bladder disorders, rheumatism, lumbago and uric acid conditions.

GOLD MEDAL
HAARLEM OIL
CAPSULES

correct internal troubles, stimulate vital organs. Three sizes. All druggists. Insist on the original genuine GOLD MEDAL

"CASCARETS" IF BILIOUS, CONSTIPATED—10c A BOX

If Dizzy, Headachy or Stomach Is Sour, Clean the Bowels.

To clean your bowels without cramping or over-acting, take "Cascares." Size 81c2 headaches, dizziness, biliousness, gases, indigestion, sour upset stomach and all such distress gone by morning. Nicest laxative and cathartic on earth for grown-ups and children. 10c a box—all drug stores.

FOR SALE—DESIRABLE FARMS in Georgia, Florida and Alabama. In choice sections and suited for growing cotton, corn, tobacco and other crops. Acquired by foreclosure and for sale cheap and on easy terms. Send for price list. The Georgia Loan and Trust Company, Macon, Georgia.

W. N. U., CHARLOTTE, NO. 40-1924.

RADIO

(Edited by G. Lougias Warrop, Editor of Radio Merchandising)

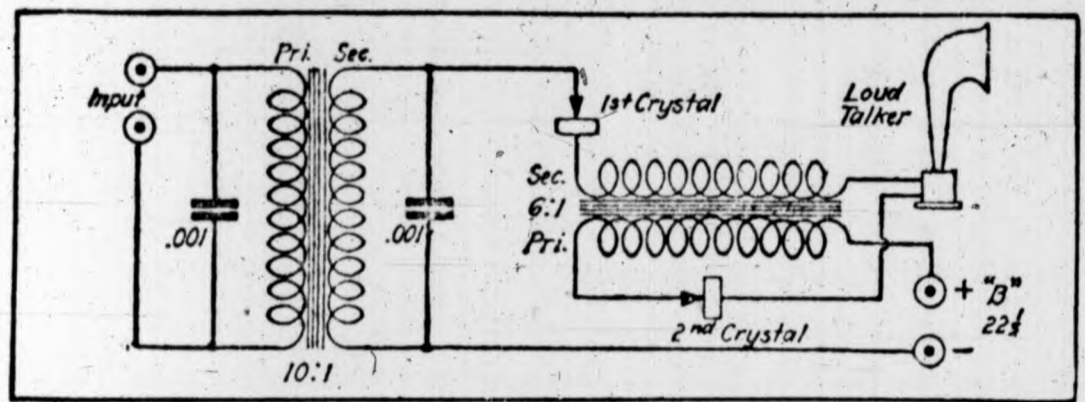


Diagram Showing Directions Which Must Be Followed for Construction of the Two-Stage Crystal Amplifier.

By PETER MOMBELLO

Tube amplification, with its persisting noises, has been the only thing to prevent a radio set from comparing very favorably with a phonograph for clear music. Also, because of these noises, many radio fans who are satisfied with the locals have gone back to the crystal sets to enjoy clear, natural and faithful reproduction. These properties of the crystal account for its existence in this age of multitube sets. If the crystal can be used as a detector, why cannot it be used as an amplifier (if this term is appropriate)? As a matter of fact, it can be used in the latter way, and the rest of this article will be devoted to the construction of a two-stage amplifier using crystals.

The following parts will be needed: Two audio-frequency transformers—one of 10 to 1 ratio and another of 6 to 1 ratio; two perfectly insulated crystal detector units, two very sensitive galena crystals, two mica fixed condensers, .001 mfd. capacity; one "B" battery, 22½ volts; six binding posts and one radion panel, 7 by 5. All these parts are to be very efficient, and, considering the fact that they can be used over and over again. It is worth while to spend a little more and get good ones the first time.

Must Follow Directions.

The diagram given with this article must be followed very carefully. Of special importance is the connection after the first amplifying crystal. The wire, that comes from the secondary of the first transformer and goes through the crystal is to be connected to the secondary of the second transformer. If this connection should go to the primary the amplifier would not work, and the sensitivity of the first crystal would be ruined by the battery.

No baseboard is to be used. The transformers should be mounted at right angles to each other on the inside of the panel. The first crystal should be placed above the first transformer, and the second crystal above the second transformer on the front of the panel. The connections to both of them should be reversed to give the best volume. The input posts should be on the left and the battery posts and output posts should be on the right.

In wiring, use pure soft drawn copper wire or goldplated wire. Under no circumstances should you use the thinned bus-bar wire, as its surface conductivity is very low. Make all connections direct in straight lines and solder absolutely every connection. When soldering the connections to the crystal detector units make sure that you remove the crystals, as they will be ruined by the heat or decomposed by the soldering flux. For the sake of tone quality use fixed condensers having a mica dielectric, and connect these directly on the posts of the transformer as shown in the diagram. Since different transformers vary greatly in their construction, it would be worth while to experiment with the capacity of the two fixed condensers.

Although a "B" battery of 22½ volts is used to force the signals through the amplifying transformers, the unit should be built with the greatest of care, as every bit of energy is to be preserved if the amplification is to be successful.

Operating Amplifier.

In operating this amplifier connect the phone terminals of the set to the primary of the first transformer; then carefully manipulate the first crystal until the greatest volume is obtained. Follow this by manipulating the second crystal for louder results. After a little practice the two crystals can be worked simultaneously.

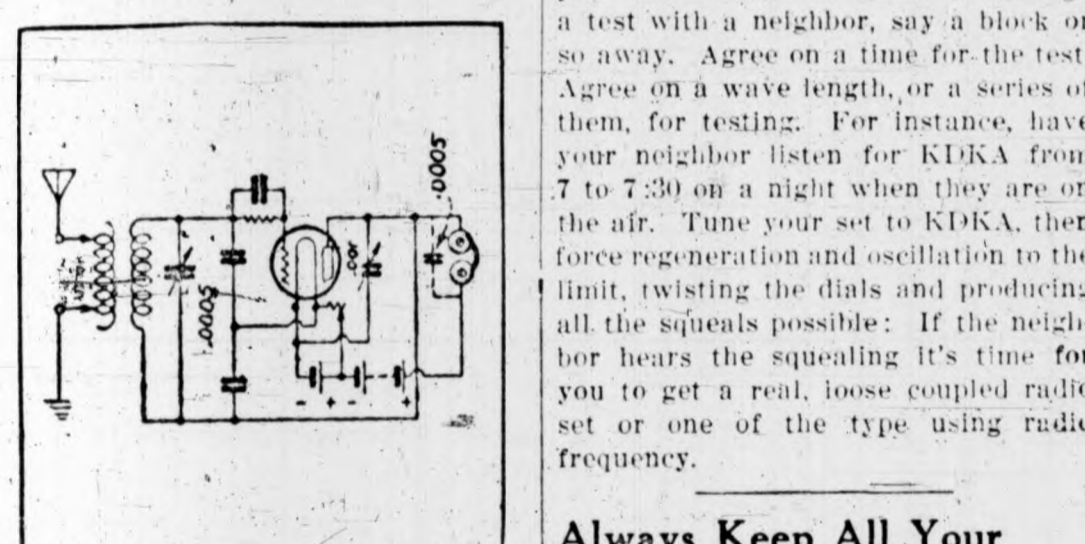
This amplifier, although it cannot compare with the regular two-stage amplifier using tubes, will be free from the tube noises of the latter amplifier. Under good conditions, a crystal set will do very good work with this unit, and the locals will come in as strong as on the ordinary two-tube regenerative receiver. Although the range of the receiver will not be increased by adding this amplifier, the signals which were not audible will be greatly amplified and they will be heard clearly in the phones without the usual straining of one's ears.

If, due to the location of the receiver, one of these units fails to operate a loud speaker, two of them should be constructed. The second amplifier should use one medium ratio transformer and one low ratio transformer. It should be connected in the same way as the first unit, and should be placed after the first unit, with its input posts connected to the output posts of the first amplifier. This combination will work very well in any case, and for the quiet satisfaction these amplifiers give they are well worth the trouble of construction.—New York Herald-Tribune.

Where Trouble Comes in Altering Your S. C. Set

The trouble in altering the single circuit set lies in getting the tube to oscillate at the high waves, and also in the loss of volume and distance reception when dry cell tubes are used. In trying to overcome these two things the ultra audion circuit has been suggested at different times, but this circuit in its standard form also has shortcomings, making it little better, if any, than the tuned plate circuit.

The receiver described herein is an improved ultra audion circuit that fills values and also try shifting it from its present position to one wherein it is connected from the grid to the negative or positive filament.—New York Sun.



Secondary Circuit Connected in Ultra Audion Manner.

the bill both in ease of oscillation and in distance of reception. A glance at the circuit will show to the fact that it is a two-circuit tuner with the secondary circuit connected in the ultra audion manner.

The primary and secondary coils of the set are the stator and rotor respectively of an ordinary variocoupler. The secondary tuning condenser may be the one formerly used in the aerial circuit of the old single circuit tuner. The other variable condenser has a capacity of .001 mfd. This condenser is included for the purpose of eradicating the fault of the old standard ultra audion circuit, i. e., uncontrollable oscillations.

The two fixed condensers shown in the secondary circuit must be good mica condensers that will not blow when the B battery is applied, otherwise the tube used in the set will be burned out. The grid condenser and leak are standard. It is suggested that the constructor experiment with the grid leak in this set after he has learned the tuning. Try various

Separation of Set From Battery Is Not Harmful

In installing a radio receiver in a home, it is often desirable to place the storage battery a distance away, in order to make it unseen. This can be done without fear of affecting the actual results obtainable from the set. The length of wire between the latter and the battery is of little importance; in fact the wire acts as an additional aerial and often helps along the regular outside antenna.

SCHOLAR NOTED FOR HIS ECCENTRICITIES

Many Amusing Stories Are Told of Doctor Spooner.

The retirement of Rev. Dr. W. A. Spooner, the distinguished English historian, who has been successively fellow, tutor and warden of New College, Oxford, has caused an outburst of anecdotes in the British press, for Doctor Spooner's habit of interchanging letters or syllables, with results that were sometimes very amusing, is famous wherever Oxford men are found. Indeed, the fame of "Spoonerisms" eclipsed his very considerable fame as a scholar, much to the ironic amusement of the victim himself.

There is a good deal of doubt as to the authenticity of many anecdotes told about Doctor Spooner, but at least the noun "Spoonerism" is enshrined officially in the New English dictionary: "Spoonerism (f. the name of Rev. W. A. Spooner—1844). An accidental transposition of the initial sounds or other parts of two or more words," and Oxford slang has known the word joyfully for 50 years.

One of the most famous Spoonerisms is said to have been uttered in a sermon which Doctor Spooner preached at Oxford. "Ah, brethren," he said, "are you never conscious of a half-warmed fish within the breast? Who would recognize in that extraordinary sentence a 'half-formed wish?' It was Doctor Spooner who, at the conclusion of the Oxford celebration of Queen Victoria's jubilee, called for three cheers for "our queer old dean"—an honor which that functionary might well have appreciated in spite of the adjective, but which did little honor to the "dear old queen" for whom the celebration was held. It was Doctor Spooner also who in bicycling days is supposed to have dismounted to "boll his heels."

One student of New college insisted to his dying day that the warden had rebuked him for "fighthag liars" in the quadrangle, and there is a story that he took his history class severely to task for "hissing all my mystery lectures." There is also a tale of an unfortunate graduate whose waste of time led to the accusation that he had "tasted two whole worms." Doctor Spooner is said on one occasion to have read out the first line of the hymn, "Conquering kings their titles take," as "Kinkering kongs their titles take," and to have proposed the royal toast, "Gentlemen, the king," as "Kinglemen, the gent," to the mild dismay of the assemblage.

Being a kind-hearted and philosophic person, the ex-warden of New college finds a quiet diversion in the gradual multiplication of anecdotes about him, nine-tenths of which, needless to say, are apocryphal, though none the less amusing for that trifling fact.—From the Living Age.

New Refrigeration Idea

Freezing with carbon dioxide is a new method of fish refrigeration being tested at the Atlantic biological station in Canada, according to reports received by the American Chemical Society. The use of solid carbon dioxide, it is asserted, has several advantages. The lowering of temperature by this means retards spoiling, and the cooling can be controlled within wide limits. The carbon dioxide also excludes the air while the penetration of the juices of the fish by carbon dioxide gas has an additional preservative effect. Weight for weight solid carbon dioxide has twice the cooling power of artificial ice, and it is believed that the cost of production can be kept down to about the same figure.

Reassured

News had reached the village of Forksville that a motor-bus plying between the two neighboring towns of Bampton and Gush Hollow had gone over the side of a cliff with all on board. It was also known in Forksville that the wife of the much-heaped Bud Blodgett was en route to Gush Hollow via the bus line. An interested villager immediately called on Bud.

"Ain't ye worried 'bout yer wife, Bud?" he asked.

"Well," replied Bud, "I was fer a while, but her cousin in Bampton jest called up an' said she saw Sal git on the bus with her own eyes."—American Legion Weekly.

World's Largest Libraries

The most important library in the world, according to the number of volumes, is the national library in Paris with its 3,500,000 books, after which comes the United States library of congress at Washington, with 2,918,256 books, the New York public library with 2,637,565; the British museum library with 2,500,000 books; the Harvard university at Cambridge, with 2,101,000 books; Graveghage, in Holland, with 2,000,000; the Prussia state library in Berlin, with 1,750,000; and the Bavaria library, with 1,750,000 volumes, says Detroit News.

American Foods in China

If the American appetite seems to lean more heavily each year to chop suey and other Chinese foods, as is indicated by the increasing number of Chinese restaurants, it has a counterpart in China where American dried fruits, breakfast cereals and cigarettes are growing more in demand from the native Chinese. The increase in the demand for American food products there is so noticeable that the consular representatives have made official report on it.

LITTLE ROCK OFFICER GAINS TWENTY POUNDS

And Recovers Strength by Taking Tanlac.

"Tanlac increased my weight 20 lbs. and left me feeling like a new man three years ago and I am strong for it," recently affirmed J. J. Hardestle, a special police officer, 311 Poplar St., North Little Rock, Ark.

"Two years ago stomach trouble had pulled me down to where I simply felt all played out and miserable. I suffered so from gas bloating, pains and other uncomfortable symptoms after meals that I actually dreaded to eat anything. My nerves were all un-

done, too, and I had so little energy that I just had to drive myself to work.

"My improvement started with my first bottle of Tanlac and five bottles of the medicine put my stomach in condition so I can eat anything I want and all I want without a touch of indigestion. The medicine also set me right in a general way and I am glad to praise it to everybody."

Tanlac is for sale by all good druggists. Accept no substitute. Over 40 million bottles sold.

Tanlac Vegetable Pills for constipation; made and recommended by the manufacturers of Tanlac.

Genuine BAYER ASPIRIN

SAY "BAYER ASPIRIN" and INSIST!

Unless you see the "Bayer Cross" on tablets you are not getting the genuine Bayer Aspirin proved safe by millions and prescribed by physicians 24 years for

Colds Headache Neuralgia Lumbago
Pain Toothache Neuritis Rheumatism

Safe Accept only "Bayer" package which contains proven directions. Handy "Bayer" boxes of 12 tablets. Also bottles of 24 and 100—Druggists.

Aspirin is the trade mark of Bayer Manufacture of Monocetacidester of Salicylicacid

The Sign
"How old is your cow?"
"Two years."
"How can you tell?"
"By her horns."
"Oh, yes, I see. It only has two."

Encouraging Lawyer
"De lawyer in de case was so good," said Uncle Eben, "dat his client was kind to sorry he didn't steal several mo' chickens while he was at it."—Baltimore Star.

ALLEN'S PRINCESS RANGES

COPPER BEARING IRON



MADE of the famous rust-resisting Copper-Bearing Iron—tested for over a quarter of a century—Nearly a million in use—your neighbor or someone near you uses one—known and sold everywhere.

There is an Allen Dealer near you—in your town or close by. Write us for catalog and where they may be bought.

ALLEN MANUFACTURING COMPANY
NASHVILLE TENNESSEE

Don't waste your money! Why pay more when you can get—in DAVIS—full raising strength, absolute purity and good baking results for less money?

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