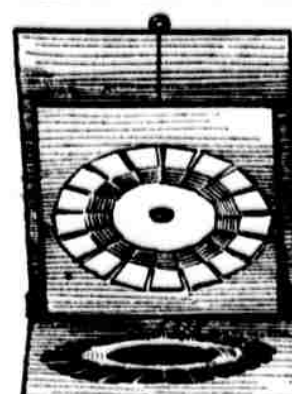
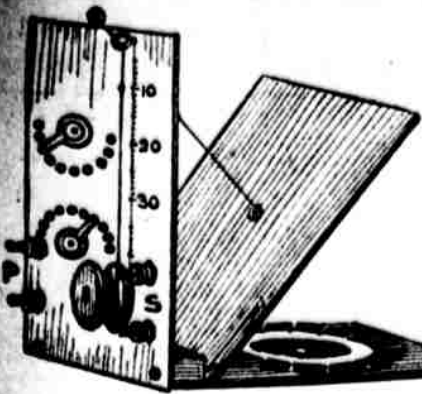


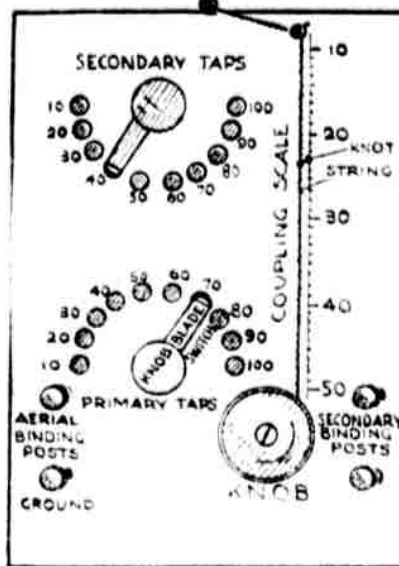
RADIO IN THE HOME

By HENRY M. NEELY



Let's Mount Those Spiderweb Coils

Of course you've got those two spider-web or basket-woven coils made and tapped, both tens and units, by this time. That is to say, everybody has to tap them by tens and all must tap them by units unless they are the proud possessors of variable condensers. A variable condenser will accomplish the same result as tapping by single turns of the coil, but it won't work up to such big values as are included in the tens switch. An ordinary four-plate condenser will give you about the same range of wave length variation as twenty turns of a coil made on an oatmeal box or one of those spider webs. That's approximately.



Here is a handy made little unit for mounting two spider-web coils to make a coupler. The upper picture are actual views of such a unit. The lower one is a diagram of the panel arrangement. The article explains it.

We have already printed the form for you to use in cutting out the panel board which you would want your spider web coils. You'll notice that one of the holes was extended beyond the circle and was separated off at the end. After you have wound and tapped your coils you make these two squares ends together, and glue them with a hinge made of insulating tape or good tough dress brand, so that the two coils will open and close like the covers of a book.

The illustration shows a different method, if you prefer it. Each coil is mounted on a square of board or heavy cardboard by means of a hole through the center and the two boards are hinged at one edge. This method probably makes it more certain that the apparatus will keep its shape and the coils will continue to close center to center instead of working loose-sided. However, use either method you wish. The unit illustrated in the plan of a loose-coupler or a variable coupler of a pair of honeycomb or "dis-lateral" coils in any "hook up" you may see in one of the radio magazines. It is simply one board secured right against the edge of a heavier board which is used for the base. The upright board is known as the panel. One of your coils now becomes what we call the "primary" and the other the "secondary." It doesn't matter which you make which. I have made it a practice to use the bottom one as the primary always. That saves confusion when you make as many of these outfits as I do for experimental purposes.

The panel illustrated is the kind that would be made by a fellow who is the proud possessor of two variable condensers. It has no units switches on it. The primary coil is tapped in tens only and so is the secondary. If you have the condensers you'll have to tap only your panel so as to include the four switches and four terminals of contact points, two each for the primary and secondary, one semi-circle of each for unit taps and the other for tens taps.

If you have one variable condenser you can use it either in the primary or secondary coil circuits and then eliminate the units taps for that coil. It is best to use a single condenser in the primary circuit. To do this instead of leading a wire from the post marked "ground" direct to the coil water spigot, you join that post and one post of the condenser by wire and then join the other post of the condenser to the wire leading to the spigot. That's what we call being "in series." It means that all of the electric forces which act through the coil must also act through the condenser before they reach the spigot and thus to the ground.

If you prefer to use the condenser with the secondary coil, you join it differently. You wire one post of the condenser to the post marked "secondary" on the panel, and the other post of the condenser to the other secondary post. That's what we call "parallel" or "shunt."

The series joining will shorten your wave length in your primary circuit. The parallel joining will lengthen the wave length of your secondary coil. The only part of this panel that requires further explanation is the knob and thread and the scale marked on the side of the thread.

Any kind of knob will do. I buy little wooden knobs intended for lin not lids in a hardware store. They cost one cent each. Fasten the knob to the panel by a bolt and nut and glue the end of the thread to it. Pass the thread up through two small screw eyes as shown and down behind the primary and secondary coils and fasten either by tying around the screw or to the far edge of the coil or the board. If you have mounted the coils on the board only:

When you turn the knob you send the thread up on it and this winding lifts the upper coil away from the lower as far as you want to lift it. This separating of the coils or getting them fall together is what we call "varying the coupling." The coupling is their nearness to each other.

There is a knob in the thread and when I use this outfit I vary the coupling until I hear a signal at its best and make a note of the "coupling" as indicated on the scale. Any kind of scale will do. It is merely to record the coupling so that if you listen for the same station the next night or the next week you know where you found him before and you are likely to find him somewhere around the same adjustment again.

Today's Programs

Philadelphia Station (WFI) (Stribling & Co.) 1:10 P. M.—Last news items from the radio. 1:30 to 4:30—A varied program by Elizabeth Patterson, George Morgan, Miss G. P. Stribling, John Owens, and Harold A. Simonds. 4:30 to 6—Baseball scores. 6:30—Radio for the day. 7:30 to 8:30—Dinner concert by Josephine R. Bennett, conductor; Letitia Clark, soloist; Walter Hervey, piano; Harry Stiles, conductor; with Philadelphia State Band (Lansburgh & Co.) orchestra. 8:30 to 11:30—The Miller. Philadelphia Station (WIP) (Gimbel Brothers) 1:30 P. M.—Several numbers by Sophie Acosta—Piano. 2:30—Harmonica. 3:30—Jacob Hill, solo. 4:30—An American song. 5:30—Vincent Guiney. Under the direction of Raymond. 6:30—Recital by George Morgan (tenor), assisted by Charles S. Halpern (piano). 7:30—Music in June. 8:30—German. 9:30—Burrhead. 10:30—Look Down, Dear Eyes. 11:30—Fisher. Little Chestnut. 1:30 P. M.—Several numbers by Sophie Acosta—Piano. 2:30—Harmonica. 3:30—Jacob Hill, solo. 4:30—An American song. 5:30—Vincent Guiney. Under the direction of Raymond. 6:30—Recital by George Morgan (tenor), assisted by Charles S. Halpern (piano). 7:30—Music in June. 8:30—German. 9:30—Burrhead. 10:30—Look Down, Dear Eyes. 11:30—Fisher. Little Chestnut. 1:30 P. M.—Several numbers by Sophie Acosta—Piano. 2:30—Harmonica. 3:30—Jacob Hill, solo. 4:30—An American song. 5:30—Vincent Guiney. Under the direction of Raymond. 6:30—Recital by George Morgan (tenor), assisted by Charles S. Halpern (piano). 7:30—Music in June. 8:30—German. 9:30—Burrhead. 10:30—Look Down, Dear Eyes. 11:30—Fisher. Little Chestnut.

6:30 P. M.—Sixth chapter of "Alice in Wonderland" by Kath. Haver, reader. 7:00 P. M.—"Health Talk," by Dr. Herman M. Hays, New York State Health Inspector. 7:15 P. M.—Concert program. (Program through courtesy of Mohawk Valley Radio Club.) 7:30—Musical program. 7:45—Musical program. 8:00—Musical program. 8:15—Musical program. 8:30—Musical program. 8:45—Musical program. 9:00—Musical program. 9:15—Musical program. 9:30—Musical program. 9:45—Musical program. 10:00—Musical program. 10:15—Musical program. 10:30—Musical program. 10:45—Musical program. 11:00—Musical program. 11:15—Musical program. 11:30—Musical program. 11:45—Musical program. 12:00—Musical program.

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