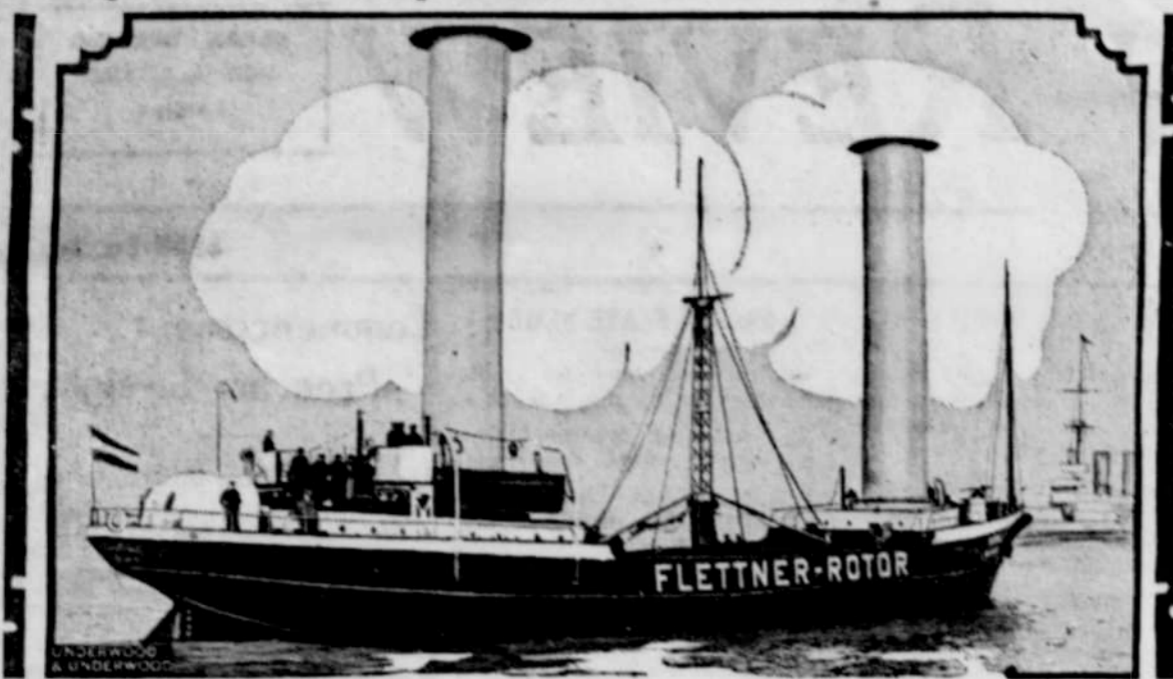


Queer Rotor Ship Baden-Baden Comes to America



The Flettner rotor ship, Baden-Baden, formerly the Buckau, on her way to America under rotor power. Herr Anton Flettner, the inventor, also sailed for New York.

Wisconsin Town Saved From Flood by Sandbags



After an all-night fight, residents of Portage, Wis., succeeded in blocking a break in the wall of a canal between the Fox and Wisconsin rivers, and saved the town from an imminent flood. The high waters forced down seventy-five feet of the wall, and weakened the gates at the Wisconsin river end of the canal. Citizens filled the gap with granite and sandbags.

Design for the Irving Memorial



Daniel Chester French, sculptor, with his design of the Washington Irving Memorial to be erected at Irvington-on-Hudson. A campaign is now in progress to raise \$50,000, the estimated cost of the memorial.

HOLDS MANY OFFICES



Princess Alexandrine Cantacuzene, who is president of the Women's National Society of Rumania, president of the National Council of Women of Rumania, vice president of the International council, and vice president of the Women of the Small Nations. She is a member of the Social Institute of Rumania, and has been decorated with the Grand Cross of St. Sepulcher, and Grand Cross of the Order of Queen Marie of Rumania, is a grand officer of St. Sava of Yugo-Slavia and an officer of the Croix de Guerre of Italy and Rumania.

Booths at Chicago S. A. Congress



General William Branwell Booth, international head of the Salvation Army, and Mrs. Booth attended the territorial congress of the organization in Chicago. They have just completed a tour of Salvation Army posts in Europe.

E. GIL BORGES



New portrait of E. Gil Borges, assistant director of the Pan-American union in Washington.

Named for Pioneer

The city of Rochester, N. Y., was named for Nathaniel Rochester, an American pioneer and Revolutionary officer, who was one of the chief colonizers of the Genesee valley and of the city which bears his name.

Thorough Job

Retired painter and decorator (to artist, whom he had commissioned to paint his daughter's portrait): And none of your slap-dash painting for me; three good coats, y'understand?

POULTRY RADIO

FARM FLOCK STILL ILLINOIS SIDE LINE

Although Illinois is one of the foremost states in value of poultry and poultry products, the business is still considered a side line on most farms of the state, according to John Vandervort, poultry extension specialist of the college of agriculture, University of Illinois. Poultry is kept to utilize waste grain and furnish eggs and poultry for the family. Some profit is realized from the average farm flock, but the income is distributed in small amounts throughout the year. The farmer, therefore, often does not realize how profitable his flock is.

There is a great need for educational work to encourage farmers to adopt better management methods. To this end, the flock management is being stressed in the poultry extension work of the college. A definite project is being carried out for the three-fold purpose of: (1) encouraging better management methods for farm poultry flocks in Illinois, (2) encouraging the keeping of records as a basis for studying the efficiency of farm flock production, (3) developing leaders who will follow improved poultry practices, as far as practical, in order that their flocks may serve as demonstrations of profitable poultry management in their respective communities.

This flock management project is becoming more popular each year. Groups of co-operators in 40 counties started records at the beginning of 1925 and it is expected that similar records will be kept in nearly fifty counties in 1926. The record books of much value to the individual but it is felt that more good will eventually be derived from the development of flock demonstration farms that will demonstrate better management practices to farmers in communities near these farms.

Seventy farm poultry records were completed in 1924. The average size flock on their farms was 183 birds, the average egg production was 112 eggs and the average profit was \$12.24 a bird. The best one-third of the farm flocks showed an egg production of 128 eggs and a profit of \$2.88 a hen while the poorer one-third of the flocks showed a production of 96 eggs and a loss of 21 cents a hen. These records bring out the fact that low egg production can be an important factor in causing low profit.

Better production can be brought about by the elimination of hens that have proven to be poor layers and pullets that do not give promise of paying their board, careful breeding from birds selected for egg production and by careful feeding and management.

Poultry is not profitable on many farms because of heavy losses caused by parasites and diseases. This problem is becoming more and more serious throughout the state and a need for work along these lines has been felt. As a result, a poultry sanitation program has been outlined and started in a few counties this year in co-operation with the farm advisers of these counties and the animal pathology division of the college.

Dust Wallows Essential for Health of Chickens

A dust bath is as essential for the health of chickens as a water bath is for humans. By its use fowls are able to rid themselves of many lice, as well as to remove the scales and scurf from the skin.

Large, deep dust boxes are essential in the laying pens. They should be deep enough to hold about six inches of dusting material. They are usually placed in the corner of the pen, in the sunshine, and elevated so that the litter from the floor will not be thrown into them.

The material used for dusting should be fine, light and dry. If it is to kill lice it must be fine enough to fill the breathing pores of these parasites. Sandy loam mixed with road dust makes a fairly good dusting material. Sifted coal ashes will help in making it finer.

If no provision has been made for securing dusting material before winter, it will usually be necessary to depend upon loam which can be dug up and dried and mixed with one-third sifted coal ashes.

Lack of Proper Feed

If you own a flock of Rhode Island Reds or Barred Rocks that don't seem to be producing as many eggs as your neighbor's Wyandottes or Leghorns, don't make the mistake of wanting to raise the same breed as your neighbor. You probably are at fault in the care, feed and method of feeding. If given proper management your flock would probably be able to produce as well as your neighbor's. The average farm flock does not receive the feed needed for egg production.

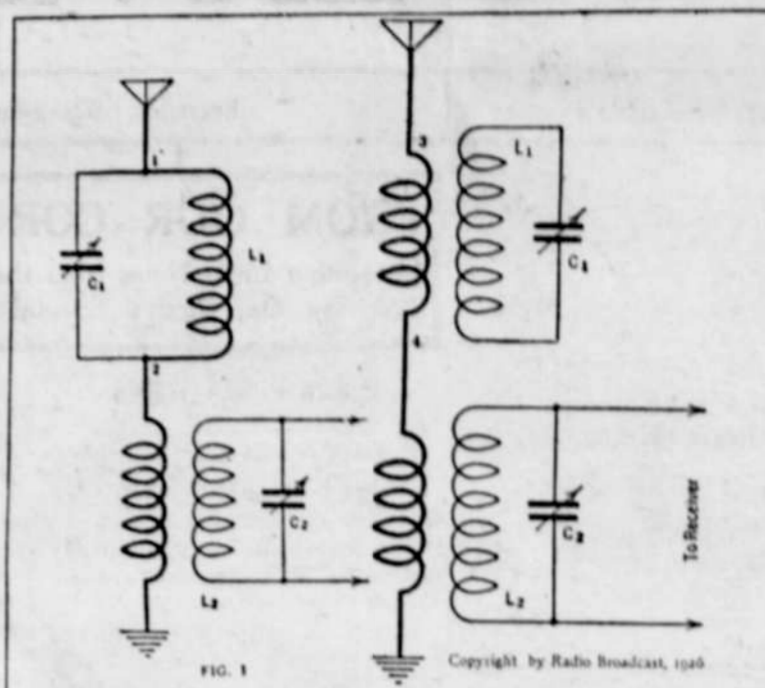
Time to Caponize

The time of the year to caponize is of little importance as the capon recovers from the operation regardless of the season. However, there are certain other considerations that are of importance. First in importance is the age and size of the cockerel. The best time to caponize is when cockerels weigh from 1 1/2 to 2 1/2 pounds at from 2 to 4 months old. The lower age limit applies to large breeds and the higher limit to the Asiatic varieties.

Use Only Clean Eggs

Experiments have demonstrated the importance of using only clean eggs for hatching and that even if clean eggs are used they should not be held more than 10 to 12 days. These results were obtained in an experiment carried on for the first time last spring. The experiments were made to test out the theory that the eggs had to be turned each day. Results obtained showed that the turning of the eggs made little difference in their hatchability.

RADIO



Wave Trap Will Cut Out Loud Locals—The Conductively Couple Form and the Inductively Coupled.

Due to the widespread increase in power of many of our broadcasting stations, the need for some sort of apparatus capable of cutting out strongly interfering stations, is becoming felt more and more. There is not much fun in sitting through the program of one particular station night after night, especially when a better program is being offered by some other station which is drowned out by the nearer or more powerful transmitter. "Interfering signals," writes Howard E. Rhodes in the Radio Broadcast magazine, "sometimes are caused by direct pickup by the coils of the set so that its natural selectivity is of no avail in eliminating them. This occurs when the set is being operated in proximity to a broadcasting station, with the result that the field strength in the vicinity is great enough to induce currents directly in the various coils of the receiver. Under these conditions it will be found possible to hear the program with the antenna disconnected."

"The only practical methods to be used in eliminating this type of interference are either shielding of the receiver or using some form of closed-field coil, such as a toroid. If the set is to be shielded, it is necessary to line the entire inside of the cabinet, including the cover and the panel, with this copper. Any joints in the copper sheet are soldered together and connection is finally made between the shield and the minus A terminal which, in this instance, is connected to ground. This puts the entire shield at ground potential, thereby excluding from the coils any external electrical fields. It should also be pointed out that this shielding will also eliminate any interference caused by power lines, motors, etc., provided they are causing trouble by setting up currents directly in the coils. However, if the interference is reaching the set by way of the antenna system, shielding will be of no aid. The use of toroid coils is coming into very common use in instances where there is need of an inductor that is unaffected by external fields."

Why Toroid Coil is Favored.

The gist of Mr. Rhodes' explanation why the toroid type of coil is recommended for use where ordinary coils will cause broad tuning by their pick-up qualities, is as follows: Toroid coils will, as is the case with other coils, have induced in their turns currents which ordinarily would nullify the selective qualities of a receiver. However, the voltages induced in opposite halves of the coil, oppose each other, and the resultant effective pick-up voltage is zero. This nullifying feature is apparent in several other types of coils, but is probably more so in the toroid. The article in Radio Broadcast continues as follows:

"There is a second type of interfering signal that causes considerable trouble, and against this type the two cures so far described are useless. If the signals being induced in the antenna are sufficiently strong, it is possible that a receiver may not have a selectivity sharp enough to eliminate them completely, although its selectivity under ordinary conditions may be perfectly satisfactory. For instance, the receiver might be operated at a location quite close to a powerful broadcasting station so that the signal strength from this station in comparison with the strength of the signals that it is desired to receive from other stations is so great as to produce considerable interference, even though the receiver is considerably detuned from the interfering signal. It is apparent then, that, in some way, this powerful

signal must be impeded so as to decrease its strength. The most common piece of apparatus for use in this connection is the so-called wave trap which is actually a filter circuit tuned to absorb the interfering signals. These wave traps are very easily constructed, and cost little. They consist merely of an ordinary coil and a condenser. The traps are connected in the antenna circuit and are adjusted so that, at the frequency of the interfering signal, they have a very high impedance, the exact value depending on whether the unit is connected in series or parallel with the antenna. This high impedance prevents the signal from passing down through the primary of the antenna coupling and so into the receiver. At the same time, these wave traps offer a very low impedance to all other frequencies.

Methods of Operation.

"There are several methods by which these traps might be operated. Fig. 1 shows the most common method. In the drawing L₁, C₁ constitutes the trap circuit and L₂, C₂ the antenna coupler and tuning condenser of the receiving set. It will be seen that the trap is connected between the antenna post of the receiver and the antenna lead-in. Fig. 2 represents a slightly different method of connecting the trap in the circuit. In this latter method, the wave trap is inductively coupled to the antenna. This inductive coupling is obtained by winding a few turns of wire about one end of the coil L₁. One end of this new winding connects to the antenna and the other to the antenna post of the receiver. This circuit is practically equivalent to that of Fig. 1 with the difference that somewhat sharper tuning is obtained.

"Whether the trap circuit of Fig. 1 or that of Fig. 2 is used, depends to a considerable extent upon the characteristics of the antenna system. A well insulated antenna with a short lead-in and a short ground wire to a good ground, such as the cold-water mains, gives best results with the inductively coupled circuit. Every effort should be made to have as good a ground and antenna as is possible, but if it is necessary to use a long ground lead to a rather poor ground system, the direct coupled wave trap will probably give better results.

"When using the latter method of direct coupling, as illustrated in Fig. 1, some small change in the tuning of the antenna condenser will be noticed, whereas with inductive coupling practically no change in tuning takes place. This represents a slight advantage in favor of inductive coupling since it will be possible to continue to use the same old dial readings after the trap has been installed.

"If the trap is poorly made," says Mr. Rhodes in conclusion, "it may not only eliminate the interfering signals but will also decrease the strength of those signals we desire to receive. The most common cause of poor results with wave traps is due to the use of high resistance coils and low-grade condensers. It is therefore essential that the trap operate efficiently, and in order to obtain such operation, it is generally best to use a fairly small coil and a large condenser. With a large coil the elimination is usually more complete but the neutralized band is larger so that the trap interferes with reception on wave lengths adjacent to that wave on which the interfering station is operating. Most satisfactory results are obtained when low loss coils are used, such as space wound solenoids, while a toroid may be used in the inductively coupled circuit."

Popular Solenoid Coils Are Very Satisfactory

The bureau of standards, in its latest report on coils used for broadcast reception, sets forth the following: A loose basket-weave coil, wound with 32-38 Litz wire, is the most efficient.

The popular solenoid, wound single layer on a hard rubber cylinder with No. 24 DCC wire, is a close second and more desirable from the viewpoint of cost. It is a low-loss coil of great excellence.

A two-layer bank wound coil is the worst. Six broken strands in Litz wire increase the radio frequency resistance only 0.5 ohm.

Binders on coils are sanctioned, especially collodion. No. 16 DCC is found to have lower resistance on high waves, but higher even than No. 28 on lower waves. For the solenoid coil, 60 turns of No. 24 DCC wound on a hard rubber form 3.19 inches in diameter and 1.77 inches long is ideal. Tuning con-

Increased Volume Ruins Tubes

No matter what kind of tubes are used in a set, every operator should remember that increasing the volume and overheating the filament is a wasteful practice. The proper temperature of the filament is ascertained by observing its brilliancy, or, more accurately, by using a voltmeter to indicate the voltage which is used across it.

Some Radio Figures

There are about 1,000 broadcasting stations in the world, of which 538 are in the United States. There are approximately 8,000,000 radio sets in use, 5,000,000 of which are "tube" sets and the remainder the crystal type.

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CARBUNCLES CARBOIL

Recalling Memories of Fautleroy Craze

In his book, "The Turn of the Century, 1900-1904," Mark Sullivan cites a recent interview with Wallace Edinger, who was one of the three child originators of the title role in "Little Lord Fautleroy," by Frances Hodgson Burnett. Mr. Edinger said: "The role was originated by three of us. . . . We all rehearsed it about the same time and we all played it at the Broadway theater in New York. I was only seven when I began the Little Lord Fautleroy part. I played it all over the United States, Maine to California, and received as high as \$250 a week. . . . To play the part, I had to have long golden curls. In addition, I had to wear white cuffs and be, oh, so sweet, on the stage. As a result, the other boys used to call me 'Sissy.' After a while a boy seldom got beyond the first part of the word before I slammed him in the nose. There were other kids who were glad when the 'Fautleroy' vogue died, too. Their mothers were dressing them as counterparts of me in the role, and they were always getting into fights."

A Paradox

"It may seem paradoxical," said the librarian at an East side branch library, "but I find that the people who have the deepest appreciation of literature almost invariably are those who keep their library books beyond the allotted time. It isn't that they do not read the books but rather that they read them quickly, and perhaps buy others or borrow others, forgetting the books which should have been returned to the library."—Detroit News.

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FROM THE FOUR QUARTERS

Forks were first imported from Italy. Mole is eaten in many parts of Africa. Isinglass is obtained from the air bladders of fish. President Garfield's father died fighting a forest fire. The Amazon river, South America, enters the ocean at about the equator.

First high school for girls in Boston was opened in 1820. The first battleship Maine was launched November 18, 1890. The Russo-Japanese war was waged in Manchuria in 1904-05. John Jay of New York was first chief justice of the United States. The summit of Mont Blanc, in the Alps, was first reached by a guide in 1786.

Retired painter and decorator (to artist, whom he had commissioned to paint his daughter's portrait): And none of your slap-dash painting for me; three good coats, y'understand?