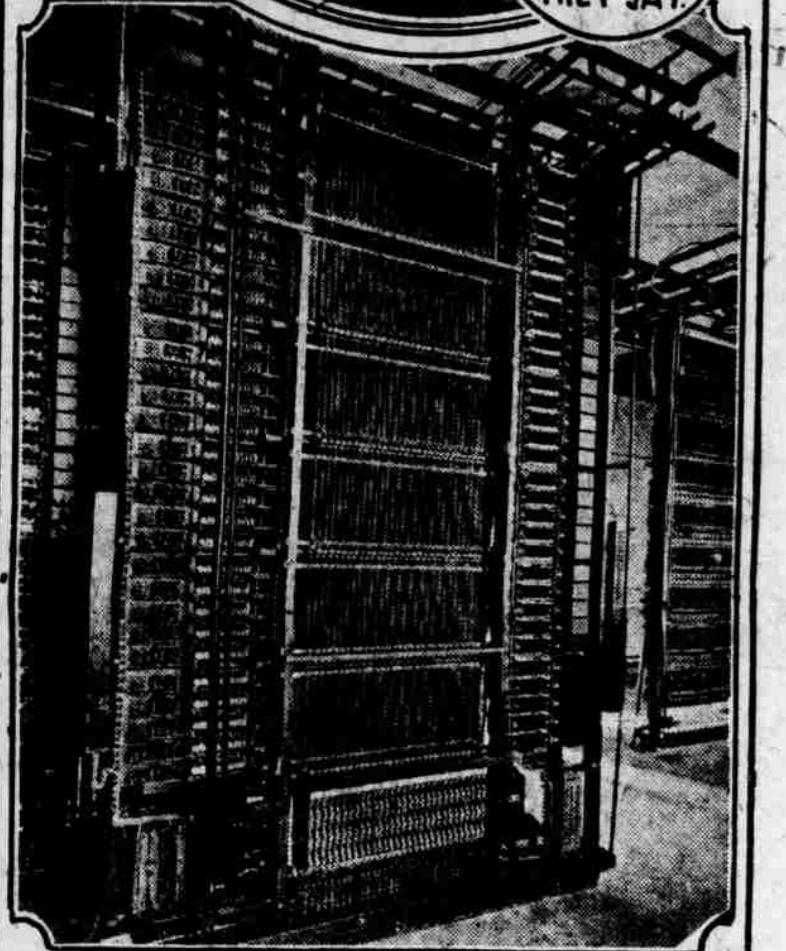


WRONG NUMBER? NO MORE SAY PHONE MEN

IT WILL BE YOUR OWN FAULT IF YOU FAIL TO MAKE CONNECTIONS UNDER NEW MACHINE SYSTEM WHERE CENTRAL USES HER EYES INSTEAD OF HER EARS



IT MAKES IT EASY FOR THE OPERATOR, THEY SAY



THIS IS JUST ONE OF 105 "FINAL FRAMES" ISN'T IT SIMPLE?

By J. T. ARMSTRONG.

The hour is midnight. A dark figure is fumbling with a latchkey at the front door of a West Side dwelling house.

"Is that you, John?" The voice is quickly followed by a stout woman, clad in a dressing gown and slippers.

"You Brute!" "Bu—business kept me, dear," gasps John.

"Brute!" exclaims the woman, shaking her husband roughly.

John sinks into a chair with a groan of despair.

Officials of the phone company say there isn't a chance for the new machine switching system.

And although fully as many operators will be employed when the system is installed as before they assert the elimination of the "human element" will result in increased efficiency.

For even the best of operators have been known to pause now and then and tuck a stray wisp of hair in its proper place.

Slightly Quicker. Now the comparison's absurd, of course, but the machine system has no stray locks of hair; nor is

it capable of "talking back," hence the prediction of increased efficiency.

"On calls from one automatic phone to another or from one automatic exchange to another the connections will be made slightly quicker by machine switching," explained F. C. Buitta, of the phone company.

"Between an automatic phone and a manual, or old style phone the calls will be completed in about the same time as heretofore."

Mr. Buitta says the use of the so-called automatic phone is just as simple as the use of the old oral instrument.

Take receiver from the hook and wait for a humming sound, or "dialing tone." Then, with the receiver off the hook dial the number desired.

The phone will purr—contentedly, no doubt—when the desired number is being rung. A rapidly buzzing sound indicates the line is busy.

Now consider the dial. You'll notice all the letters on the dial are black and the figures red.

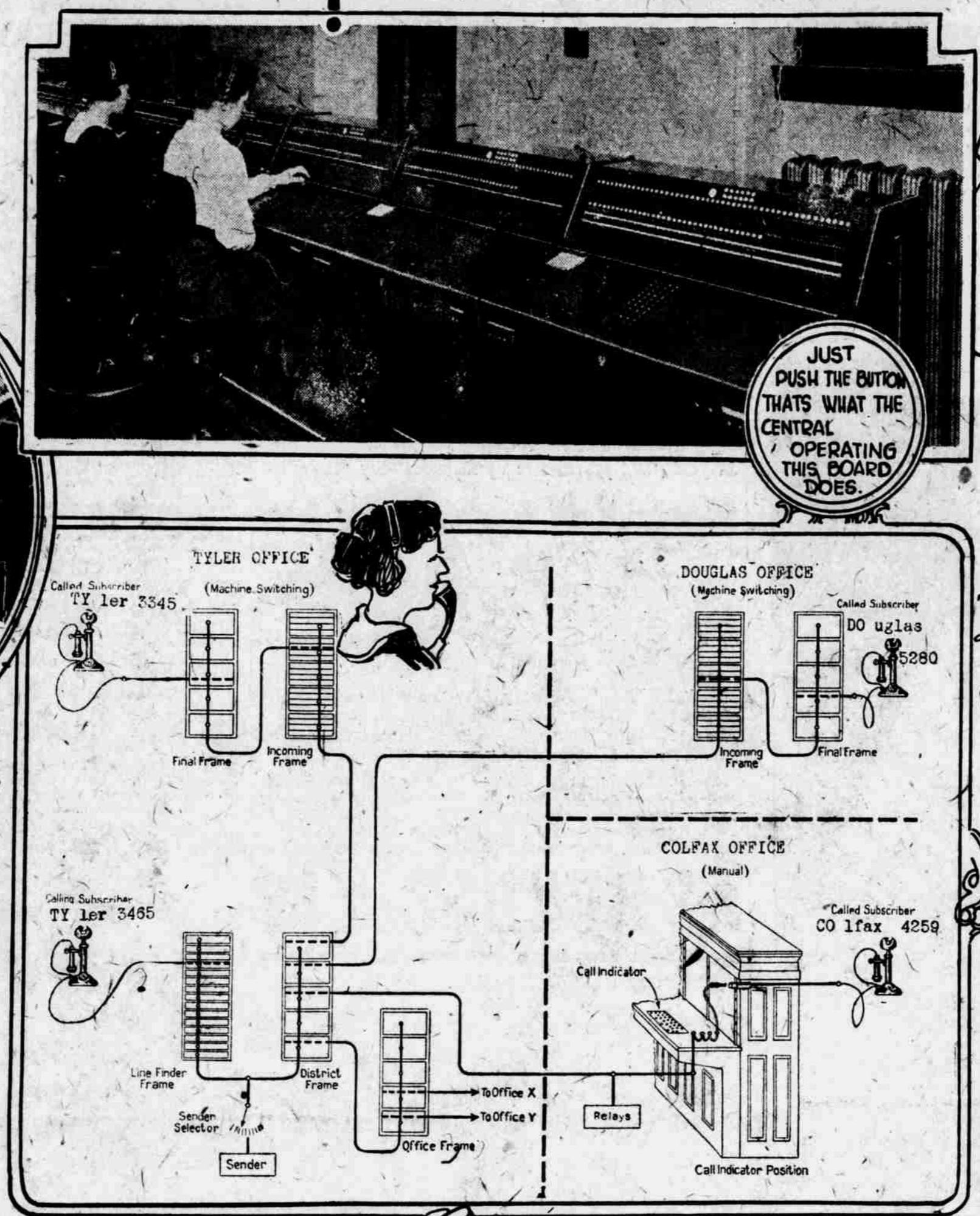
Great Indoor Sport. Dialing races promise to become a great indoor sport in homes that have party phone lines.

Decided to call a number at the same time. The fastest dialer would naturally be the one to get his call through.

But consider the innocent dial a bit longer. How are you going to call a number at night when it's dark and you can't see the figures and things?

Turn on the lights, say the telephone experts. But why go the trouble of turning on the lights, we ask. Why not learn the touch system?

Why Not? Or why not stay a little radium on the dial and make the figures and prefixes stand out in the gloom



HOW IT'S ALL DONE

like the hands on your old army wrist watch? And here's a secret! If you become a bit vexed at the machine system and are just dying to tell somebody what you think of it here's the way.

There's a mysterious letter "O" on the dial that will connect you with a service operator.

Here's another secret that'll interest subscribers on party lines. If you have any grudge against the "other party" wait till some time when he or she is talking.

Result: A combined booming and shrieking in the "other party's" ear that will make him or her think he or she's being bombarded by the entire German army, as it uses war.

The aforementioned Mr. Buitta doesn't advocate dialing in somebody else's ear. It isn't polite and besides the "other party" has a dial also, and may use it on you some day, he says.

All of which brings us to the difficult part of the story. No doubt you are curious to know just how the machine system gives you your number.

Perhaps the inventor of the system could explain it. But his explanation would be filled with volts and amperes and turbines and rotary switches and friction rolls and magnetic clutches and other strange things.

To give you an idea of the system's immensity the lumber in boxes used to bring it to Omaha would be sufficient to build seven two-story, eight-room houses.

Knocked down these boxes and crates made enough lumber to fill six cars and is valued at \$10,000.

And to give you an idea of its complexity it requires 342 tools and gauges to make one tiny multiple brush. This brush performs the function of selecting a contact through which a connection is finally established for the number dialed.

Cost \$2,000,000. The estimated cost of the system is \$2,000,000, of which \$250,000 must be expended to unify

"P. B. X." boards in large downtown offices. Dials must be added to these switchboards so that they can be used for either manual or machine calls.

The entire Tyler exchange and the Douglas exchange north of Pierce street will be "cut over" to the new system this spring.

aid summer. Other exchanges will remain manual for a time.

The first shipment of the machine system arrived in Omaha in February of 1920 and installation work began immediately.

Los Angeles. Three floors of the Northwestern Telephone company's building at Eighteenth and Douglas streets are devoted to machine switching mechanism.

A fourth floor is devoted to a power room. There are also 145 eight horsepower alternating current motors operating the final frame, line frame, senders and other switch frames.

In the selector frame are constantly revolving friction rolls, magnetic clutches and racks by means of which selecting mechanisms are moved up and down.

The call generated in this power room were turned into electrical current. It would light a town the size of Nebraska City.

Now that everyone, including the writer, is sufficiently confused about the system, here's the explanation of its workings described by Mr. Buitta himself.

Mr. Buitta, after a pause in which he caught his breath and lit the extinguished cigarette, continued:

"But suppose the person is calling from a machine switching Tyler number to a Harney number which is a manual or girl operated telephone.

"He must dial in the same manner as before, but the mechanism will connect his telephone with a series of registers in a Harney office when he dials 'H' and 'A'.

"The operator will simply connect him with the number desired. In other words he signals the number to her.

"Then again, suppose the person is calling from a manual phone, without a dial—the kind we are now using—to another person who has an automatic phone. He will simply take down his receiver and give the number in the ordinary way to his operator. His call will be passed to an operator who has a series of keys resembling an adding machine keyboard. This is known as a 'cordless B' switch-

board. She will punch off on these keys the number for him and his connection will be 'automatically' established.

"There are still other kinds of calls that need explanation. Take The Omaha Bee, for example. It has a private branch exchange, with a little switchboard all its own.

It's a Secret. "While The Bee's number is Tyler 1000, several other lines are connected with it. These lines are Tyler 4001, 1002, 1003 and so on.

"When the connection is thus completed a purring sound, repeated at intervals, will be sent back to the caller, through the receiver, indicating the desired number is being rung.

"Supposing the person using the phone wants to call Tyler 0480, he jiggles Mr. Buitta, clearing his throat and lighting a Turkish cigarette made in America.

"He moves the receiver from its hook and listens in the receiver for a continuous humming sound, called the 'dialing tone,' which indicates the mechanism is ready to receive his call.

"Instantaneous Operation. "He will then insert his finger—any finger will do—in the opening in the dial above the letter 'I,' and rotate the dial until the finger comes in contact with the metal stop. He releases the dial, which will automatically return to normal. He will then repeat the operation for the letter 'Y' and in this way call Tyler 0480.

"Mechanically, when he removed the receiver from the hook his line was connected with an apparatus called the 'line finder.' His line is then automatically connected with the 'sender' the operation being completed in a fraction of a second.

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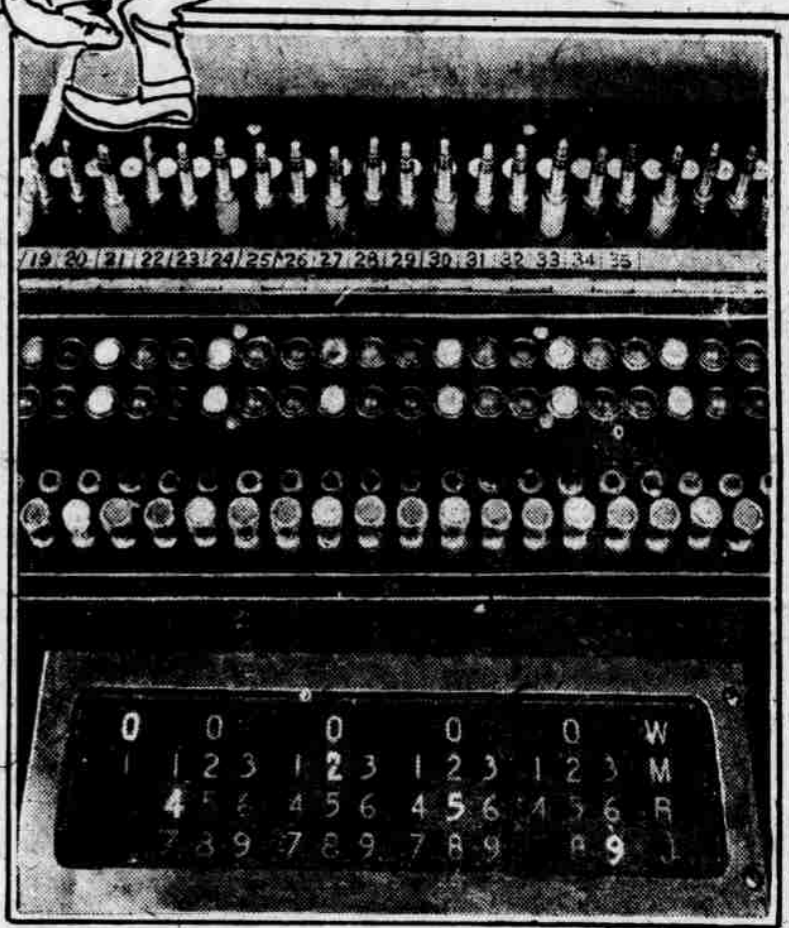
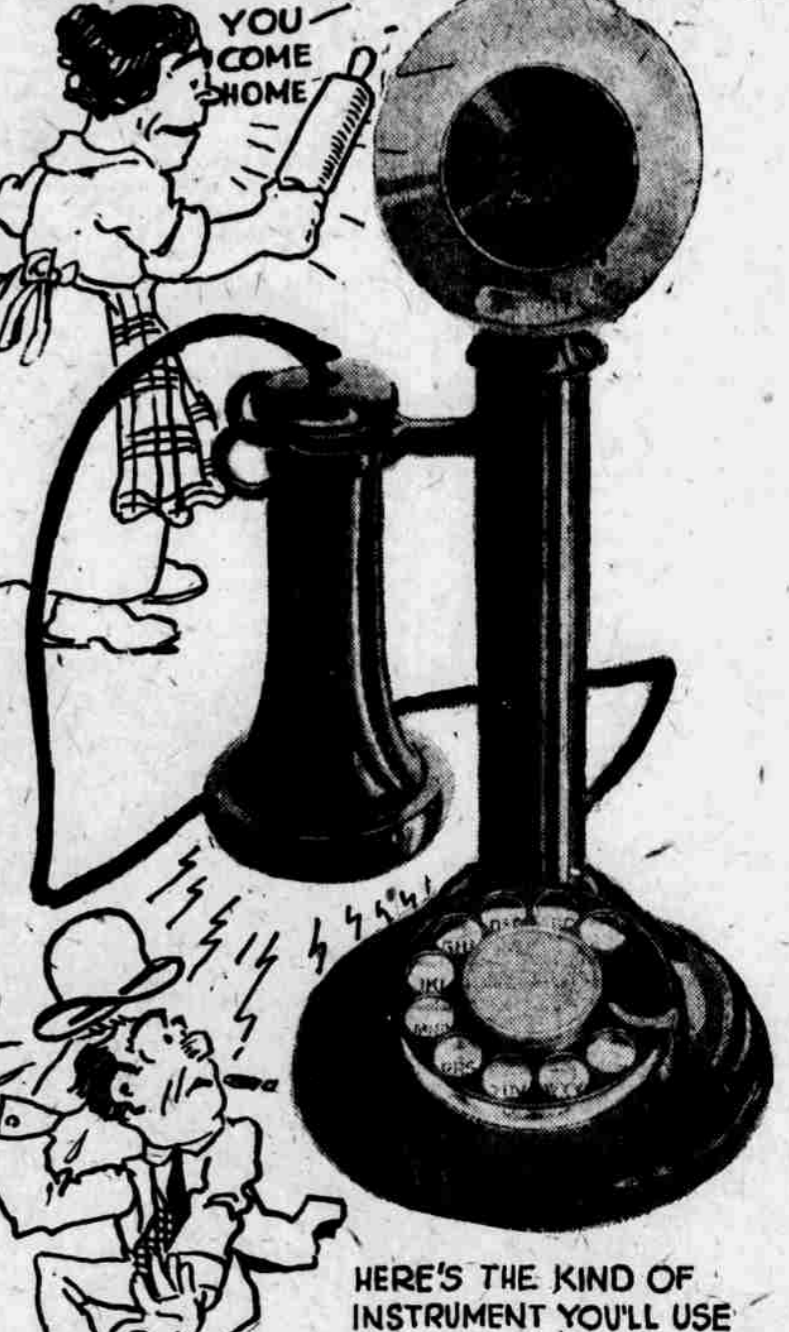
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