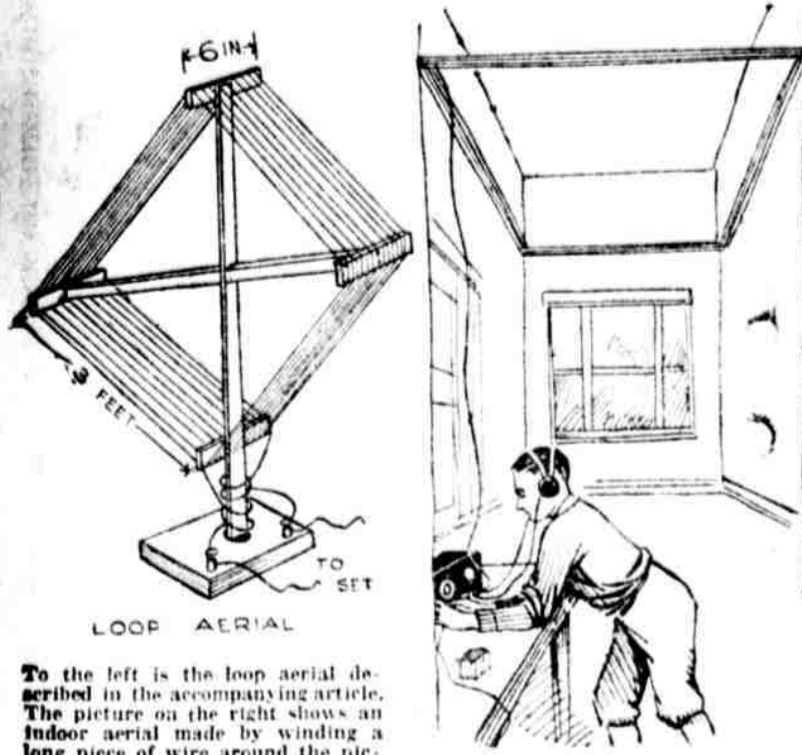


### RADIO IN THE HOME

By HENRY M. NEELY



To the left is the loop aerial described in the accompanying article. The picture on the right shows an indoor aerial made by winding a long piece of wire around the picture molding of a room, the wires being spaced about an inch apart. This makes a good aerial, but not by any means as efficient as one placed outdoors. The number of turns required for an aerial of this kind can be told only by experience, but it is best to start with something like 150 to 200 feet of wire altogether. One end of the wire is made fast to the ceiling and the other end is brought directly to the receiving set, and the set then has the ordinary ground wire.

#### The Use of Indoor Aerials

The melancholy days of radio are upon us. Even in the winter the interference caused by the constantly growing number of broadcasting stations is hard enough to tune out. But now and for the rest of the summer we are confronted with a very different and more pernicious kind of interference and one that cannot be tuned out, if we are using the accepted type of aerial outdoors.

This interference is "static," the discharge of powerful electric currents in the atmosphere. Static is a great radio spark, but it is produced without any of the fine adjusting devices of our modern transmitting stations, and it has no respect for the wavelength regulations of the United States or any other government.

When a discharge of electricity shoots across the atmosphere some dozens of miles above the earth it uses every wave length known to modern radio and will come crashing in on your phones regardless of your tuning, and if you are using a loud-speaking de-

vice there will be soundings during the summer when you could hear the broadcast concerts just as well if you were in a better factory. The only thing that I know of that will even partially suppress static is an indoor non-aerial.

So today we are taking up the question of the loop, not only for the benefit of the sufferer from static, but for those who live in cities under such conditions that they are not permitted to put up outdoor aerials.

First, let it be thoroughly understood that the loop aerial is not by any means as efficient as an outdoor aerial. My own experience with loops suggest as a comparison that a loop aerial with an antenna built and with the best hook-up possible will get about the same response in the telephone as will a crystal detector with a good outdoor aerial placed in the same station.

If, therefore, you are in such a situation that an outdoor aerial and a crystal would just barely bring the contents to you in your phones you will know that if you use a loop aerial you will almost certainly have to use an antenna built and at least one step of amplification to get satisfactory results. But the fact remains that it is possible to get very good satisfaction with an aerial that you can stand on the floor beside your set and that the loop also removes most of the complicated and expensive regulations of the fire underwriters with regard to wiring, lead-in, lightning arresters and switches and grounds.

The only regulations you need worry about with a loop are those covering the storage battery, and we have already described them.

The usual form of loop is like the picture on the left of the illustration with this article. As a matter of fact, it can be round or square or hexagon, but this square form is the easiest to make and is quite efficient.

For a loop built in this way with

dimensions three feet on each side and six inches wide, eight or ten turns of wire will be all that you require. Your regular aerial wire will do for this or you can use a good insulated wire not less than about No. 14 gauge. The wire is wound in a continuous spiral around the loop and the two ends are made fast to the binding posts shown on the stand.

You need not adhere to the dimensions given or to the number of turns. Personally I like to put about twenty-four turns on such a loop, the turns spaced a quarter of an inch apart. I use a large wire, insulated by tape wherever it touches the frame. Instead of connecting the ends of this wire to the binding posts I make them fast to the frame and use two short pieces of wire for the binding posts, the ends of these wires being soldered to spring clips, which when you press two parts together open their saw-tooth jaws, and when you let go allow these jaws to grasp firmly whatever is in between. I don't know what you call these clips, but they are the same things our grandfathers used on their suspenders.

With these two jaws I can of course throw any number of turns into the

aerial whenever I want and receive different wave lengths from 200 to 800. The great advantage of the loop aerial, if you are in a city where there are a number of broadcasting stations, is that the loop receives only when one corner of it is pointed directly at the waves coming from the sending station. This ability of the loop is used by the government in its radio compass stations.

If you are in a city with four or five broadcasting stations you will hear the one at which one corner of the loop is pointed, and those which are off at an angle of 15 degrees or more will either come in so faintly as not to bother you or will not come in at all. Those which are at right angles to the loop will be completely suppressed.

If, however, you are directly between two stations the loop will respond to both of them equally well because each station will have one of the corners of the loop pointed directly to it. It then becomes a question of your skill in tuning with the receiving set.

This ability of the loop—what is called its "directional properties"—is of great assistance in static season because the static which originates in the

parts of the sky not pointed at by either corner of the loop will be minimized or suppressed. It is therefore well worth while if you are the fortunate possessor of a bank account large enough to permit it, to add two stages of amplification to your set, take down your outdoor aerial entirely and use a loop.

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#### ELSIE SLEIGH SKIDS

Girl on Probation Rearrested for Robbing Official

Elsie Sleigh, seventeen, of East Passauken, N. J., was placed on probation yesterday by Judge Shull, in Quarter Sessions Court, but a short time later was sent to jail when it was discovered that she had stolen a pocketbook containing \$5 from the office of the probation officer.

Accused of the theft, the girl broke down and confessed. She said she had given the money to a relative and had thrown the pocketbook in the river while crossing on the ferry.

#### Uncommon Sense : The Price of Independence

By JOHN BLAKE

INDEPENDENCE, one of the most desirable things in existence, has always been expensive.

Our forefathers paid for it with their blood, and held it cheap at the price.

MOST of the wars that have blasted the world have been wars of independence.

Gradually designing men have acquired power, and employed it for their own advantage.

Steadily the men whose independence was being taken away from them opposed the tyranny, till finally swords or guns or poison gas or flying machines decided the issue. In almost every case the victory has been a victory for independence.

and patience to do what he has to do; the hope of it makes monotonous work supportable.

IT IS true that few obtain any full measure of independence, yet it is almost always within the reach of those who will pay the price.

It is not a low price. It is not a price which most men would call even reasonable.

Yet it is a price that, bar had luck or ill health, most men and women can pay, and which many of them do pay.

But they pay with their time, and with the sacrifice of pleasures, and with many battles over their stubborn wills.

on the installment plan, not to be delivered till paid for.

YET, after fifty, it is worth all its costs and more. It means not only leisure to enjoy things that have been forbidden in the past, but a clean conscience, and the satisfaction of having got out of life what one is entitled to get out of it.

What cost thousands of people their happiness and their lives costs the modern man and woman only toil and sacrifice. And surely it is a rare bargain at that price.

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#### City Truck Driver Hits Boy

The driver of a motortruck of the Bureau of Street Cleaning sped away after the vehicle struck Robert D. Lally, five years old, 1638 Warrington avenue, about 7 o'clock last night at Fifty-seventh street and Delmar terrace. The boy is in the Misericordia Hospital with a fractured left arm, cuts and bruises.

The advertisement features a large, detailed illustration of a city street scene, likely Atlantic City, with buildings, a streetcar, and people. A large, stylized 'S' logo with 'GOLD MEDAL MILK' inside is prominently displayed. Below the illustration, there is a bottle of Gold Medal Milk.

# GOLD MEDAL follows you to the Seashore

The thousands of our customers who will summer in Atlantic City, Ocean City, or nearby points, need have no misgivings about their milk supply during the vacation period.

GOLD MEDAL Service and Quality are available at your summer homes in the same degree of excellence and reliability as in Philadelphia, Camden, Chester and the suburbs.

GOLD MEDAL MILK, CREAM and CREAM BUTTERMILK—just as rich, fresh, pure and wholesome as you find them at home—are delivered from our large, well-equipped, sanitary seashore dairies, with unfailing regularity and courtesy.

SUPPLEE ICE CREAM—made in our Atlantic City plant—seldom equaled and never excelled, awaits you at hundreds of stores and restaurants, all over Atlantic City and Ocean City. There is one close to you.

## SUPPLEE-WILLS-JONES

ATLANTIC CITY 247 N. South Carolina Ave. Bell Phone 4671

OCEAN CITY 716 Asbury Ave. Bell Phone 225

#### Today's Programs

Philadelphia Station (WFL) (Strawbridge & Clothier)  
8:15 P. M.—Patrol. Local radio news bulletin.  
8:30 to 9:00—A varied program, including news by Elizabeth Lewis, "Home and Shop," and "Vandenberg's Base."

Philadelphia Station (WIP) (Gimbel Brothers)  
1:30—A varied musical program.  
2:30—Recital by William H. Clavin, organ soloist.  
3:00—News items and articles of public interest.  
4:00—Dance music.  
4:30—Fritz Kreisler, violin.  
5:00—"The Music of the World," vocal soloist.  
5:30—Announcement of next day's program.

Newark, N. J., Station (WJZ) (Westinghouse)  
7:30—Jack Rabbit Show, with David Gray.  
7:45—"The Life of the Day," with George A. Pinner, Charm Allen, Clara Hesse.  
7:55—"America's Story of Architecture," by Charles W. Henshaw.  
8:00—"The Story of the Republic," by New York Times. (Rebroadcast of special broadcast and the "The Story of the Republic," by Pulitzer prize, under the direction of Paul F. Taylor.)  
8:15—"The United States," vocal soloist.  
8:30—"The United States," vocal soloist.  
8:45—"The United States," vocal soloist.  
9:00—Connecticut. (Rebroadcast of special broadcast.)

Pittsburgh Station (KDRV) (Westinghouse)  
8:30 P. M.—An all-day program, including news, music, and a variety of other features.  
9:00 P. M.—"The Story of the Republic," by Pulitzer prize, under the direction of Paul F. Taylor.  
9:15—"The United States," vocal soloist.  
9:30—"The United States," vocal soloist.  
9:45—"The United States," vocal soloist.  
10:00—Music program, including "The Story of the Republic," by Pulitzer prize, under the direction of Paul F. Taylor.  
10:15—"The United States," vocal soloist.  
10:30—"The United States," vocal soloist.  
10:45—"The United States," vocal soloist.  
11:00—Music program, including "The Story of the Republic," by Pulitzer prize, under the direction of Paul F. Taylor.  
11:15—"The United States," vocal soloist.  
11:30—"The United States," vocal soloist.  
11:45—"The United States," vocal soloist.  
12:00—Music program, including "The Story of the Republic," by Pulitzer prize, under the direction of Paul F. Taylor.

**EUGENE G. WILE**  
No. 7 North Tenth Street  
Philadelphia, Pa.

Everything in Radio of Standard Makes Complete Radio Sets Installed Open Friday and Saturday Evenings

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**TEN DAYS' TRIAL THE DUDLEY JUNIOR The Crystal Set with Proven Units**

THE DUDLEY JUNIOR is a new type of radio set, designed for the home. It is a crystal set, and it is the only one of its kind that is so simple and so easy to operate. It is the only one of its kind that is so reliable and so durable. It is the only one of its kind that is so cheap and so popular.

THE DUDLEY JUNIOR is a new type of radio set, designed for the home. It is a crystal set, and it is the only one of its kind that is so simple and so easy to operate. It is the only one of its kind that is so reliable and so durable. It is the only one of its kind that is so cheap and so popular.

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**DUDLEY-VOUGHT CORPORATION**  
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