

RADIO RALF---

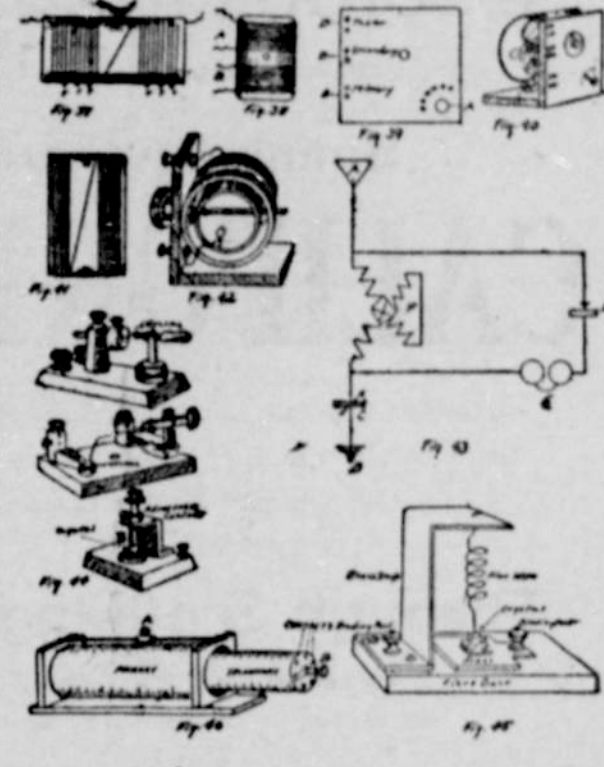


THE HOME RADIO

How to Make and Use It By A. HYATT VERRILL

XV. VARIO-COUPPLERS AND VARIOMETERS

Vario-couplers may also be home made if desired, but they are seldom very efficient and as they are very low in price it is scarcely worth while to attempt their manufacture. These consist of two coils, one rotating within the other. If desired to make a vario-coupler you will require a cardboard tube or a fibre tube about four and one-half inches in diameter and five inches long. A rotor form that may be purchased for a dollar or so. A quantity of No. 26 and No. 28 B. & S. gauge, double cotton covered magnet wire and some No. 20 of the same type wire. You will also require a brass shaft or rod 1/4 inch diameter, a dial, knobs, switch, a panel of fibre or bakelite about 3-16 inch thick and 6 inches square and a wooden or fibre base 1/4 inch thick and 6 inches square, besides screws, odds and ends, etc. The cardboard tube and rotor form are preferably soaked in paraffine, but this is not essential. Begin winding the cardboard tube, starting 1/4 inch from one end through a small hole, as shown, and wind on 38 turns of the No. 26 wire, keeping the turns close together but not touching. Then, bring the wire across the tube as shown in Fig. 37, leaving a space of one inch bare and continue to wind on another 30 turns of wire. In winding, take off three taps from each section, one at every twelve turns, beginning at second turn from top and leaving two turns at bottom of winding as shown in Fig. 37, T, T, T, finally passing the end through a hole as shown. The whole should then be covered with paraffine, or it may be shellacked, although shellac will decrease its efficiency and paraffine will serve every purpose. In the center, at the bare space which has been left, a 1/4 inch hole should be bored as shown in the cut. The next step is to wind the rotor form, which is done by winding on twenty-five turns of No. 20 wire (starting through a fine hole as shown) which forms the "tickler" coil Fig. 38, A, and leaving the two ends of the wire about 6 inches long and running the last end through a hole to hold it. Then, at the other end of the rotor, wind on forty-two turns of No. 28 wire to form the secondary Fig. 38, B, and leaving free ends of wire about 6 inches long. Through the center of the rotor-form, a hole should be bored 1/4 inch in diameter as shown.



The next step is to mount the coupler, which is done as follows: In the fibre panel, bore a 1/4 inch hole two inches from the top and 3/4 inches from one side, Fig. 39. In the lower corner, place a switch with six contact points A, and on the right hand side drill six 3-16 inch holes for binding posts B. Then make and place the shaft in the rotor, securing it by glue, sealing wax or by means of nuts, according to your mechanical ability, and attach the two parts to the panel, fitting a dial and knob to shaft and mounting the panel on the base. In connecting up, the primary, secondary and tickler wires are connected to the six binding posts and the six tap-offs on the primary coil are connected to the switch contacts as shown in the cut, with one of the primary wires in the switch post. Then, when the coupler is to be set up, the aerial is connected to one of the primary posts, the ground to the other, the secondary posts are connected with the grid circuit and the tickler posts to the plate and receiver circuits, all of which is shown in the diagram Fig. 40.

A variometer may be made in a very similar manner, using two cardboard tubes, one about four inches in diameter and three inches long; the other three inches long and about three and three-quarters inches in diameter. The dimensions should be such that the small tube can turn freely, without touching, within the larger tube and the smaller the space between the two the better; but you must remember to allow for the thickness of the wire to be wound upon the inner tube. First, measure carefully the exact centers, so that when a shaft fastened to the inner tube or rotor is passed through the larger tube, the inner one will rotate freely and evenly without touching or increasing the space. The entire efficiency of the variometer depends very largely upon the accuracy with which this is done. Starting with a small hole about 1/4 inch from the outer edge of the smaller tube, wind on about twenty turns of No. 28 double-coated, cotton-insulated copper wire, being careful to keep the turns separated. Then skip a space of about an inch, as shown in Fig. 41, and wind on another twenty turns, finally running the wire through a hole, fastening both ends with a drop of glue or sealing wax and, leaving five or six inches of free wire at each end. Starting the same way, wind the larger tube in exactly the same manner and being sure to wind in the same direction. When all are wound, mount the smaller tube on a shaft inside of the larger tube, fastening shaft by glue or sealing wax dropped on from inside, and mount as shown in Fig. 42. Finally, connect one end of the stator wire to one end of the rotor wire, leaving plenty of free wire to allow rotor to revolve, and lead the other two ends to binding posts, as shown, being sure to keep that to the rotor loose to allow free movement. The shaft to rotor should be equipped with knob and dial as shown in the cut and the whole mounted on a fibre or bakelite panel on a proper base.

PEOPLE'S COLUMN

[Editor's Note—We are glad to give space to the people of our community on topics of the day, but ask them not to become personal or abusive. Each contributor must sign name, not for publication, but for our protection.]

How in the world could any merchant make money when no admission was charged, money given away on premiums for the best exhibit of farm products, and also in contests. From what source did the money that was given for premiums come? from no other source than the pockets of merchants who generously contributed the necessary funds to show the people of the Santiam Forks a good time; and better still to help show the value of Santiam products to the eyes of the world.

Prize Winner.

When my neighbor takes me to the counter to treat me to ice-cream, I do not ordinarily say, in putting in my order, "I'll take the cash please!" I am sure that those winners of awards of prizes at the fair do not understand the situation at all or they would not say practically this to the merchants who gave without prospect of return the prizes awarded at the community fair. Probably they never thought themselves as thoughtless and discourteous as they undoubtedly are.

The writer has doubtless been as critical as any one of local merchants' unwillingness to take their deflation as all of us have had to do, the salaried man at the beginning of the war and the business man at its close. This attitude, however, of criticism can be carried too far and soon become unjust. Has anyone been kind enough to mention the generosity of the local merchants in providing the prizes for this fair? Every man approached responded readily in providing for the all day treat that served the additional purpose of helping boost to give the Forks of the Santiam the place that it deserves on the map. Every merchant responded and entered into the spirit of the day with remarkable zest. The poorest Saturday's business on record was their reward and none who contributed expected more.

Have we heard a kind word for the local merchants? Pass the word around that they are real boosters of the community and mention the Santiam Fair as proof. Who will be the next to say, "Thank You." Booster.

A PLAGUE UPON THEM

After endless conference and pussyfooting palaver, republican committeemen, defeated candidates and office-seekers have adopted a "platform" which for innocuous desuetudes, is hard to beat.

The "platform" is a masterpiece of generalities that mean nothing and promise nothing, because specific in nothing.

used, but no method whereby this "equalization" is to be accomplished is set forth. There is no pledge of specific legislation to curtail bureaucracy and none concerning income taxation.

Upon taxation the platform is as vague and hazy as the democratic candidate is in his promise of a magic cure-all for political ills. Inspiration of the pie-counter is the dominating force in both camps. Neither offers a constructive program. The one presents a party without a leader and the other poses as a leader without a party.

The vital issues of the campaign, invisible government and school monopoly, are ignored in the republican platform in an effort to secure harmony, but whether harmony can be obtained by the sacrifice of principle or is worthwhile so obtained, is a question entirely beyond the limited horizon of the politician.

Does the republican party stand for invisible government? If not, why is not the governor supported in his stand for constitutional government? Does the party believe in the compulsory school bill? If not, why do its leaders evade the issue when the democratic candidate has gone over to the klan and swallowed its program?

Part of these republican leaders who assumed to speak for the party, openly wear the livery of the Ku Klux Klan and are seeking the defeat of the republican candidate for governor, after having tried in vain to defeat him at the polls and in the courts. They are also seeking the defeat of numerous republican nominees in order that ku-kluxed democrats may replace them in the legislature.

Does the republican party believe in the recently promulgated doctrine that the religion of a candidate's great-grand-dad instead of his abilities, determine his fitness for office? If not, why does the party not stand for that fundamental of democracy, religious tolerance?

Does the republican party believe in racial and religious discrimination and in depriving them of the right to supervise the education of the child, under state supervision, or does it believe in the Russian bolshevik idea that the child is the ward of the state? These are vital issues in Oregon today, but there is nothing in the platform about them.

Does the republican party believe in government from behind closed doors by secret society bigots who secretly issue their ukases upon men and measures and nominate their yellow tickets in defiance of party organization and primary ratification? This is a vital issue in Oregon, but there is nothing in the republican platform about them.

The republican conference had a great opportunity which it has thrown away. The ku-kluxing of the democratic candidate opened the way for a ringing declaration by the republicans for traditional American and republican principles, but it has been too cowardly to voice convictions.

republican party is as short on moral courage as the democratic candidate is long on demagoguery. Again we repeat "a plague upon these politicians" especially in these days of political decadence—of mediocrities and morons.—Capital Journal, Salem.

The long drawn out divorce and scandal case of the millionaire Stillmans in New York was decided Friday by the referee, who found for Mrs. James A. Stillman on every point. One of the points in question was the little boy, whom the father charged was not his, and this now entitles him to share in the millions left by the grandfather. Probably no other case in the American jurisprudence attracted so much attention and reaked with so much scandal as did this case. It was one that should never have been made public, and shows that the "400" are as deep in debased morals, or more so, than is the poor.

Miss Ida Pruitt, daughter of Mr. and Mrs. Frank Pruitt, was married in Salem recently, to Earl Iler, and they came up Saturday for a short honeymoon. Mrs. Iler was working in Salem, where she met her husband.

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