

BUSINESS AND PROFESSIONAL

One cent the word each time.

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DR. MATTIE B. SHAW—Residence and office, 108 Pioneer avenue. Telephone 28. Office hours, 10 to 12 a. m.; 2 to 5 p. m., only.

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CONVALESCENT HOME—Good cheer. Good care. Good food. Terms reasonable. 153 Granite St. Phone 411-R. 306-lmo

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FOR prompt and careful service auto trucks or horse drays, call Whittle Transfer Co. Phone 117 Office, 89 Oak street near Hotel Ashland. 56-t

T. L. POWELL—GENERAL TRAFFIC—Good team and motor trucks. Good service at a reasonable price. Phone 83.

WANTED.

WOMAN WANTS WORK by hour Address Tidings office. 84-6

FOR RENT.

FOR RENT—A splendid three room furnished apartment; adults only. 357 Vista St. Phone 122. 80-t

FOR SALE.

FOR SALE—Dry laurel wood, plenty of heater chunks; 12 inch tier, \$4.50; also 12 inch body fir, \$3.75; 12 inch second growth fir, \$3.25; delivered. 1224 Iowa St. 68-mo

FOR SALE OR RENT—Partly furnished house. 311 Granite. Inquire Neida Cafe. 72-t

AUCTION SALE—Household goods, for cash, next Saturday at 2 p. m. Mrs. James Lowe, 102 Oak St. 83-1

EVERBEARING RASPBERRIES

LA FRANCE, the largest and most prolific, 50c each, 3 for \$1; Erskine Park, Ranere and St. Regis, the best shippers, 10c each or \$5 per 100. Everbearing strawberries, \$2 and \$3 per 100; Marvel and Sivilli, \$2 per 100. The Cory Thornless Blackberry, tips 15c each, 20 for \$2.50 or \$11 per 100. I have tried Burbanks and three other kinds and the Cory is the only "thornless" plant that will produce enough fruit to pay to plant and cultivate. 14-month-old plants have produced 25 pounds of large berries and no thorns. D. P. Blue, 500 Ashland St., Ashland, Oregon. 82-5



Want Ads Attract Good Help

THE VIKING CREAM SEPARATOR is another Catalog House burster at Peil's. Prices, \$31.00 and up. Save you \$1.90 on a 20 rod roll of fencing against anybody else's prices. New and used Sewing Machines for sale or rent. Garden tools and everything for the farmer.

PEIL'S CORNER

W. A. SHELL BARBER Safety blades resharpened like new. Single bit, 7c; doz. Double bit, 6c; doz. Children's Work A Specialty

Local and Personal

Social Circle Meets—The social circle of the Christian church met this afternoon at 2:30 at the J. V. Wright home at 2.63 Mountain avenue. Mrs. Arthur Webber assisted Mrs. Wright in entertaining.

We have the best prices on used cars to be found in the city. Come in and look them over. Buick Agency. 72-t

For the best chili. Try Rose Bros. 74-t

Buy that Xmas gift at the Variety Store. 89 N. Main St. 75-t

Visited in Medford—Mrs. John Hessler, of Mountain avenue, were Medford visitors recently, visiting at the Andrews home as well as seeing the sights around town.

For sale at Needlecraft Shop, baby doll sets, garden sets, bloomer suits. 80-t

Our box candy assortment is the most complete in Ashland. Rose Bros. 74-t

G. A. R. Elects Officers—Burnside post No. 23, G. A. R., elected officers Saturday. Those chosen for office were: Post commander, E. K. Hall; senior vice-commander, A. C. Spencer; junior vice-commander, V. C. Van Natta; Chaplain, Captain Thomas. The other officers will be appointed by the post commander.

Cheap insurance is costly at any price. For sound insurance at reasonable rates, see Billings Agency. Established 1883. 34-t

A complete line of children's toys in balcony. East Side Pharmacy. 78-t

White Christmas Planned—The Christian Bible school is planning to have a white Christmas this year and are preparing a good program.

Piano Tuning—Now is the time to have your piano tuned. Carl H. Loveland. Studio, 135 East Main. Phone 465. 66-t

We have what you want for that Xmas gift at the Variety Store. Best values in town. 89 N. Main St. 75-t

Medford Residents Visit—Mrs. William Carlton and granddaughters, Freda Carlton and Mrs. Morris from near Talent, were interviewing old friends in Ashland recently. The Carltons are expecting Mrs. Etta McCollum, of Medford, as a Christmas guest at their home. Mrs. McCollum was a former neighbor of the Carltons at their home in Douglas county.

Better insurance at reasonable rates. Billings Agency. Phone 211.

Ask your grocer for Golden Sheaf Bread. 52-t

Detrick sells for less. 72-t

Prose's Leave for Winter—F. A. Prose and wife have left Ashland, expecting to spend the winter in Petaluma, Calif.

Complete sets for dolls at Needlecraft Shop—Coats, suits, caps, etc., reasonably priced. 80-t

Merry Christmas will soon be here. We have a full line of Nuts and Candies at the right prices. Plaza Market, 61 North Main. 83-t

Sells Out—Goes South—Frank Guisinger has sold his place on the Boulevard and has gone to Los Angeles to reside. Mrs. Guisinger and children expect to go soon to Los Angeles.

Why not buy her a Singer Sewing Machine for Xmas. \$5 down and \$3 per month will put one in your home. Singer Sewing Machine Co., 10 So. Fir St., Medford.

Cliff Payne has spur steel ladders.

Medford Elks Have Tree—Medford Elks will have their annual Christmas tree in the temple tomorrow evening, and it is expected every Elk in the county will be present and do his bit for the worthy poor and needy. The Christmas tree affair will begin early Thursday evening and last until past midnight, giving every member of the organization an opportunity to be present, regardless of any other engagement.

Better be safe than sorry. See Beaver Realty Co. about your insurance. Phone 68. 237-t

CATARRH of head or throat is usually benefited by the vapors of VICKS VAPORUB Over 17 Million Jars Used Yearly

RADIO

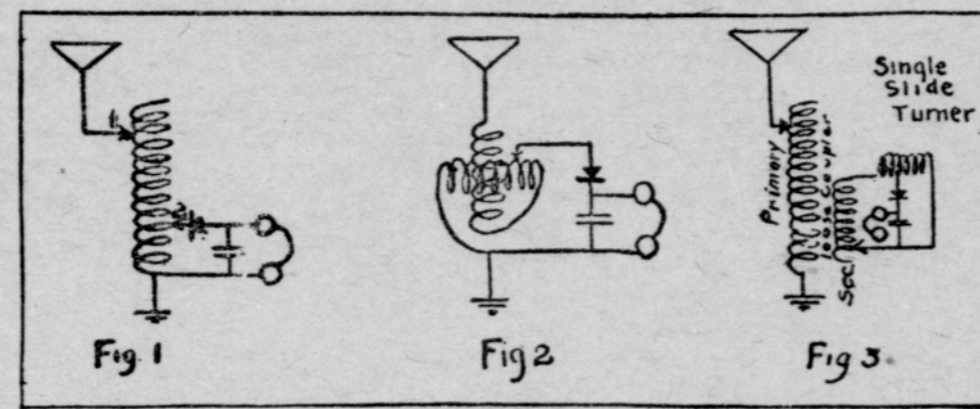
DO NOT DESPISE CRYSTAL DETECTOR

It Is Dependable and Cheap and Every Amateur Receiving Set Should Have One.

There is considerable to know about the crystal, and a little knowledge will enable the operator to get better results and bring increased respect for this instrument. There are many reasons for the longing of the owner of a crystal receiving set for the vacuum tube outfit. However, he has a great many advantages which the owner of the more expensive outfit does not possess.

For instance, the crystal reproduction of the radiophone broadcasting is of the best possible quality. The action being only rectifying there is no chance of distortion. The tube receiver nearly always distorts to some extent. If maximum regeneration is used, even though the tube is not allowed to oscillate, distortion is bound to result. Transformer or choke coil coupling between amplifiers, no grid bias or wrong grid bias, poorly matched tubes and transformers or bad loud talker will all cause distortion. A combination of several of these often causes very great distortion.

When the crystal receiver is out of commission it does not take a genius to locate the trouble. The circuit and the adjustments are simple. A burned out tube means \$5.00 or more for another. A bad crystal means a little



trouble to clean it up or at the worst a dime for a new one. The crystal set does not go out of commission periodically as the tube set does, due to a worn out battery.

The crystal set is quiet in action, adding no noise of itself, as do many of the detector tubes. Reception through static is nearly always more easily accomplished with a crystal. The atmospheric seem to be brought in all out of proportion to the signal by the tube detectors, while the crystal seems to damp out the high voltage peaks of the static or strays to some extent, leaving the signals, which are strong enough for it to rectify audibly, very clear.

The crystal set has numerous disadvantages, of course, but so has the vacuum tube, and the good points of the former greatly overbalance its faults.

It is not very stable, a slight jar often being sufficient to "knock out" a good point. There is no way in which a crystal may be made to amplify and it does not give sufficient signal strength to use with a loud talker. It usually causes broad tuning, which makes it difficult to tune out interference. It is not as sensitive to faint signals as the vacuum tube, although it is surprisingly sensitive when properly adjusted. Adjusting the crystal is a tedious task, and it has become especially so since the labor-saving vacuum tubes have become so numerous.

A crystal detector should be included in every receiving set. It is dependable, cheap, and takes up little space. Even though you have a two-step amplifier and a loud talker with all the trimmings, you will admit that there are numerous times when your receiver is out of commission because of a bad A or B battery, dead tube or

some trouble in one of a dozen pieces of your apparatus. During these periodic lapses there is usually some talk that you would like to have heard or a particular concert. A crystal detector will fill in these blanks very well, and you will be surprised at the quality of the music our broadcasting stations are sending out when you hear it via the crystal instead of at the noisy end of a two-step amplifier.

Many of the so-called disadvantages of the crystal detector can be partially overcome.

Crystal receivers usually tune broadly; that is, a small change in tuning does not cause a very great change in signal strength, and a station can be heard over quite a range of tuning. This means that if two stations are sending and their wave lengths are not very far apart it will be impossible to tune one in and exclude the other, whereas if the receiver tunes sharply, a station will be heard over a very narrow band of wave lengths. In other words, a very few degrees either way from the point where the best audibility is obtained will tune the station out. Then some selectivity can be had between two stations even if separated only by a few meters with a sharply tuned receiving set.

The crystal in the usual hookups introduces a resistance into the oscillating circuit, causing that circuit to be somewhat aperiodic. That is, it will respond to more than one wave length. It is rather hard to tune sharply with a crystal and a single tuning coil. In this case the crystal must be shunted across at least a part of the inductance and there is no way of keeping it entirely out of any of the circuits which may be used. In order to keep it as sharply tuned as possible, it is best to reduce the number of turns shunted by the detector circuit as low as possible without sacrificing too much signal strength. If the circuit shown in Fig. 1 is used, the

number of turns between slider 2 and ground should be kept less than a third of the number between slider 1 and ground. This will allow the antenna circuit to oscillate much more freely at its natural period. If using a single variometer better tuning may be had by tapping off the detector circuit, as in Fig. 2, about three-fourths of the stationary coil of the variometer, instead of hooking it across the entire variometer.

The loose coupler is very much to be preferred over either of these two tuning schemes. The two circuits are loosely coupled to each other by induction and both circuits will have a higher resistance to any but the wave length to which they are tuned, each tending to damp out the undesired signal. The crystal is causing rather broad tuning in the secondary circuit, but the antenna circuit with its higher resistance in low resistance, is left to oscillate freely, and will be sharply tuned. This will exclude to a great extent signals on any but the desired wave length. These signals, if induced into the secondary at all, will be greatly weakened. The secondary, though broadly tuned, will still have a greater resistance to any signals not on its own natural wave length.

The secondary circuit can be made still more selective by carrying out the same scheme as in the first two figures; that is, by connecting the crystal across only a part of the circuit. Sharp tuning cannot be obtained with any ordinary outfit between local station even with a vacuum tube detector; it is almost impossible with a crystal, but can be done with a tube outfit by using very loose coupling to the antenna circuit or by using a loop to pick up the signals.

RADIO SYSTEM FOR JAPAN

Power Company of Nagoya Seeks Government Permission for Plant.

Application for government sanction to establish a wireless telephone system has been made by the Daido Electric Power company of Nagoya, Japan, according to advices received by the Department of Commerce.

The company proposes to operate this wireless system primarily for its own convenience in connecting the various stations with its electric light and power system, but its use may be extended eventually to the general public if sufficient demand should arise.

As at present planned the system will start from Okuwa in Nagano prefecture on the Central Japan railway line, from which point communication will be established through Nagoya and as far as Osaka, a distance of about 150 miles.

Value of Good Receivers. Because the energy that a receiver set picks up is extremely small and every possible means must be used to convert this energy, the best results are obtained when receivers of high quality are employed. A great mistake is made by spending much time upon the construction of a tuner, detector, etc., but giving thought only to the price, and not the quality of the receivers.

RADIO FLASHES

Montclair, N. J., has installed on its high school an aerial equal in size to some of the broadcasting stations. The receiving set is in the physics department and many of the pupils are licensed operators.

High-powered radio stations will be in operation in 1923 at Bogota bay, Cuba, and Buenos Aires. This will make possible relaying messages to Buenos Aires by way of Cuba and Bogota.

Commander Tosf of Italy, a noted inventor in the radio field, states that the land of Marconi is far behind in installing radio broadcasting and that future prospects are far from promising. One hundred thousand persons heard the bride and groom make their nuptial vows in a recently broadcast marriage service. Quite an impressive number of witnesses if a divorce should ever be sought.

It required the erection of 11 aerials before radio could be successfully operated at Camp Curry, in the Yosemite valley. Rock walls rear thousands of feet above the valley in which the camp is situated.

How They Vamp 'Em



THOMAS MEIGHAN, the Paramount star, had to spend three weeks in Sag Harbor, Long Island, working in his new picture, "Back Home and Broke," which was written for him by George Ade. He thought he had seen all the different styles of vamping on and off the screen, but this one who asked to have her picture taken standing beside him as he left the local bank was entirely original. See how he is enjoying it.

MONTANA ROYAL MIXED FEED Straight Car Just Received 16 per cent protein—\$40.00 ton Unsurpassed for Dairy and Poultry Ashland Fruit Association

We Like to Believe THAT SOME DAY, SOMEHOW, FORTUNE WILL FAVOR US WITH FINANCIAL INDEPENDENCE. DON'T BE MISLED. FINANCIAL INDEPENDENCE IS EARNED BY THE INTELLIGENT USE OF MONEY, WHICH DEMANDS REGULAR SAVING.

The Citizens Bank of Ashland Ashland, Oregon

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