

LOCATION BIG FACTOR, O'ROURKE TELLS AMATEURS

Antenna Should Be Erected in Open and as Far From Trees As Possible, Expert Points Out.

By JOHN GILMORE O'ROURKE, Superintendent of District of Eastern Nebraska of the American Radio Relay League.

The first problem that confronts the amateur when erecting an antenna system is the location. Try and erect your antenna in the open. Erect it as far from trees and other structures as possible. Steel structures and trees near your antenna tend to isolate it. However, their worst trouble is that they affect the wave length of your antenna. A tree of any size located under your aerial will continually change the capacity of your antenna system, thereby changing your wave length. Thus it is next to the impossible to accurately calibrate your receiving apparatus. Your wave length will be considerably higher in summer than in winter.

If there is a power line within 200 feet of where you propose to place your antenna, try and erect it so that it will be at right angles to the power line, providing the line carries a potential of 2,500 volts or more. However, it will be best to place it at right angles to any wire system within 200 or 300 feet of your antenna. If this is done humming in the receivers, caused by inductions between your antenna and the power line, will be reduced to a minimum. The nearer you can construct your aerial at right angles to these wire systems the less the interference.

We will now suppose that you have chosen the best location for your aerial. We will also suppose that you have chosen the inverted "L" antenna as best suited for your location. There are now confronting us three main problems; namely, wave length, insulation and conductivity. The wave length is, of course, the most important. If you intend to install a transmitting equipment the total length of your antenna should not exceed 120 feet. If more than four wires are used in the flat top portion of your antenna its total length should not exceed 110 feet. By total length I mean the sum of the flat top, lead-in and ground lead. If you are desirous of erecting an aerial of larger dimensions an antenna series condenser will be required to bring the transmitted wave down to 200 meters. However, this method is not as efficient as constructing an antenna whose fundamental wave length is slightly below 200 meters. In this case your wave can be brought back to 200 meters by means of your antenna inductance or the secondary of your oscillation transformer.

In constructing your antenna, it is not necessary to use bare wire. But for the sake of lightness it is best. For a flat top, whose length is 50 feet, the wires, if there are four, should be spaced about 18 inches apart. No. 12 copper wire makes a very good antenna, although aluminum or other bronze cable is the most efficient. If your antenna contains four wires, the lead-in should also contain four. The spreaders should be made of some light but strong material. Overinsulation is an impossibility. Always choose some good insulating material, such as bakelite or electrose. Electrore is the standard insulation for aerials. The cheapest way to insulate the flat top is to place the insulators in series on the bridges or hoisting ropes. Bridle and hoisting ropes should be hoisted in wax before placing them on the antenna. Sash cord is the best rope for use in lightweight aerial construction. Securely solder all connections. To do this does not require a gob of solder as big as your fist around each joint. In next Sunday's Bee I will write of the ground system.

Queries Department.
Any experimenter or amateur may make use of this department as a source of information regarding radio communication.
No questions answered that do not bear interest to the amateur body as a whole.
No questions answered by mail.
Address all questions, Radio Department, Omaha Daily Bee.

T. H. Omaha, Neb.
1. I have heard radiophone messages on a crystal detector. Is this a trick?
A. Decidedly no.
2. They are not very loud. Is there any way to make them louder and still use a crystal detector?



A PALATABLE PLATE
Plates are as necessary, just as much as plate dinners are a custom. The more beautiful the plate the more palatable and appetizing the meal. The maid without teeth would not be presentable to serve—a with our Porcelain Plates she would add charm to the dinner.
Dr. Todd makes Porcelain, Aluminum, Gold, Zillimite and Rubber Plates.
If you have been misfit the doctor will fit you, take you out to lunch and start you off right.
Do you want a Dental?
Dr. G. W. TODD
Office Fourth Floor Barker Bldg., 15th and Farnam Streets

A. By selective tuning. How big is your aerial?
D. D. R. Tilden, Neb.
1. I have a small station, but cannot send outside of the state. Must I have a license?
A. If your transmitter interferes with stations capable of receiving messages sent from a station situated outside of Nebraska you will require both station and operator's licenses.

Church Members Figure Out Where American's Money Goes

Boston, May 8.—The Congregationalists of Greater Boston have published the following statement of how money goes:

Americans (all ages), average for tobacco per week, 70 cents.
Americans (all ages), average for theater and movies per week, 43 cents.
Americans (all ages), average for ice cream and candy, 40 cents.
Congregationalists (adults), for the church, 25 cents.
Congregationalists (adults), average for benevolence, 4 cents.

Experts See No Hope For Lower Sugar Price

(Continued From Page One.)

refiners in Washington declare it is impossible to figure on anything like normal supply or prices until Germany gets back into prewar production and the countries parcelled off from Germany, like Czechoslovakia, assume their share of the burden of producing.

Place Blame for Shortage.
It is estimated by the refiners that the actual shortage in the supply for the United States is about 1,108,000 tons, the normal consumption in this country being about 4,000,000. This shortage is due principally to the fact that the refusal of President Wilson to approve the recommendation of the defunct sugar equalization board that the United States buy up the Cuban crop, as it did during the war, and allocate it to the European powers, left the way open for Great Britain to buy up the bulk of this crop. In this connection, the refiners, who

profess to be gravely alarmed over the situation, bitterly criticize the administration on the ground of shortsightedness.
Like the large coal operators, the refiners are fearful that the present situation over which they insist they have no control, will lead to drastic legislation and perhaps nationalization of the industry. Also they declare that when normal production returns and prices drop they will find themselves face to face with high prices for their raw material and high wages to their employees.

Resales Vicious Practice.
"Under the threat of government prosecution," said Truman G. Palmer, beet sugar expert, today, "the beet sugar refiners in the west and middle west disposed of their 1919 crop as rapidly as it was refined and at the government fixed orders of 10 1/2 cents. So there is no corner as far as we are concerned. There has been, however, apparently a great deal of individual hoarding on the part of householders which has aggravated the situation for the consumers who did not hoard. Also there has been a great deal of speculation in the way of resales, which

the offer made by the refiners to the government is destined to correct. I know of one instance in which a lot of sugar which went on the Chicago market was resold 11 times before it reached the consumer, each of the intermediary brokers taking his profit. How general this is I cannot say.
"But that there is a real shortage is perfectly patent from the figures. The beet sugar crop in this country last year was 726,451 tons against 700,950 tons for 1913, and there was some drop in the Louisiana cane crop. I know that the refiners in southern California have recently paid farmers as high as \$19 a ton for sugar beets. The yield in Southern California of refined sugar from sugar beets is considerably higher than elsewhere or about \$188 pounds per ton. Elsewhere the yield is about 272 pounds per ton of beets."
Big 1920 Yields Expected
According to Mr. Palmer, the yield of beet sugar in the United States this summer will be about 150,000 or 200,000 tons more than the 1919 crop, extra large acreages being reported from Michigan, Colorado

and California, the three principal beet sugar growing states. He explained that it required considerable time to increase the yield owing to the close attention required of the farmers growing sugar beets. The California crop is expected to come on the market in July. He told of sugar brokers vainly seeking supplies in various directions and of one who paid 17 1/2 cents a pound on a shipment from Holland.
Efforts are being made by the refiners to bring in supplies from Java and the Philippines, but the Java crop has dropped from 1,778,000 tons to 1,335,000 tons.

Sought Divorce When Wife Didn't Mend His Clothes
Kansas City, Mo., May 8.—The fact that a wife fails to keep the clothes of her better half mended is no grounds for a divorce.
So ruled Attorney W. R. Hogsett, sitting for Judge Thomas, of the district court, here the other day, when August L. Hunter, a truck

driver, sought to be freed from his spouse, Mrs. Annie V. Hunter. "If failure of a wife to keep her husband's clothes mended were sufficient grounds for divorce most any man in all probability could get one some time during his married life," Hogsett told Hunter.
"I might even get one myself."
See Want Ads Are Best Business Boosters.

MON-YEN-LO

Chinese and American Cafe
1508-10-12 Howard Street Second Floor

Announce—
The cafe has been completely remodeled and equipped with imported fixtures. We serve quality foods in Chinese and American dishes.
Prompt Service and Reasonable Prices
Give us a trial and you will be satisfied.

Green Tag Sale of Silk Hose
To close out lots that will pack our Hosiery Section.
Finest quality, pure thread silk.
50ys. Hose, good value, 1.29
10ys. extra special, 59c
50ys. Fibre, silk, back, mostly a \$1.25 value, the pair, 59c



Julius Orkin

GREEN TAG SALE

THE EVENT THAT HAS CAPTURED THE UNDIVIDED ATTENTION OF ALL OMAHA, SAVINGS THAT BORDER ON THE RIDICULOUS. THE ONE GREAT-EST SALE OF RECENT YEARS.

Magnificent SUITS--Sacrificed

It is indeed difficult to imagine such beautiful Suits selling for so little money. Less than Half Price is the usual manner in which we have done the pricing for this wonderful Clearance. Grasp this great Suit buying opportunity with the least possible delay.

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|--|---------------------|---------------------|---------------------|
| Tricotines . Poiret Twills
Men's Wear Serges
English Tweeds
Burella Cloths
Wool Jerseys
Velour Checks | Suits Worth to \$55 | Suits Worth to \$75 | Suits Worth to \$95 |
| | \$26 | \$37 | \$46 |

- Embroidered Suits
- Ripple Back Suits
- Eton Suits
- Vestee Effects
- Severe Tailored Suits



Monday
GREEN TAG SALE OF DRESSES
Hundreds upon hundreds of exquisite styled New Dresses are assembled under three daring price heads
Georgettes Chineses Taffetas Satins Crepe de Stun-
Plain and Figured ning Combinations
DRESSES Worth to \$45.00 **\$19.95**
DRESSES Worth to \$59.50 **\$24.95**
DRESSES Worth to \$75.00 **\$29.95**

The great Forced Out of Business program has introduced mighty price shattering during the past few weeks, but this Wonderful Green Tag event eclipses all past performances.

WATCH FOR THE GREEN TICKET ON EVERY GARMENT—FIGURE OUT THE SAVINGS FOR YOURSELVES.



The Green Tags Tell the Savings. See Them

Tell Your Friends of This Gigantic Apparel Event

Never-to-Be-Forgotten Values in
COATS
No wonder you read these prices the second time. Coats at far less than Half Price is indeed uncommon, but that is one of the outcomes of this great Forced Out of Business event.
Polo Cloth Velours Bolivia Silvertones Camels' Hair Tricotines
Choose from COATS Worth to \$39.50 **\$16.75**
Sport Coats, Dressy Coats, Dolman Effects. Choose from COATS Worth to \$49.50 **\$23.75**
All the Newest Colors. Rich Silk Linings. COATS Worth to \$75.00 **\$34.75**

Every Sale Is Final Positively No Exchanges

Green Tag Clearance of Silk Underwear
Every day will see new lots brought out for quick final disposal.
TEDDY BEARS, one lot in dainty crepe de chine, Georgette, Jersey and satin; beautiful creations; values to \$10.50, Monday, **\$4.89**
One lot of dainty Camisoles in Georgette, satin and crepe de chine; a \$2.50 value, Monday only, **\$1.29**

Green Tag Sale of Smocks
One big lot of smart New Smocks, every wanted color, mostly embroidered, several good styles, \$3 and \$3.50 values **1.99**

Green Tag Sale of Petticoats
One gross of Novelty and fancy Colored Petticoats, good quality, various colored backrounds, good deep flounce, genuine 13.50 values, while they last **1.99**

Green Tag Clearance of Blouses
Two groups that should pack our blouse section to capacity. The values are simply extraordinary.
Stunning new Georgette Blouses, headed and embroidered, all colors—Values to \$12.50—Monday **\$4.44**
Wonderful Georgette and Crepe de Chine Blouses, beautifully headed and embroidered; rich new colors. Values to \$22.50—Monday only— **\$9.99**

