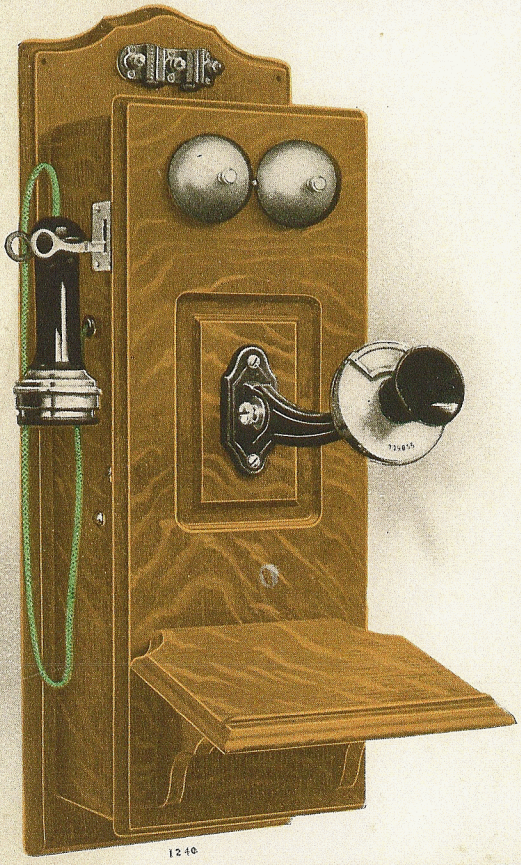
HOW THE TELEPHONE HELPS THE FARMER



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How the Telephone Helps the Farmer

THE farmer of to-day is one of the most progressive citizens of this progressive country. Whenever he is thoroughly convinced that a certain tool or piece of machinery will do his work better, do more of it or increase his income, it isn't very long before he owns that tool or machine. That his enterprise has proven beneficial to himself and to his calling is demonstrated by the wonderful strides agriculture has taken and the improved methods employed on the average farm.

But he must be convinced. He is a careful, prudent man, not quick to jump at conclusions.

The first thought that must have come to the minds of the majority of farmers upon the advent of the rural telephone line was, of what good to the farmer is a telephone?

This was but a natural question. The farmer, above all, is a practical man, and the value of the telephone had not yet been demonstrated. He couldn't see the utility of it—it would not milk the cows, plow the corn, nor make the crops grow. What practical benefit, then, could a farmer derive from the telephone? He could understand how it might be "just the thing" for the capitalist who hadn't anything to do but enjoy himself. He could see how merchants and city folks could use it, but the farmer didn't have time to fool around the house talking over a telephone.

Some farmers argued that they had gotten along so far in life without a telephone, why not the rest of their days?

This same argument, if carried out, would have kept hundreds of other improvements, now considered absolute necessities, off the farm, and would thus have retarded the marvelous march of progress that has made the modern farmer of America the model of the world.

Because a man might walk from New York to Chicago is no reason why it would not be cheaper and much more sensible to ride, as well as being quicker and easier.

Thousands of farmers, however, were quick to recognize the value of the telephone to the rural resident. They foresaw the improved conditions that its adoption would bring to them and to their families, and the consequence is that the building of farm lines, which began a long time ago, is going on at a livelier rate than ever to-day.

In spite of this fact, some farmers even yet are undecided as to the wisdom of this universal movement. They fear that it is a needless waste of hard-earned money. But the farmer who has had a telephone for a year or more knows why so many farm lines are being built. To them the reason is plain—it is because the telephone is a money-saving, time-saving, labor-saving addition to the farm, that pays its own way and leaves a nice profit besides every year.

The farm telephone has come to be recognized as a necessity. No one questions the statement that time is money, and very few will question the statement that as a time-saver the telephone has no equal. Time is an important item on the farm.

"The great man goes ahead of time,
The prudent man goes with it, and
The blockhead endeavors to go against it."

The farmer with the telephone is the man of the time—he is the prudent man.

The need of telephonic connection is far more urgent to the farmer than to the city man. Every errand means a trip to town or to the neighbors', involving a loss of time at every step—lost time means lost money, lost opportunity.

Suppose, in the rush of the busy season, when every hour is precious, a piece of important machinery breaks down, what's the result? To get repairs means a trip to town—lost time—perhaps a wasted crop. With a telephone at hand the new part may be ordered in a moment and be on its way by rural delivery before "the boy" could saddle his pony and get started after it; often reducing the delay from a day to an hour.

The product of the average farm in the United States is worth about $800, but the progressive, busy farmer, who uses the most improved implements and machines, produces 50 to 100 per cent more than the average. There are only about 200 good working days in the year on the farm, therefore every day counts. When a corn-field is getting weedy, a day's work with the cultivator will make a difference of $25 in the value of the crop. When a field of wheat is ripe, a delay of a day may cost more. The successful farmer has to consider all these things, and he can not afford the time to run errands when nature is calling him to the field.

Help on the farm is scarce, and is more difficult to find each year. The farmer must help himself by using everything which will save labor and make his time go farthest. A man with the most modern equipment can do as much as two or three men with old, out-of-date methods, and the progressive man is the one who is getting rich.

The farmer with a telephone not only saves time which he can devote to his fields, but, if he needs a man for a few weeks or a few days, the telephone gives him the "inside track" in finding some one. If he has fence to build or some other odd job that he can not take the time to do, a moment on the telephone will find some one in a near-by village or town who will be glad to have a job. While it is getting harder and harder to find men who will work by the year on the farm, the telephone makes it easy to get "transient" help just when you need it without the loss of time in hunting for it. In a hundred other ways the telephone saves time and helps to keep things going on the farm, thus swelling the profits for the year.

It saves the hard-worked farm horses many a drive when they need rest. When stock gets sick you can call a veterinary and often save the most valuable animal on the farm, for usually that is the particular one that is stricken and liable to prove a great

loss. When the threshers are in the neighborhood you can step to the telephone and make all needed arrangements for "change" of work, hire extra help in haying or harvesting, order provisions from town, get market reports by the hour, and save time in a thousand ways.

"A friend in need is a friend indeed," and perhaps the greatest service the telephone can render is in time of sickness. Medical attention can be summoned, more than half the time saved, and in many instances a precious life saved. When accidents happen or fire breaks out, the telephone affords assistance that is of great value.

Before hauling produce to town you may know just what your dealer is paying—you don't have to go it blind and take his price or haul your stuff back home—he knows you have the advantage. You are in a position to buy when prices are down and to sell when prices are up. In short, you have the bull by the horns.

The telephone is the connecting link between city, town and country. It puts the farmer next door to everybody and everywhere.

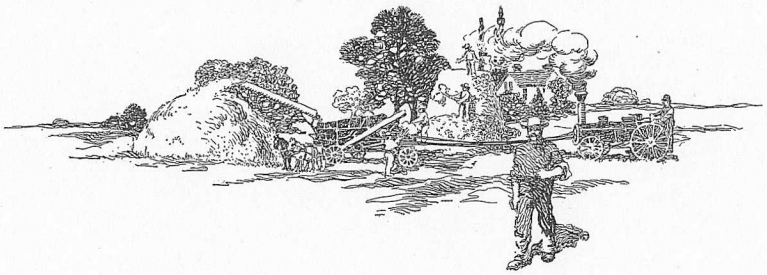
In a social sense alone it is worth all it costs. News of the neighborhood flashes across the wire before it gets cold. It helps to keep the boys and girls contented at home—they are no longer isolated from the society of other young folks, and farm life is not the dry drudgery of non-telephone times.

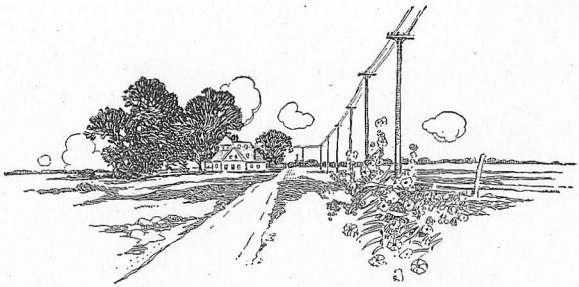
A neighborhood that is thoroughly in touch through telephonic connection is in position to resist the encroachments of tramps and other offensive characters. Petty thieving can be detected and information sent spreading the news of any outrageous conduct through a neighborhood, and pilfering has almost entirely disappeared where telephones are in general use.

The advantages of a farm telephone are so numerous and valuable one can not measure or appreciate them at their real worth. With the advent of the telephone into the home comes a new companionship—new life—new possibilities, new relationships and attachments for the old farm by both the young and the old. Lonesomeness is banished by the privileges of city life being added through the telephone, and the influx of country folk to the city has been changed to an exodus from city to farming communities, even to a much greater degree than people who have not investigated realize.

The advantages of farm telephones can not be overestimated, because their practical utility is unlimited, and where installed they are never taken out. You can't keep house without them after once learning the convenience, time-saving and money-saving features. Many are of the impression that a telephone system is complicated and difficult to build.

We want to prove to you the error of this by a brief explanation of how to organize a company, and we will gladly send you, upon request, our booklet No. 32, which tells how to build a rural telephone line. This booklet explains in detail how to build a telephone line, and, if you follow the instructions laid down, there need be no question about the results obtained.





A Telephone Story

"WELL, GEORGE, what's the news in town?" asked Farmer Graves of his son, who was unhitching his team from the light spring wagon on his return from town, four miles away, where he had been with his mother to do the weekly trading.

"Telephones, nothing but telephones," replied his son, "but, of course, you don't care to hear anything about them, since you have no time for them."

"No; I don't have no time for the jinglin' things, but what are they sayin' about 'em now?"

"Well," said George, "they're talking pretty strongly of running a line down this road past our place. All our neighbors are going to put in a 'phone if they do. Neighbor Wilkins wanted to know how you felt about it. I told him he'd better talk to you."

"Why didn't you tell him out and out?" interrupted his father, sternly. "Ye know I wouldn't hev one of the fool things in the house. Why didn't ye just tell him so and not have him botherin' me about it?"

George answered quietly, "I didn't want to speak for you, father. I didn't know but you might change your mind when you knew all the rest of the neighbors were going to have them."

His father responded with a grunt and went about his chores. George unharnessed his team and went about his own chores without the subject being mentioned again.

When the chores were all finished, both men went to the house for supper. As they sit at supper let us take a peep at them. Mr. Graves, a man of sixty, with gray hair and beard. Eyes kind, but showing their capability to look stern when occasion demands. He is a kind husband and father, and a good friend and neighbor. Mrs. Graves, a pleasant-faced woman, five years younger than her husband. Her hair is brown, streaked with gray. She has a well-preserved look and shows she is proud of her home and family. George, now past thirty years old, is a tall, manly fellow. He has graduated from an agricultural college and has returned to help his father run the two-hundred-acre farm. Mary, a sweet, gentle girl of twenty-two. She has graduated from the high school and, as she loves her country home, stays with her mother and helps to lighten the burdens that make farm work a bugbear to so many. And thus we have a happy family. Mrs. Graves had

told the news about the telephones to Mary before the men had come in, and they both hoped something would happen to change the father's mind so he would give his consent.

Not a word was said upon the subject uppermost in each one's mind until Farmer Graves broke the silence.

"I see you folks are all worked up over this telephone business, but you must give it up. Why, wife, haven't we kept house for nearly forty years without one of them machines? And what do we need it for now? I've never objected to buyin' anything in the way of a labor-savin' device nor anything we really needed, but $50 and several days' work is more than I feel like sparin' for dead property—somethin' that'll never pay for itself."

"But, Pa," said his wife, gently, "just think how quick we could call the doctor if we needed him."

"If we needed him, yes," interrupted her husband. "But we're not a family of invalids. We ain't had a bit of sickness since Mary and George there was little babies—how often do we need a doctor? And, besides, there's plenty of horses in the stable when we need to send for one."

"Yes," said George, "but there are lots of other things. Supposing you want to thresh, you have only to step up to the 'phone, call up one neighbor after another, notify them, and your work is done; no trips to be made around to all the neighbors during a busy time."

"Well, I have always found time to notify my neighbors whenever I needed help and—" he was going on when Mary took her turn.

"Yes, but just think, we could get reports from town, whenever we wanted them, of the prices on cattle, hogs, poultry, eggs and butter. And, I remember how nice it was when I was at Uncle George's. Uncle George would come in from his work too tired to go any place, but he could go to the 'phone and call up any of his neighbors and have a good visit without leaving his own fireside."

"If folks ain't worth goin' to see, they ain't worth talkin' to," replied her father, losing ground. "All these things you speak of are very nice, but they ain't worth $50. Give me somethin' that'll pay for itself." So saying, he pushed his chair back from the table, filled his pipe and prepared to enjoy an evening's smoke and the daily paper brought by the R. F. D.

The first article his eyes lighted on in the paper was "An Argument for the Use of Telephones in Rural Districts." He smiled to himself, but read it through, and then thought to himself, "Of course, the things are awful handy at times, but I wouldn't have one in the house. Who wants a bell a-jinglin' in the house from morning till night? Besides, a body never knows how many people are listening when he wants to talk to somebody. I can't consent to have one put in my house, although I know my family'll think I'm selfish. We've lived and prospered this long without one and we can get along the rest of the time." He put his paper down and prepared to retire. When he had gotten out of hearing, Mrs. Graves, Mary and George began to talk it over.

Mary said, "If we could only get his consent to have one put in, I'm sure he would soon realize the value of it."

"Yes," said George, "and I would do the 'several days' work he spoke of on the line and I'd give the money, too, but that isn't the question. He doesn't want one in the house, and I am afraid he'll never give in."

"Well, maybe after the others get theirs in

and he sees how handy they are, he'll wish he'd done it before 'twas too late," ventured the mother.

George said, "I believe I'll tell Neighbor Wilkins how it is and ask him to arrange with the stockholders so we could 'tie on,' as they say, if father should give in later."

"We could have it put right there between them two windows and it could be heard all over the house. Then we'd not have to go far to answer it when we were about our work here in the kitchen," said Mrs. Graves to Mary.

Time passed on and the neighbors were busy setting poles and stretching wires. Farmer Graves, who was generally foremost in any neighborhood movement, felt a little "out of it," but could not see his way clear to give in. At last the lines were all up, the instruments put in and everything was in working order.

One evening a neighbor dropped into the Graves home for a chat. He related several items of news about the neighbors, of some that were sick, some that were visiting, and one thing and another that the Graves family had not heard.

"Where'd you learn all this news?" finally asked Mr. Graves.

"Why, over the 'phone, to be sure. We talk to all our neighbors nearly every day, and that way we hear what everybody is doing. Last Sunday night, you know, there was a big fire in town. The girl at "Central" gave the general ring—four long rings—and we all knew about the fire almost as soon as town folks did. Then last night Neighbor Donns called everybody on the line up and we heard some fine music. You know they have a new piano and some of the young folks were there with other instruments, and we had a regular concert. It was fine. Then we get the weather predictions every morning. I tell you these telephones are great things to keep us farmers wide-awake and interested in life. I wouldn't take what mine cost me and do without it."

Farmer Graves did not reply at first. Then he said, "I suppose there's no way to have one put in after the line's finished."

George winked at Mr. Donns, and he replied, "No, not unless arrangements were made beforehand."

He left soon afterward and the subject was not resumed, although it was on each one's mind.

A few mornings later, when George and his father went about their chores, they found a valuable colt caught in the manger in such a way that the two men were unable to extricate it. George stayed with it and tried to quiet it while Mr. Graves saddled a horse and went to the neighbors' for help. But by the time enough help was summoned to do any good the animal had struggled and crippled itself so it had to be shot.

At the breakfast table Mr. Graves said, "I had an offer of $300 for that colt and had about made up my mind to take the fellow up, but it's too late now."

Mary remarked, "When I was at Uncle George's, he had a colt valued at $200 in just such a scrape as that, only he saved his. He just telephoned to three or four neighbors and they were there in time to save it. Uncle said he had just figured that his 'phone was worth $150 more than he had paid for it."

George looked up at his father, expecting an outbreak, but Mr. Graves was gazing at his plate.

The neighbors were very kind about offering the Graves' the use of their 'phones, but Mr. Graves never availed himself of the opportunity, although Mary and her mother often talked to their friends in town that way.

Two months had gone by and there had been no special need of a 'phone in the house, and Mr. Graves congratulated himself whenever he saw his neighbors repairing some damage after a storm.

George and his father had been feeding some hogs and cattle for market, and when the time came to market them, George took them to Chicago. George, when he was at home, always built the fires in the morning before going about his chores, but now that he was gone Mr. Graves took that duty upon himself. One morning he descended to the kitchen and discovered that he had forgotten to prepare kindling the night before. He rushed to the woodshed, neglecting to take a light, and began splitting kindling. In some unaccountable way the ax descended upon his shoeless foot, laying open a wide gash, which bled profusely. He staggered to the house and called to his wife and Mary. They came quickly, and Mary did all she could to staunch the blood, but she knew medical aid was needed.

Her father said, "I wish there was a doctor here now."

Mary looked up quickly and said, "I could have one here in half an hour."

"What," exclaimed her father "you ride to town four miles and have a doctor here in half an hour."

"I repeat, I can have a doctor here in half an hour," said his daughter.

"All right, my girl. There's a $50 bill in my pocket that I got for a cow yesterday. That will be yours if you get him here in half an hour," said Mr. Graves, now nearly exhausted from loss of blood.

Mary was busily preparing for her "trip," and, as she was getting ready, she asked, "And, father, can I get whatever I want with that $50? And you will promise to make no complaint?"

"I promise," said her father, "but I'm afraid you'll kill Black Bess to earn it."

She was ready now, and made her way toward the stable, but instead of saddling Bess she slipped round the barn and ran as fast as she could to the nearest neighbor's, not a quarter of a mile away. She knew that haste must be made to accomplish what she had agreed to. She asked for the use of the telephone and called up Dr. Murray, an old friend of her father's. In response to his "Hello," she said, "Dr. Murray, I am Mary Graves. If you want to save my father's life be at our house inside of half an hour." The reply came back, "I'll be there, Mary, my best horse is waiting at the door."

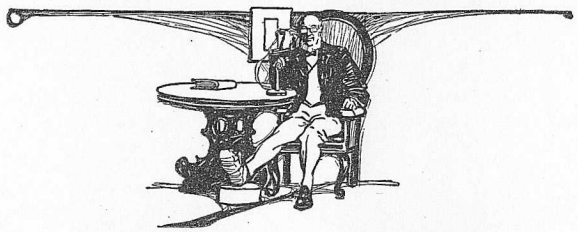
Mary hung up the receiver and then sat down to wait until Dr. Murray drove by. It was 6 o'clock when Mary set out from her home, and it was just 6:28 when the doctor drove up at the Graves' door and tossed his lines on the dashboard, never stopping to tie his horse, and rushed into the house.

Farmer Graves could hardly believe his own eyes, but he was too weak to ask any questions. Mary ran home and took charge of the doctor's horse, which was dripping with sweat.

"Well, my friend, the telephone surely saved your life, as I would surely have been too late in another half hour."

"Telephone," gasped Mr. Graves, "what can you mean?"

But, before the doctor could answer, he said, "Oh, yes, I see now. Mary was pretty cute about it, but she won her $50 all right," he continued, as Mary walked in, "she can have $500 if it takes that much to get a telephone, as I am sure that's what she meant to get with her $50."—*Farmers' Tribune.*



How to Interest Your Neighbors and Organize a Farmers' Telephone Line

THE first step to take toward promoting a farmers' telephone line is to talk with your neighbors and find out what their attitude toward such a project is. It might be well to call a meeting and have a good speaker present to talk to them. Be sure he is familiar with the practical advantages of the telephone on the farm, and capable of interesting his audience.

Send us a list of names of all those present, and of all other persons who would probably be interested and want telephones in their homes if a line is built. We have prepared literature intended to interest such persons, and will gladly send it to them free of cost, if you will but give us their names.

Independent exchange managers have had considerable experience in telephone work and can give you valuable information as to how best to proceed. They usually take an active interest in the building of rural lines, and their advice and co-operation will often prove invaluable, especially in cases where trouble occurs and is hard to locate. Frequently exchange managers are prepared to extend their lines into the country and give rural service. In such event it no doubt will be found more satisfactory to the farmers to take his service on a rental basis from the established exchange.

As soon as possible you should decide about what you will try to accomplish in the building of a line; how many miles of line you will build, and how many telephones will be used thereon. If you will do that and send the information to us we shall be very glad to make recommendations and suggestions which will be of great value to you, and to estimate the cost of your complete equipment. When you are able to tell your neighbors just what the line will cost, and just how much each will have to pay, you will find it much easier to interest them and get them ready for action.

In the back part of this booklet we have printed a modern constitution and by-laws which seems to meet the requirements

of all small telephone companies. We can furnish printed copies at a reasonable charge to those who decide to adopt this form for their companies. Following this, you will also find approved forms of petition for permit to erect telephone lines in towns and for right of way and privilege to cross railroad lines.

To give something of an idea of the expense of building one mile of line, grounded circuit (1 wire), we submit the following items. We do not estimate the cost of poles, which should be cedar. Chestnut poles are sometimes used, and give very satisfactory results. Any other native timber will only last a very short time. Poles can usually be obtained in your own locality. Material necessary and cost (with the exception of poles) for one mile of line, using twenty-five 25-foot, 5-inch top-poles to the mile:

165 lbs. No. 12 galvanized B. B. wire	$6.80
25 oak brackets	.30
25 pony glass insulators	.37
25 60-penny and 25 40-penny nails for fastening brackets to poles	.25
Total	$7.72

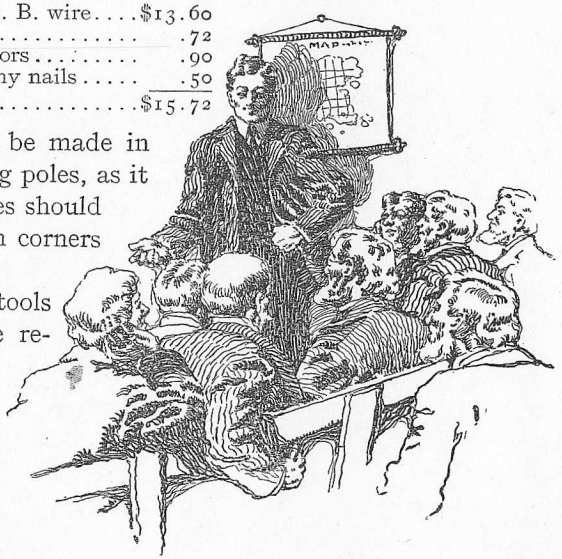
The above does not include the cost of setting poles and stringing wire, as this labor is generally furnished by the members themselves.

Material necessary for a one-mile, full-metallic circuit (2 wires), using thirty 25-foot, 5-inch top-poles to the mile:

330 lbs. No. 12 galvanized B. B. wire	$13.60
60 oak brackets	.72
60 No. 9 pony glass insulators	.90
60 60-penny and 60 40-penny nails	.50
Total	$15.72

An allowance should be made in addition to this for guying poles, as it is important that the lines should be guyed where they turn corners or cross highways.

We carry in stock such tools and materials as may be required for building farmers' lines, and shall be glad to send our booklet No. 87, illustrating this line of material. It also gives our net prices on same.



Some Telephone Talk

Extracts from an address read at the National Independent Telephone Convention by one of the leading telephone men of Indiana.

Village Exchanges and Farmers' Lines

THE telephone—which, after all, has only had its development in the last six or seven years—is a greater boon to farmers than to any other class of people.

The great drawbacks of country life are its isolation, its meager opportunities for social intercourse, and its still fewer opportunities for protection.

The telephone should be welcomed by the farmer with open heart and ready hand to the best of everything he has. I regret to say that this is not always done. Our farmer friends still insist, in a great many localities, upon being somewhat beggarly in their treatment of the telephone. The telephone can not, any more than any other agency, perform its proper functions except under fairly good conditions. It is entitled to the very best we can give. It is no longer an experiment; it has demonstrated its usefulness and its right to a forefront position in the economies of life as completely as have the locomotive, the steamboat, the reaper and the threshing machine. It was extremely unfortunate in its birth, and its boyhood associations were not good; but it is fast approaching a glorious American manhood—"redeemed, regenerated and disenthralled."

Men do not now hesitate to put sufficient money into railroads; the steamboats on our lakes and rivers are perfect floating palaces; and the wise farmer pays a good price and gets a good article of reaper and threshing machine when he has reaping and threshing to do.

It is, I am afraid, a slight reflection on the usual good sense of the average farmer, who has progressed in other respects out of the cheap way of doing things, to find him insisting upon putting up cheap, grounded telephone lines on native poles 300 or 400 feet apart, marring the landscape and furnishing temptations to profanity by those who have to use them.

A poorly constructed and badly managed country telephone line is many hundred times worse than no telephone at all. There was a time when these things served their purpose as educators, but that time has passed.

The country telephone is fast becoming the most important feature of rural life. It should be treated with the respect and liberality which are its natural due.

The country telephone line (and all other telephone lines which go along the country road) should be considered as part and parcel of the road itself. They should not (in my judgment) be considered as tenants of the road, or as something that is there by sufferance, or by permission—grudgingly given—of those, who, for the time, do not appreciate its advantages; but they should be regarded as a part of the road itself.

With due respect to the manufacturers (and I think the manufacturers are entitled to a great deal of credit for the development of the telephone business), I can not help the feeling that they are very largely responsible for a great lot of shoddy, inefficient and wholly abominable telephone equipment in the country. Many go upon the theory that the farmer wants something cheap, and that the way to catch him is to present a very low-priced article, without very much reference to how long it will last or what service it may give him in the meantime. This is little short of criminal, and can not be too strongly condemned.

All people interested in the telephone business who want to escape responsibility for bad service by other people, as well as by themselves, should set their faces firmly against the manufacturers who make specially "Cheap-john" equipment for the farmers' lines.

Another explanation for bad equipment in the country is the very short-sighted practice indulged in by some city companies of selling their worn-out material to farmers at reduced prices. A chain is only as strong as its weakest link; the telephone or switchboard that is not fit for use in town is certainly not fit for use in the country.

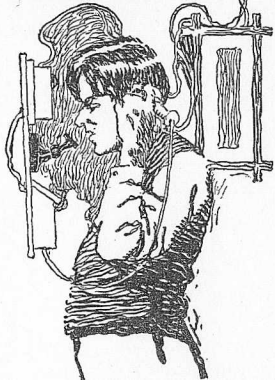
"Good equipment everywhere" should be the motto.

The battlefield of the great telephone war which has been raging in this country for the past five years—with the victories always on the same side—has been largely transferred from the cities to the country. The Bell companies, in the days of their monopoly—and, in fact, until quite recently—positively refused to furnish service to the farmer upon any terms.

Now they have changed their minds about that, and seem to have concluded that the farmer and the villager are not such bad fellows, after all. But their repentance has come too late. The farmer and the villager have been doing a thing or two for themselves in the meantime.

I would advise our farmer friends, the country over, to be a little skeptical about this death-bed repentance.

"When the devil was sick,
The devil a monk would be;
When the devil got well,
The devil a monk was he."



Selecting a Telephone and Equipment Suitable for a Farmers' Line

IT IS unfortunate, but a fact, nevertheless, that all telephones look very much alike from the outside. It is the mechanism inside that counts. Oftentimes a fine watch-case conceals a worthless movement, while an ordinary one may cover a perfect time-keeping mechanism. There is even more difference in telephones, and it behooves the purchaser to look well to the reputation of the maker of the telephone he contemplates buying.

In selecting a telephone, use the same common-sense judgment you would in buying a watch. The chances are that you know more about watches than you do about telephones, and would be less liable to make a mistake—in any event, you would be governed by the make very largely, and in buying telephones you should give this matter the same consideration.

There are some things about a telephone that determine whether it is going to wear well or not, and you can not prove this by examination in the ordinary manner. There are some parts of the apparatus that are concealed and can not be examined without taking it apart, which would not be practical for an inexperienced person to attempt. Even those parts which are not concealed, one can not tell merely upon examination whether they are made of the proper grade of steel, iron, brass, German silver or copper, and if they are, they would perhaps not be able to tell whether the one was properly tempered or the other properly annealed, or whether pure platinum was used or some cheaper material that would last but a short time, or until the free trial offer was over.

Do not be blinded to quality upon the strength of free-trial offers and cheap prices—the cost in the end is the cost that counts for economy. There are telephones that are made simply to sell—the same as a good many other articles. Manufacturers of such apparatus have no reputation to maintain, and do not expect to sell a second time in the same places, but are continually on the lookout for new territory in which to dispose of their product. Any kind of telephone, even though sold at a few dollars, will give apparent satisfaction on thirty days' trial, but it takes quality to stand wear and tear for years.

Telephones sold on thirty days' free trial basis are usually built for such a purpose. The metal used in them is of so poor a quality that it will not hold its magnetism for more than thirty days. You can magnetize the blade of a jack-knife so that it will pick up a number of pins, but after a short time it will lose its strength and will not pick up one. This is because the blade

does not possess the proper qualities, is not tempered properly nor magnetized thoroughly. There is a good deal of similarity between this and the permanent magnets used in the cheap telephone. They may have a good deal of strength at first, but soon lose it, and the telephone is useless.

It is sometimes next to impossible to replace the parts in a cheap telephone because the manufacturer does not make all of them, he is not really a manufacturer, but an assembler. No man should buy a telephone that is going to require the parts to be replaced if he can help it, because it generally happens that while a telephone is being repaired it is needed the most.

The telephone business is in some respects like the watch business. There are a very few high-grade watch manufacturers, but there are *many watch assemblers*. The same is true of telephones. More expense is put on the finish and outside appearance than on the working parts. They are made to sell at sight—and not to wear. They usually possess some slight feature which the experienced man recognizes as of no value, but upon which great stress is laid with the inexperienced buyer.

Many of these telephone assemblers and individuals have entered into the manufacture of telephone apparatus, prompted by the success of the Stromberg-Carlson Telephone Manufacturing Company, and many have since abandoned their project, while a large majority that continued in the field have been supported by inexperienced purchasers, attracted by low prices, which *must* necessarily mean inferior material and incompetent workmanship. The results of such purchases have invariably proven unsatisfactory and a waste of money. There are no reasons why purchasers of telephone apparatus to-day should be misguided, for they can profit by the experience of so many others, and ample proof as to merit and practicability can easily be obtained. Stromberg-Carlson telephones are proving their worth by their work. This is shown by the fact that only during the last year we have found it necessary to double our capacity from five hundred telephones per day to one thousand per day.

In talking qualities, they talk for themselves, and in this regard have earned the sobriquet "*Strong 'Phone*" from the thousands of farmers who are using them. Not only are they strong in talking qualities, but strong in durable features, strong in satisfaction-giving results. Like the high-grade timepiece—always just right.

Get the best, because it is the cheapest in the end. As a matter of fact, the best telephone costs only a *few dollars* more than the ordinary or cheap kind. Do not trust to a brand that is unknown—that is an experiment—that has not been in service long enough to prove its standing. The Stromberg-Carlson telephones have gone through the experimental stage years ago. They are known and used all over the civilized globe. We began the manufacture of telephones in 1894, and to-day have the largest independent telephone factory in the world, employing a few over two thousand people. The reason for this phenomenal growth is explained in that old, familiar quotation, "Nothing succeeds like success." We put on the market a successful telephone, an article honest through and through, backed up by a guarantee worth the price of the instrument to every purchaser. No

company could build up such an extensive business in this length of time and work on any other principle. We can not afford to send out a poor telephone any more than you can afford to buy one. One poor telephone on a farmers' line would do us more injury than the profit on the sale of a hundred telephones would benefit us.

As a result of working along these lines, the Stromberg-Carlson products stand to-day in the telephone world where every high-grade article in the commerical world stands—alone, beyond comparison.

Do not select a telephone by its price-mark. Look a little farther ahead. Buy a telephone much the same as you would a binder or some important piece of farm machinery. You can't tell the quality of steel or iron in a plow by looking at it, but you do know that if it bears a certain name it contains the best material and workmanship. The same thing can be said about a Stromberg-Carlson telephone. Look to quality—get something that will not only last, but give lasting satisfaction. In short, take our advice, get a Stromberg-Carlson and get the best telephone made. There is really no comparison between the Stromberg-Carlson telephones and other makes. That they are the highest priced is an argument in their favor. In buying a Stromberg-Carlson telephone there is satisfaction in knowing that you are paying the same price as all others. Stromberg-Carlson Farm Telephones are sold at one price the world over. The price per telephone depends upon the number purchased in one order or in a given length of time. This can not be said of any other telephone that is being sold on the market to-day. Our telephone equipment has been selected by the leading telephone engineers in this country, for such places as St. Louis, Louisville, Minneapolis, Kansas City, Mo., St. Paul, Rochester, Columbus, Syracuse, Memphis, Atlanta, Seattle, Des Moines, Peoria, Savannah, San Antonio, Wheeling, Birmingham, Atlantic City, Elgin, Cumberland, Ogden, Bowling Green, Grand Forks and many other leading cities, and in some States we have in use over a hundred thousand telephones, the majority of which are in the homes of farmers or people living in rural communities.

It is not expected that you will buy our telephone solely on account of these facts, but they should have due weight with you in deciding which is the best telephone for your purpose. As there are certain manufacturers with no reputation to maintain, you will, no doubt, find statements that sound stronger than the facts we have given. It's facts that count. If you will take the trouble to look up our financial standing and reputation, and carefully study the description of our telephone as given in this booklet, we confidently believe that you will come to the conclusion that the Stromberg-Carlson telephone is the only one to buy.

As this booklet deals with telephones for farmers, it is taken for granted that the bridging telephone will be purchased. This is the kind of telephone that should always be used on rural party lines.

On the following pages we describe our Farmers' Bridging Telephone such as we furnish for rural party lines. An open and closed view of it is shown in colors in the center of this book. We can furnish other styles, some of which are shown on page 25.

In describing the various parts of our telephone it would be impossible to make a comparison to show wherein they are in all cases superior to all others, because the average reader is not familiar with the construction of such things. In order to do this it would be necessary to go into much detail involving electrical terms with which the average person is not familiar. We believe it would make a more lengthy description than you would care to read, and we doubt if it would help materially in deciding which is the best.

Below we show an illustration of a complete telephone, with the names of its various parts. On the pages following we tell what they are for, what they are made of and how they are made.

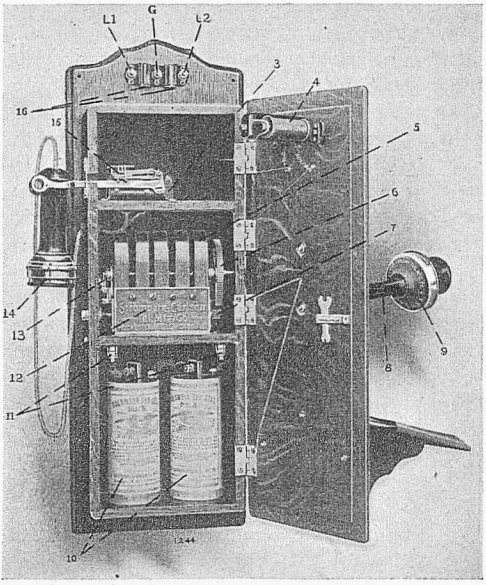


Fig. A.

L1—Line Binding Post
L2—Line Binding Post
G—Ground Connection
3—Induction Coil
4—Ringer Movement
5—Generator Magnet
6—Generator Gear
7—Generator Pinion
8—Transmitter Arm
9—Transmitter
10—Dry Batteries
11—Battery Binding Posts
12—Generator
13—Shunt Springs
14—Receiver
15—Hook-switch
16—Lightning Arrester

Believing that specialists are better than "Jacks of all trades," the factory is divided into fifty-four different departments, each in charge of a foreman, an expert in the particular line of work under his supervision. It is in these various departments that the parts are made which we describe in the following pages. Illustrations of many of them are shown.

In describing our Farmers' Telephone, we will first describe the cabinet. This is merely a case for protecting the various parts of the apparatus, but it is essential that it should be built of thoroughly seasoned wood, put together in a strong and workmanlike manner, and well finished, so as to look nice and be in keeping with the surroundings wherever it may be installed. It should also permit getting at any of the parts in the telephone easily, if necessary.

Cabinet

The cabinet, Fig. 1, is built of quarter-sawed oak, well seasoned and kiln-dried, is tongued, grooved and glued at the corners, and is sanded to a

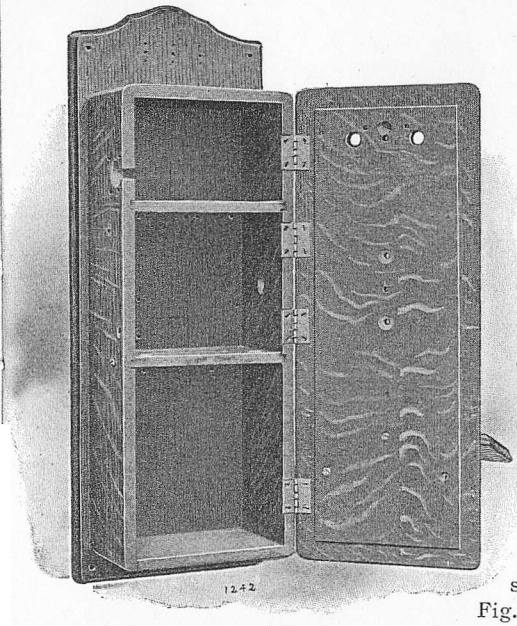


Fig. 1.

smooth surface before finishing. Each cabinet is finished as follows: First, it is given a coat of golden-oak stain, next a coat of golden-oak filler, then one of white shellac and afterwards two coats of rubbing varnish, making a beautiful finish that must be seen in order to be appreciated.

The front part of the cabinet is fastened to the back-board by eight heavy wood screws, which are countersunk (see Fig. 2). Each cabinet, after being finished in the manner described above, is drilled with the various holes necessary to permit mounting the apparatus therein. You will note, from the illustration of the cabinet shown in Fig. 1, that it is necessary to drill a large number of holes in each cabinet. All of this work is done in the Cabinet Drilling Department, Fig. 3.

In order to make sure that these holes will be in exactly the same place in each cabinet, an accurate set of steel jigs is used for drilling the various holes. Fig. 4 shows the door of one of the cabinets being drilled to permit mounting the ringer and transmitter arm. A steel frame or jig, with holes that are in just the correct place, is placed on the door, as shown, and the holes are then drilled by forcing the drills down through the holes in the jig. This makes all of the boxes uniform and exactly alike, not only presenting a better appearance, but if it becomes necessary at any time to replace any part, it can be done without any fitting or readjustment. In the cheaper grade of telephones this drilling is often done without any guide whatever, or, if one is used, it may be nothing more than a piece of fiber board, which, after it has been used for a short time, becomes worn, and the holes may be anywhere from one-sixteenth to one-fourth of an inch out of the way, so that there are no two

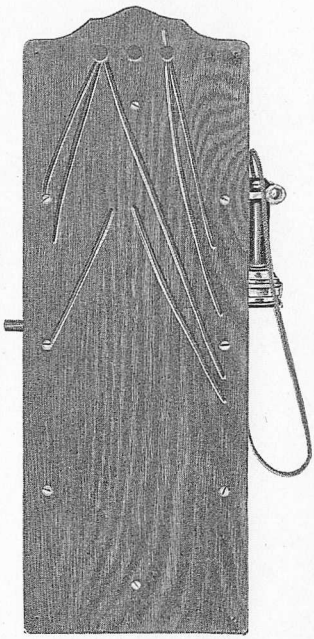


Fig. 2.

of the boxes exactly alike. In that case, you can't replace a part without fitting it to the cabinet.

The two shelves, shown in Fig. 1, are for supporting parts of the telephone. The lower one is fastened so firmly, by our improved method of fastening, that it prevents the cabinet from spreading or the shelf from getting out of place. The shelf is fastened in this way: Screws pass through each side of the telephone cabinet and into the shelf, but, instead of screwing into the wood shelf, they are screwed into a small, round brass rod, which passes through the shelf. One of these screws is shown on the inside of the cabinet, opposite the shelf, while the rod which it screws into is shown near the right edge of the shelf.

This shelf, as you will note in the illustration, Fig. 1, supports the generator, which is so heavy that it might, in some cases, spring the shelf out of place if it were not fastened in this way. Parties have been known to experience a great deal of trouble in carrying a cheap telephone out into the country in an express wagon. The jolting would break this shelf down and cause considerable trouble in getting the telephone to work again properly. This may happen to telephones during transit, if they are not fastened as we fasten them.

The way a telephone is wired up, that is, the way the various parts are connected, has a great deal to do with its continuous operation. In cheap telephones, this is done either by running loose wires on the inside of the telephone cabinet, or by running them on the back of the cabinet, and fastening them to it with small staples or tacks. These loose wires, running on the inside of the cabinet, often cause considerable trouble by getting crossed, or disconnected. The wires that are run on the outside of the back of the cabinet often cause trouble by getting loose, or by moisture coming in contact with them, if the instrument is mounted on a damp wall, or in a place where water could get at the wiring. Our method of wiring a telephone is such that it entirely eliminates any of these troubles. It involves considerable more work and expense, but it pays us in the end to do this, because it helps to maintain our claim that Stromberg-Carlson telephones give "*lasting satisfaction.*" We drill holes in the back-board of the cabinet, opposite to where the various parts of the apparatus are mounted, and then cut small grooves in the back of the cabinet from one of these holes to another and run the wires in these grooves. After the wire has been placed in the groove and fastened so it will not come out, it is covered with hot beeswax, which not only gives the back of the cabinet a better appearance, but prevents moisture from coming in contact with the wires, thus eliminating trouble.

Fig. 2 illustrates a rear view of the Farmers' Telephone, and shows these grooves in which the wires are embedded and covered with beeswax. The man, shown in the foreground of Fig. 3, is cutting the grooves in the back of the telephone back-boards with a small saw attached to a flexible shaft. The other seven men, shown to the right, are drilling the various holes in the cabinets.

Fig. 3.

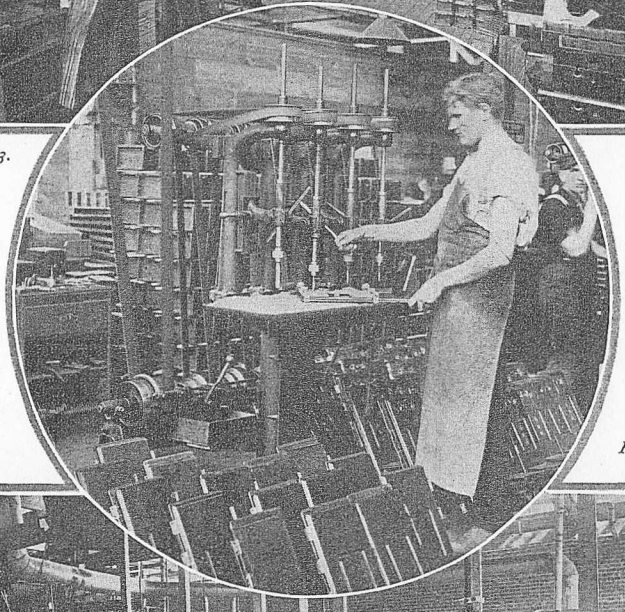


Fig. 4.

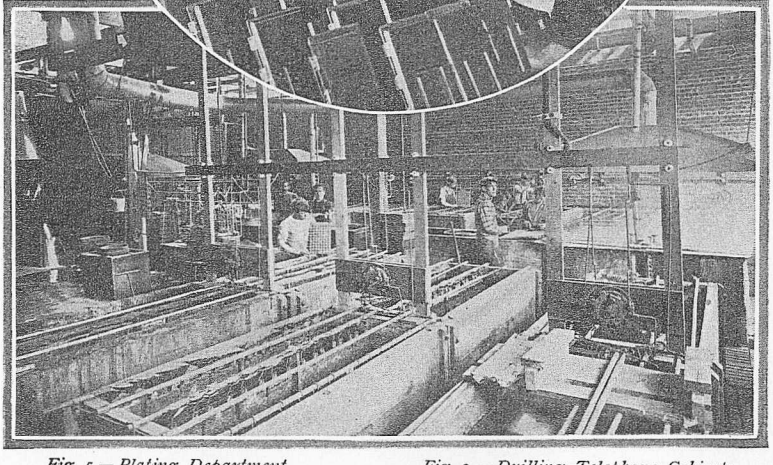


Fig. 5.—Plating Department.

Fig. 3.—Drilling Telephone Cabinets
Fig. 4.—Drilling Door of Telephone Cabinet.

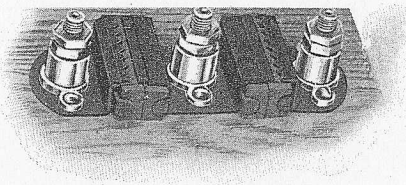


Fig. 6.—Lightning Arrester.

Lightning Arrester

This is to protect the telephone from lightning. All that is necessary to do this is to provide an easy path for the atmospheric electricity to reach the earth. That is what the lightning arrester accomplishes.

We equip each of our telephones with a lightning arrester, the same as shown in Fig. 6. This lightning arrester is known as the carbon-block type, because there are two sets of carbon blocks held between brass springs or clips. The blocks are separated by thin strips of mica, which prevent the ordinary telephone current from escaping, but afford practically no resistance to a discharge of lightning, which passes through it into the earth. At the side of each arrester, and between them, is mounted securely on the cabinet, a standard, machine-made binding post, with two hexagon nuts and washers. These are carefully polished, as are all the parts in our telephone, which are nickel-plated, in our Polishing Department, Fig. 28, and are then heavily nickel-plated in our Plating Department, Fig. 5. The two outside ones are for attaching the wires leading to the telephone line. The middle one is for the ground wire. On the inside of the door of the telephone will be found a small wrench for tightening these nuts after the wires have been attached. The ends of the posts are spread so that the nuts can not be taken off or get lost. We can furnish additional lightning protection if it is desired. Devices of this kind are illustrated in our booklet No. 87, "Telephone Construction Material and Supplies for Rural Party Lines."

Induction Coil

The object of the induction coil, Fig. 7, is to increase the feeble currents produced by the battery in flowing through the transmitter to a sufficient current force to operate over the line. While in construction this is apparently a very simple piece of apparatus, it is of great importance, and has made it possible to talk over long distances. The center, or core, consists of a bundle of soft, annealed iron wires, with maple heads at each end, and are carefully wound with layers of fine copper wire, silk-insulated. There are two windings on this iron core—one called the primary, the other called the

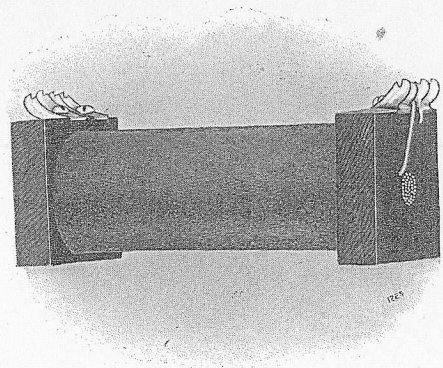


Fig. 7.—Induction Coil.

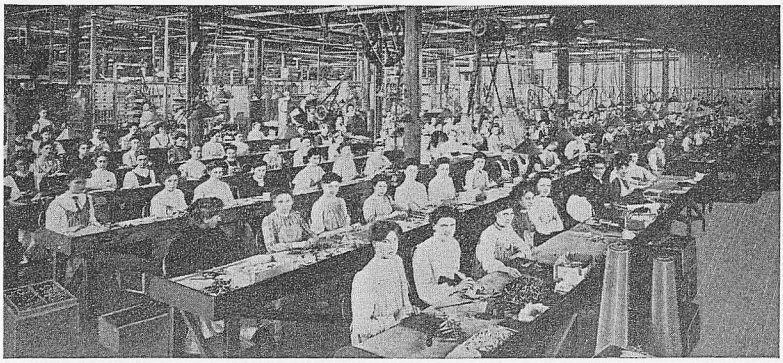


Fig. 8.—Winding Department.

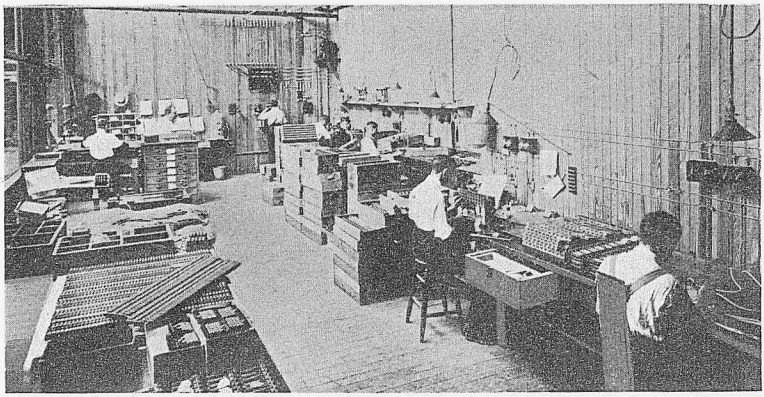


Fig. 9a.—Final Inspection Department.

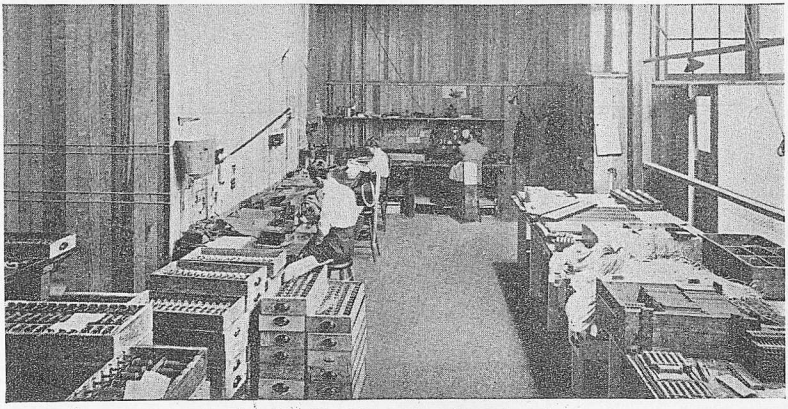


Fig. 9b.—Final Inspection Department.

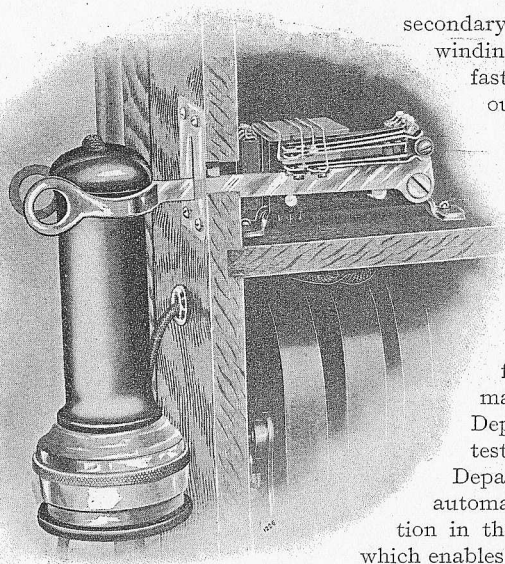


Fig. 10.—Hook-switch.

secondary winding. The ends of these windings are soldered to terminals fastened to the maple heads. The outside of the coil is covered with heavy, glazed, pebbled, linen cloth, to protect the wire from mechanical injury. A hole is drilled through each of the maple heads, so that the coil may be fastened by screws to the shelf, as shown in Fig. A, page 16. These coils are carefully wound by the use of automatic machinery, in our Winding Department, Fig. 8, and afterwards tested in the Final Inspection Department, Fig. 9. We use an automatic machine of our own invention in the manufacture of these coils, which enables us to produce a very efficient coil, and one that gives uniform results.

Hook-switch

This piece of apparatus is not, as many people suppose, merely a place to hang the receiver when it is not in use. It serves to automatically throw your telephone in and out of connection with the line. When the receiver is hung up, as shown in Fig. 10, the talking mechanism connected with the line and the current from the battery are cut off. This saves the battery, as it is only working when the instrument is in use, or when the receiver is off the hook. As the length of the life of the battery is somewhat dependent upon this piece of apparatus, it is important that it should be well made, and very positive in action. If it does not work properly, much trouble will come as a result. One is to shorten the life of the batteries.

If this hook-switch fails to operate properly when you hang up your receiver, your ringing mechanism would not be connected with the line, and you would not get a ring if some one called you.

We have been using this style of hook-switch on all of our telephones for a number of years. There are several hundred thousand in daily use, and we seldom receive a complaint from them. The hook-lever is made of brass, heavily nickel-plated and mounted on a steel frame. The springs are made of German silver, insulated from each other with hard rubber. The contacts between the springs are of pure platinum. This is the most expensive material that can be used for this purpose; it is more expensive than gold, but it gives much better results. It costs us, on an average, at the present

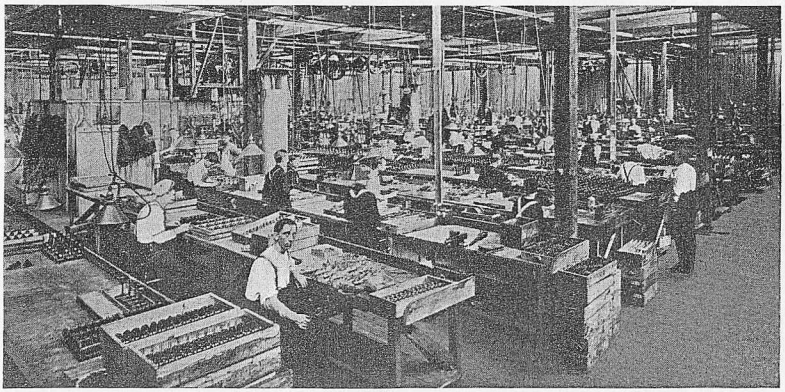


Fig. 11.—Hook-switches and Transmitter Arms.

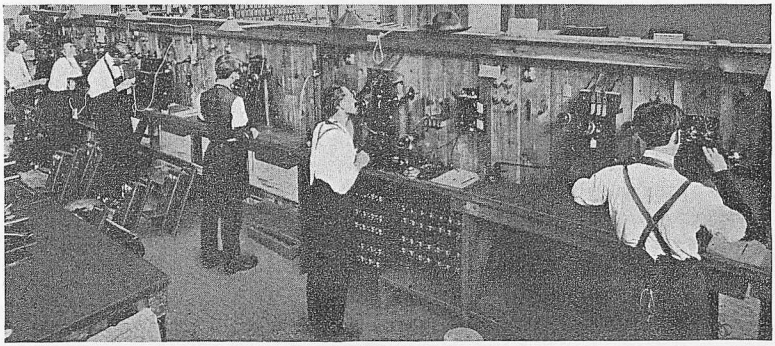


Fig. 12.—Testing Telephones—A.

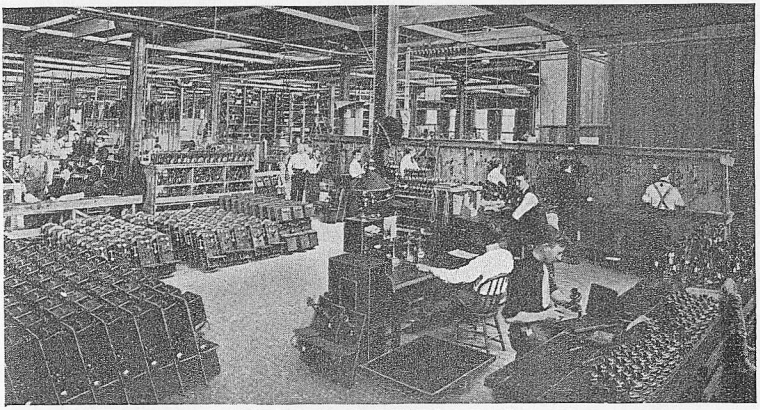


Fig. 13.—Testing Telephones—B.

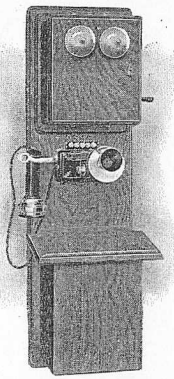
time, over $850 per week for platinum contacts. This will give you an idea how expensive it is, and how much the manufacturer of a cheap telephone can save in a year by using an imitation which costs next to nothing. We use it because it is more durable and *will not corrode.* No other material has ever been discovered that can be used for electrical contacts that will not corrode and wear out in a short time. This is one reason why Stromberg-Carlson telephones cost more to manufacture. It is also another reason why they are more durable. The contacts in many of the cheap telephones are made of platinoid, a composition of German silver and platinum. Pure platinum contacts will last a lifetime, while the imitation will last only a few months.

These hook-switches, after they are carefully assembled in the Assembling Department, Fig. 11, and tested thoroughly, are sent to the Final Inspection Department, where they are given another test before they are used in a telephone. The finished telephone is also given an inspection, Figs. 12 and 13, thus this piece of apparatus gets three inspections before it leaves our factory, so that there is little danger of any defect ever showing up.

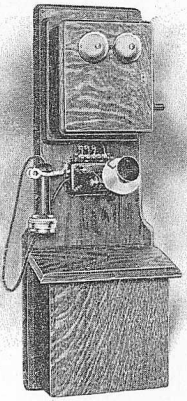
Generator

A complete five-bar generator is shown in Fig. 14, and some of its parts in Fig. 15. This piece of apparatus is what furnishes the current for ringing the bells of the telephones. It is in reality a small dynamo, which generates electric current on the same principle as the large machines used in electric power stations. It has nothing to do with furnishing the current for talking, this being supplied by the batteries, which may be either the dry or wet type, the former now being used almost universally. It is quite easy to see why this is one of the most important parts of a telephone, because it must be depended upon to ring the bells or signal the other parties on your line. If it fails to generate enough current to ring all of the bells on your line, it, of course, becomes useless. It is not difficult to build a generator that will ring a few telephones, but to build one that will ring twenty-five to thirty-five telephones and continue to do it for a number of years, requires experience; also a certain special grade of material must be used. We are the oldest, as well as the largest, telephone manufacturers who have always built their own generators, consequently our experience has enabled us to perfect and make what we claim is the strongest and best generator on the market. The generators themselves are proving this statement. The fact that we have been compelled to practically double our capacity during the last year is good evidence that our apparatus possesses the proper wearing qualities. The principal requirement of a generator for bridging telephones is that it shall be capable of ringing a large number of telephones and continue to hold its strength for years. There are, of course, other details in connection with the generator which must be perfect, such as attachments necessary to operate it, otherwise it would not be possible to get any current out of it. The thing of greatest importance in a generator, outside of

Standard Bridging Telephones



Style G-B.



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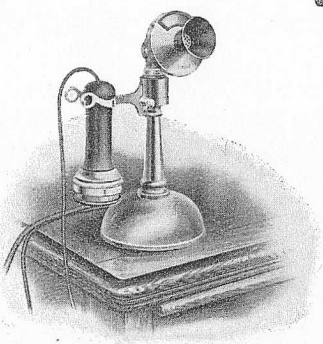

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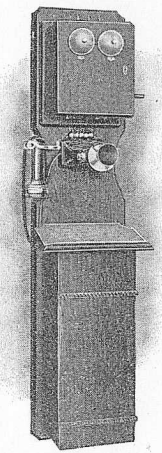

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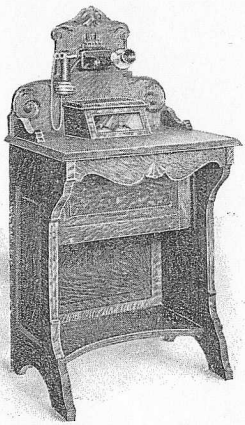
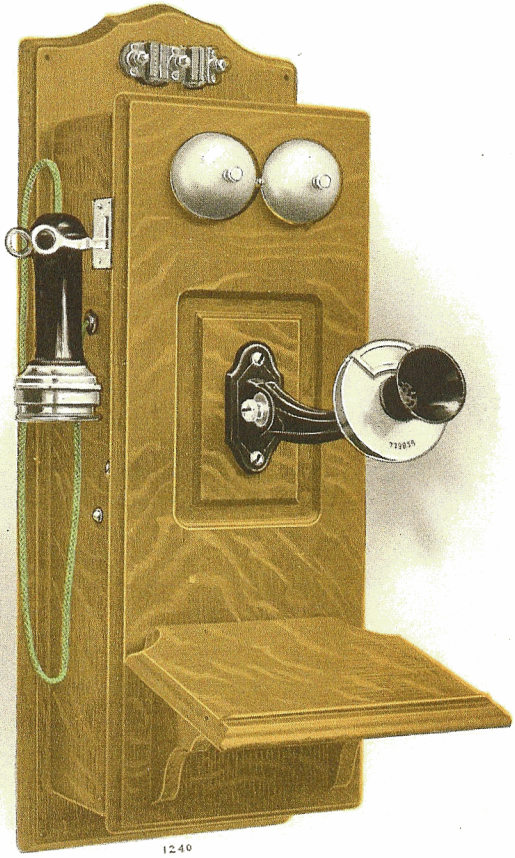


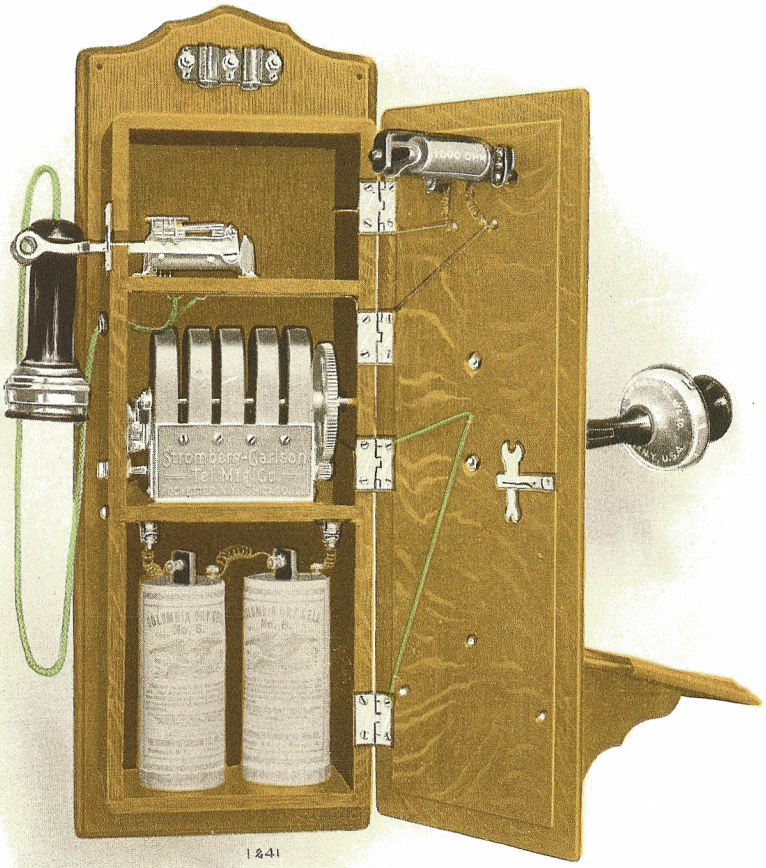
Cabinet Telephone.

Farmers' Bridging Telephone



Closed View

Farmers' Bridging Telephone



Open View

Fig. 14.— Generator.

being properly designed, is the material used.

The permanent magnets, "E," Fig. 15, are bent from heavy bars of magnet steel, then carefully tempered and magnetized. If they are not made of a special grade of steel, containing certain properties, and are not tempered just right, they will retain their magnetism for only a short time. In order to determine whether this steel is made up of the right materials, we give samples from each lot that we receive from the steel manufacturers a chemical test in our Chemical Laboratory, Fig. 16. It is also given an electrical test in our Electrical Laboratory, Fig. 17, in order to determine whether it is suited to our purpose from an electrical standpoint. If the steel will pass these two tests, it is sufficiently high grade to be used for the permanent magnets in our generators. After the magnets have been bent and tempered, they are cleaned thoroughly by a sand blast. After these operations, they are copper-plated to prevent rusting, then given a coat of lacquer. This is a very important operation, the success of the generator depending very largely upon how well they are tempered. The men employed on this work have become so skilled that they can readily tell by the color of the metal just when it has been heated and tempered properly, the same as the farmer can tell when to cut his grain, merely by the color of it. The material used for the fields, "A," Fig. 15, are made of soft iron, and must possess properties entirely different from the steel used for the permanent magnets. The steel used for this purpose we give a similar mechanical and electrical test.

The armature, "B," Fig. 15 (revolving part), is made of a special grade of Norway iron, known as transformer stock, which is also carefully tested and is wound with fine copper wire, silk-insulated. All of this work, including the insulating of the wire, is done in our own factory. The winding of this armature is done in our Winding Department, Fig. 8. Automatic machines are used for winding these, so that we may be sure that just the right number of turns of wire are put on each armature. The shunt springs, "D," are an important part of a bridging generator. These springs are so constructed and operate so as to connect the generator with the line when you ring, and disconnect it when you stop ringing or turning the crank. The shunt springs used on our generator are

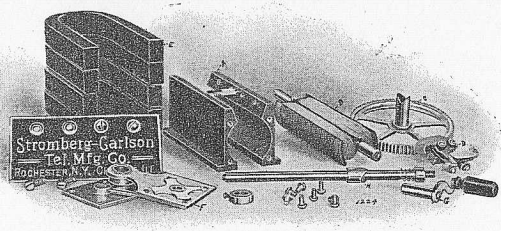


Fig. 15.— Generator Parts.

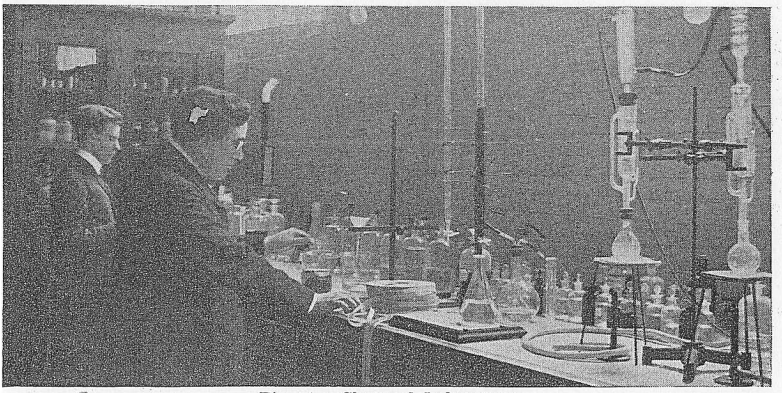


Fig. 16.— Chemical Laboratory.

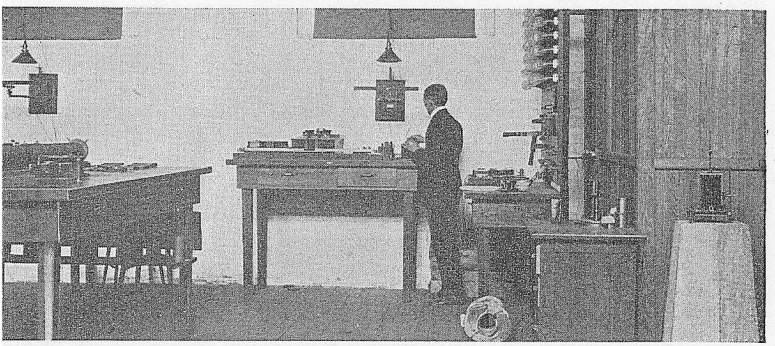


Fig. 17.— Electrical Laboratory.

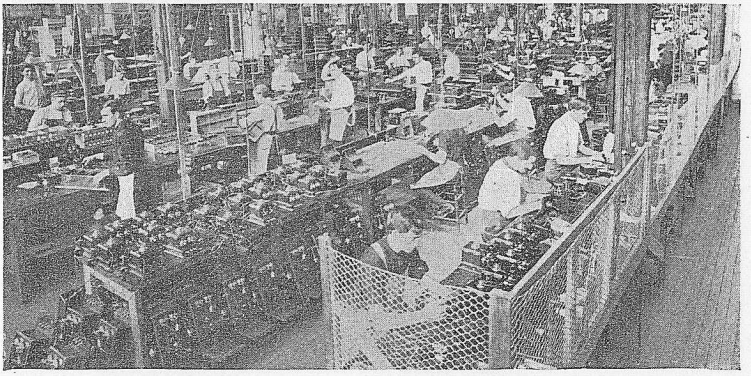


Fig. 18.—Assembling Telephones. Section 1.

long and flexible, made of German silver, and provided with pure platinum contacts. They never fail to operate, consequently your generator never fails to send a current out on the line, ringing all of the bells. The gear, "C," is made of heavy brass, cut very accurately, and the small pinion with which it connects is drawn from hard, brass rod, making it more durable than a cut pinion, such as used on cheaper telephones. All the parts are designed to make a perfect generator. The most of them are made with special tools and dies, so that the parts do not vary more than one-thousandth of an inch. The important tools used in their manufacture are made in our own Tool Department, shown in Fig. 19. This department is devoted exclusively to the building of accurate tools and dies, employed in the manufacture of our various telephone parts. Some of these tools and dies are marvels of mechanical skill, costing as high as $1,000.

After the various parts are manufactured, the complete generator is assembled in the Generator Assembling Department, Fig. 20, where they are also given careful mechanical and electrical tests, and also again tested in the Final Inspection Department, Fig. 9.

Our generators are made in three sizes, with three, four or five bars, or magnets. The size you need depends upon the number of telephones on your line, or the number of telephones you desire to ring. The four or five bar are the sizes universally used on party lines. The size of the generator is not, however, governed by the number of bars or magnets, even though some manufacturers try to make people think so. It is merely one of the things that govern the strength of the generator.

From the tests we have given our generators, and the way they operate in actual practice, we feel safe in stating that our five-bar generator will ring more telephones than you will ever put on a single line. We are willing to guarantee that it will ring thirty-five telephones, and, under the proper conditions, it will ring a great many more. The number of telephones that can be rung on a line depends upon how well the line is built. Some lines are so poor that it takes a good telephone to ring over them at all. It is not good practice, however, to put so many telephones on the same line, because it makes the signals complicated, and, with so many on the same line, some one would be using it all the time.

Where there is to be twenty or twenty-five telephones on the same line, we advise cutting the line in two, and using some kind of switching device for connecting the two sections. We furnish switchboards and other arrangements for connecting two lines, or as many as may be required, and have published a booklet illustrating such appliances, which we will mail free to those in need of such apparatus.

Ringer

In the illustration, Fig. 21, is shown the complete ringer, with one gong attached and one removed. When the generator is operated, it sends a current through the ringer, thus ringing the bells on the line. The ringer is made up of two spools, or bobbins, of fine wire, a permanent magnet, "A,"

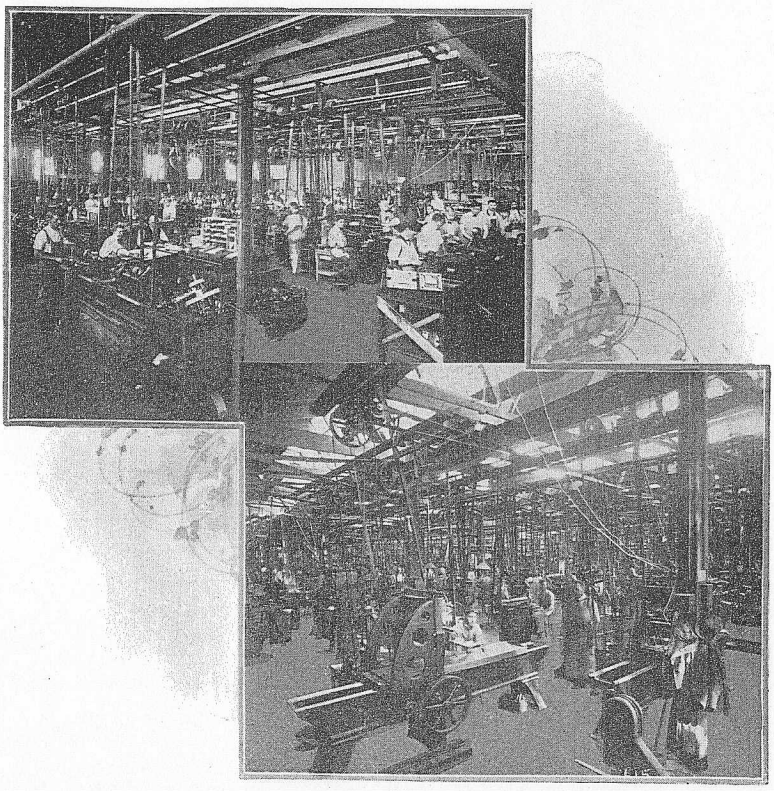


Fig. 19.—Tool Department.

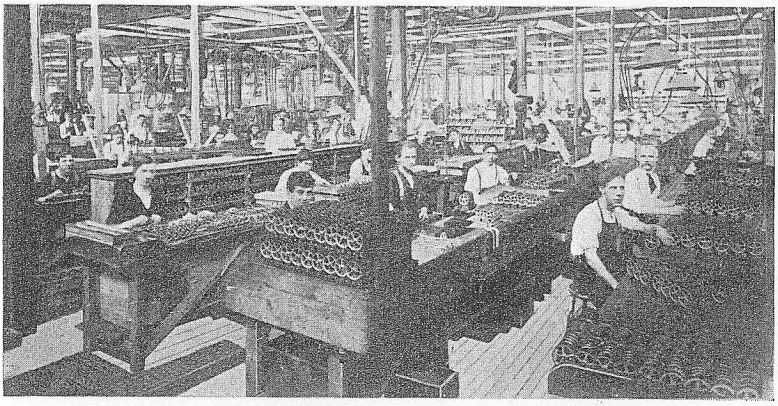


Fig. 20.—General Assembling Department.

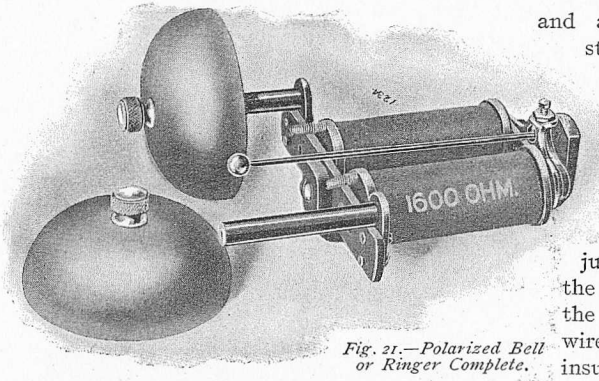


Fig. 21.—Polarized Bell or Ringer Complete.

and armature, "C," and striker, "G," as shown in Fig. 22. The essential thing in a ringer is that it shall be well constructed, of good material, with a simple method of adjustment. In our ringers the spools are wound with the finest grade of copper wire, silk-insulated. The insulating of this wire and the winding of the spools are done in our own factory under the careful supervision of experts. The outside of the spools is covered with heavy, glazed, pebbled, linen cloth, to prevent the wire from being injured. Our adjustment is as simple as it could possibly be made. The armature, "C," can be adjusted, as required, by this simple arrangement. There is no other ringer manufactured that can be adjusted so easily.

The ringer is known as the self-contained type, consequently any shrinkage of the woodwork upon which it is mounted does not affect its adjustment. The gongs are not fastened directly to the woodwork, as in cheaper telephones, but to adjustable steel standards. Our standard bridging telephones are furnished with ringers having windings of either 1,000, 1,600 or 2,000 ohms resistance.

Please bear in mind that resistance is not the thing desired in a ringer to give the proper results, but the size, quality and number of turns of wire is the important essential. The thing desired is to get as many turns of wire on a spool of a certain size as the space will permit. In order to do this, it is, of course, necessary to use small wire, and the smaller the wire the greater the resistance. You will see from this that if large wire is used, the resistance will consequently be less, while, if we use too fine wire, in order to get a large number of turns, the ringer will have too much resistance. Manufacturers of cheap tele-

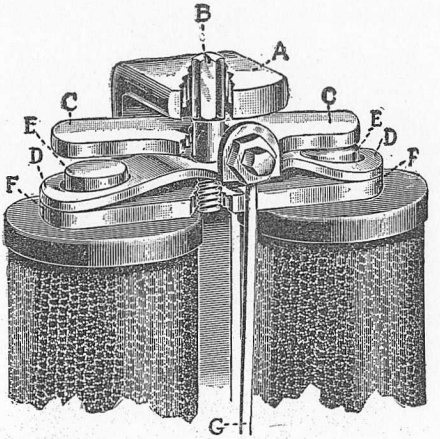


Fig. 22.—Armature End of Ringer.

A—Permanent Magnet
B—Adjusting Screw
C—Armature
D—Yoke
E—Cores
F—Binding Plate
G—Striker

Turning B to right or left changes adjustment, as required.

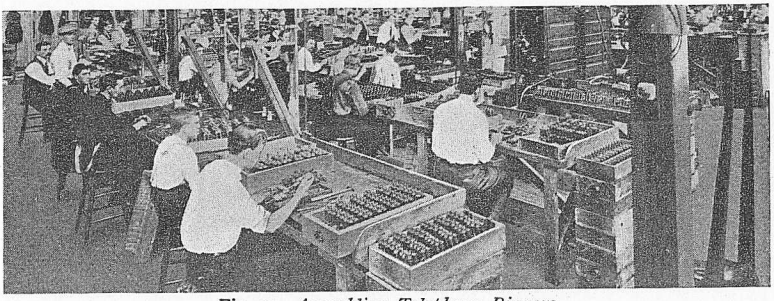


Fig. 23.—Assembling Telephone Ringers.

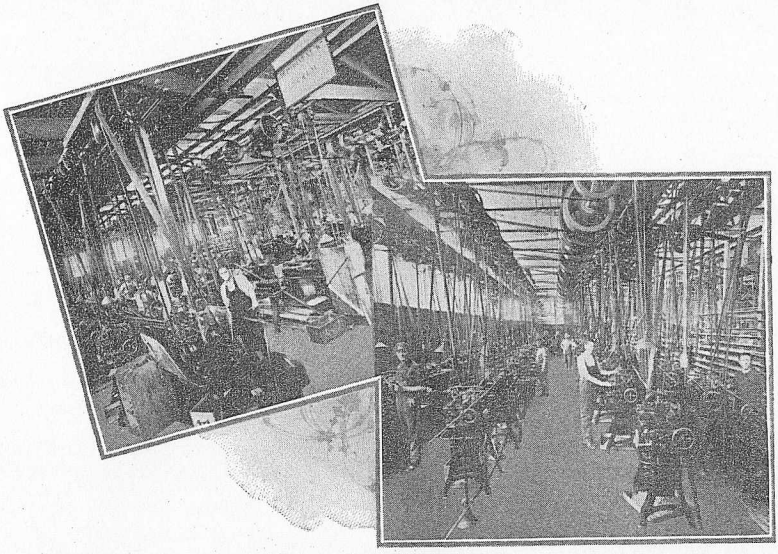


Fig. 24.—Screw Department.

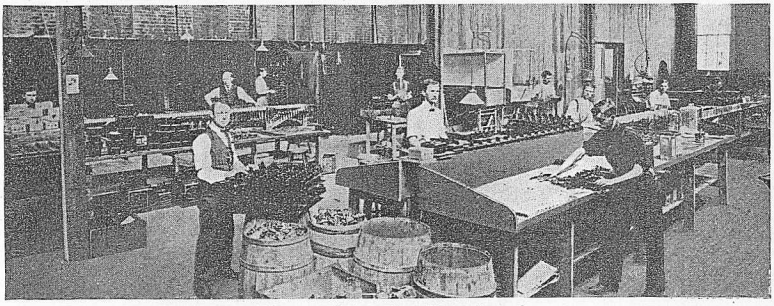


Fig. 25.—Japanning Department.

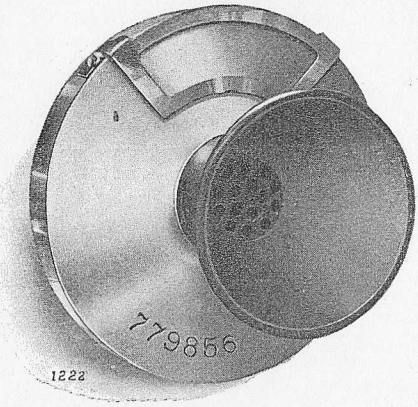


Fig. 26.—Transmitter.

phones have been known to wind their ringers with German silver wire, which would make them have a high resistance, but they would be lacking in the essential thing—many turns of wire. The telephone with 1,600-ohm ringer is the one most generally used for party lines. Fifteen to twenty-five telephones, with this ringer, can be used on the same line. Twenty-five and over on the same line should have 2,000-ohm ringers. If one ringer is of a higher resistance than the other telephones on the line, the call may "go around it." Electricity follows the path of least resistance, in preference to the higher one, just as water will go over the lower places in a shallow stream and run around the higher places. We always furnish telephones with ringers of the same resistance when we equip a line. If an order is given us to supply a new subscriber, it is important to keep this in mind. It is almost impossible for a party on a line having a telephone with a 1,000-ohm ringer to ring another party on a line having a telephone with a 2,000-ohm ringer, when the two lines are connected. He could, however, ring a party on another line having a telephone with a 1,600-ohm ringer. A telephone line with 1,600-ohm ringer telephones could call parties on a line with 2,000-ohm ringer telephones.

After these ringers are carefully assembled and tested in our Assembly Department, Fig. 23, they are sent to the Final Inspection Department, Fig. 9, and given another test before they are put into the telephone. As the complete telephone is also tested, after the parts are all assembled in the cabinet, the ringer is given three tests before it leaves our factory.

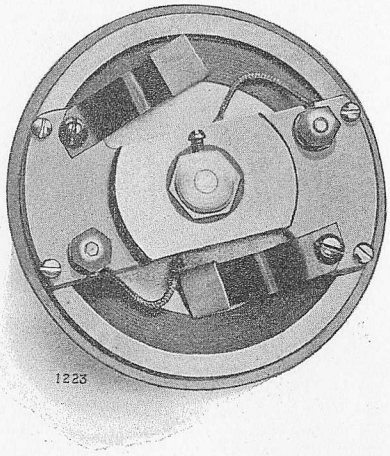


Fig. 27.—Inside View of Transmitter.

Transmitter

It is the business of the transmitter (the part you talk into), see Fig. 26, to make waves or vibrations in the electric current, which correspond to the waves and vibrations of the voice. Some transmitters are better than others, just as some

Fig. 28.—Polishing Department.

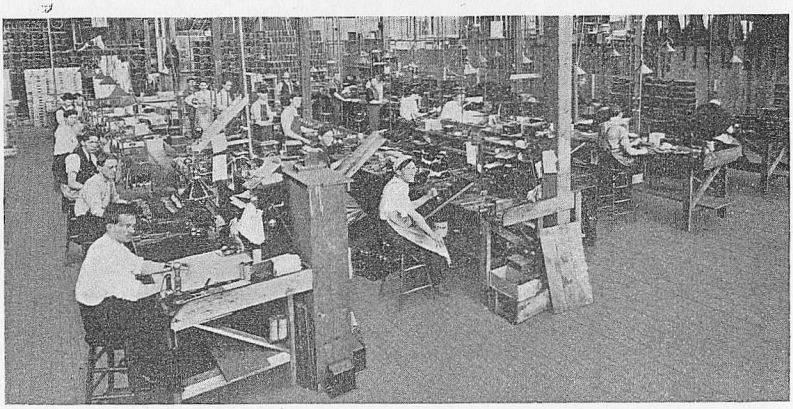


Fig. 29.—Assembling and Adjusting Receivers.

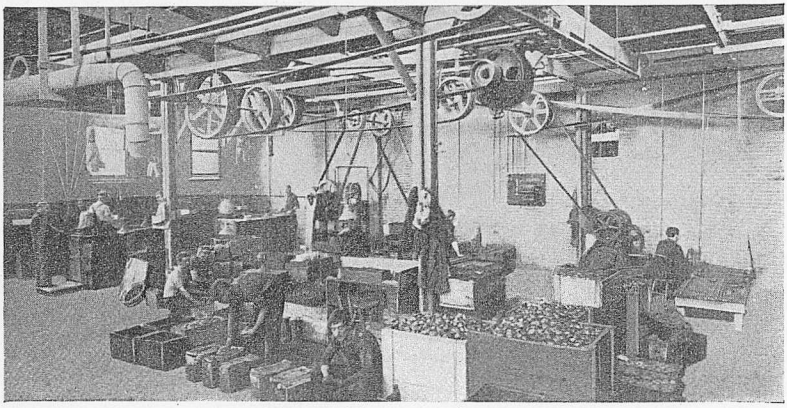


Fig. 30.—Magnet Department.

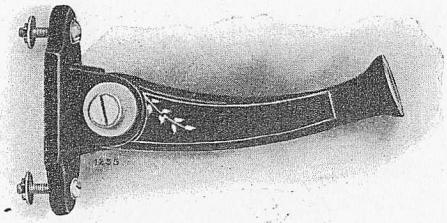


Fig. 31.—Transmitter Arm.

people speak more distinctly than others. If you hire a man to talk, you want him to be a good talker, so people can understand him. When you buy a telephone, it is even more important to have a good talker. The Stromberg-Carlson Transmitter, front view shown in Fig. 26, and inside view in Fig. 27, is the strongest, clearest talker in the telephone world, because it is not only designed correctly, but it is manufactured with as much care as a watch. During the time that our transmitter has been on the market, no less than two hundred others have appeared from time to time, all of which claimed to be the best, but none of them are to-day recognized as standards. We use the very best grade of material throughout this transmitter. The good talking qualities of all transmitters depend very largely upon the quality of carbon used. The granular carbon, which we use, is manufactured by ourselves, under a secret process.

The front of the instrument is made of heavy brass, so designed and constructed that it will not vibrate or pick up local noises. We use an aluminum diaphragm, held in place by dampening springs, as shown in Fig. 27. These springs are fastened to a heavy brass bridge. We place a celluloid disc in front of the aluminum diaphragm, or just back of the mouthpiece, to prevent

Fig. 32.—No. 3 Receiver Complete.

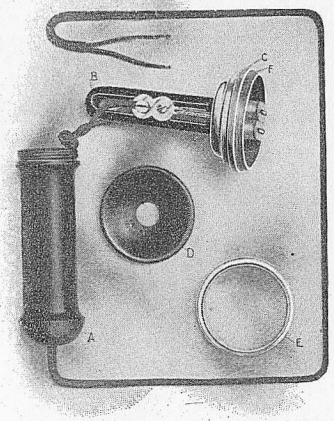


Fig. 33.—Parts of No. 3 Receiver

A—Hard Rubber Shell
B—Bipolar Magnet
C—Lock Ring
D—Rubber Cap
E—Adjustable Cap
F—Nickel-plated Brass Cup

Fig. 34.—Assembling Receivers.

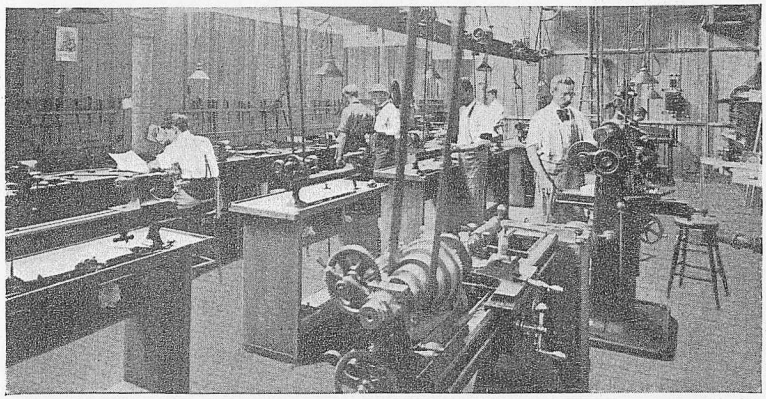


Fig. 35.—Experimental Department.

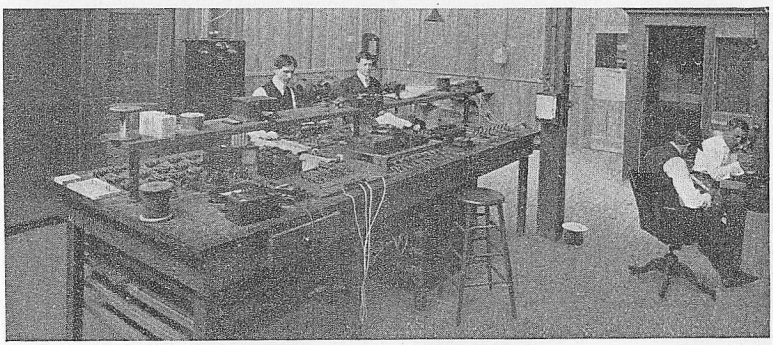


Fig. 36.—Telephone Laboratory.

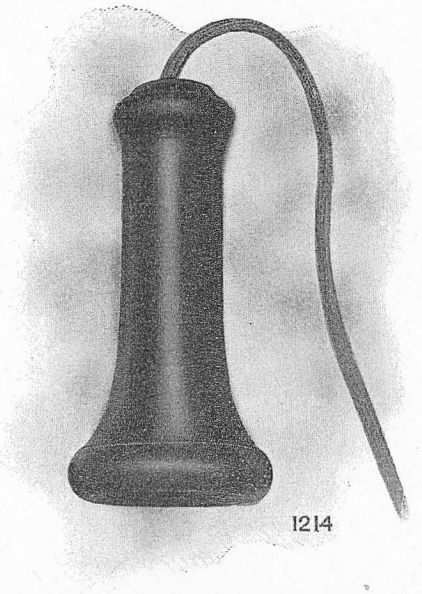


Fig. 37.—No 6-A Rubber Receiver.

moisture from getting into the transmitter and corroding any of the parts. The breath of some persons contains properties which will cause the inside of the transmitter to rust and corrode very quickly, and much trouble has been experienced in cheap transmitters on this account. By placing this celluloid disc in the front of our transmitter, we entirely overcome this trouble. Our patent on this is No. 567,324.

The fact that our transmitters are used exclusively by a great majority of the long-distance telephone companies in different States, speaks well for their long-distance talking qualities.

Do not make the mistake of thinking that any old telephone is good enough to use on a farm, like an old suit of clothes. You need just as good an instrument on a ten-mile iron-wire line as is needed on a 1,000-mile copper circuit. The difference in cost between the Stromberg-Carlson telephone and the cheapest thing you can buy is only a few dollars, and the Stromberg-Carlson will last five times as long, and give better satisfaction every day you use it.

Don't let any one convince you that any imitation of the Stromberg-Carlson is just as good as the genuine. The genuine is covered by our patents, and is only made by us. Some of the imitations look pretty well, but if you try them under difficult conditions you will find they do not work like the Stromberg-Carlson. You don't want a telephone that you can use only on nice days, when the atmospheric conditions are perfect, for the same reason that you do not want a binder that will cut only the nice, standing grain. You want a telephone that will talk clearly under all conditions, just as you want a binder that will handle grain under all conditions.

Our transmitters, like the various other parts of the telephone, are not only tested in the department where they are assembled, but are tested in the Final Inspection Department, and again on the telephone before it is sent out.

Transmitter Arm

The Transmitter Arm, Fig. 31, such as is used on our Farmers' Telephone, is made of pressed steel, neatly japanned and striped in gold. All of this latter work is done in our Japanning Department, Fig. 25. The arm is

adjustable, and may be raised or lowered to suit the needs of the user. The arm being hollow, allows the connections between the transmitter and other parts of the telephone to be carried inside of it. Thus there are no loose wires to get out of order. The arm is fastened to the door of the cabinet by two bolts with nuts, instead of with the ordinary wood screws, as in cheaper telephones.

Receivers

We make two styles of receivers, as will be seen in the illustrations, Figs. 32 and 37. One is known as our No. 3, and has a heavily nickel-plated brass cup, which holds the parts firmly in place. This receiver is very carefully constructed, and is adjustable. These cups are made by an automatic machine, as shown in Fig. 24, and gauged within one-thousandth of an inch. They are afterwards polished and then heavily nickel-plated. They do not show wear, even after years of usage. The diaphragm in a receiver must be at just the right distance from the magnets in order to reproduce the voice of the party at the other end of the line. Our method of adjustment is so fine that it allows us to place the diaphragm in just the correct position, and then lock it, and it will stay right for years, when it can be readjusted and given a new lease of life when other receivers would be worn out. The instrument can not be taken apart, except with a special wrench, and this is usually furnished only to the party having charge of the instruments.

The seven men shown at the left in Fig. 29 are adjusting and testing receivers.

Our No. 6 Receiver, as here illustrated, Fig. 37, is equipped with a pure hard rubber shell and ear-cap. It is carefully constructed and adjusted, similar to our No. 3. The various parts of the receiver are supported in a brass cup, as shown in Fig. 38. Either of these receivers will work independent of the rubber shell, this being merely a retaining case to give the receiver a finished, pleasing appearance. The No. 6 Receiver is preferred by some parties on account of its neater appearance, and it can be more readily taken apart, as no wrench is necessary for this purpose. We guarantee the shells and ear caps on both receivers never to break in actual use; if they do, we replace them free of charge. Many of

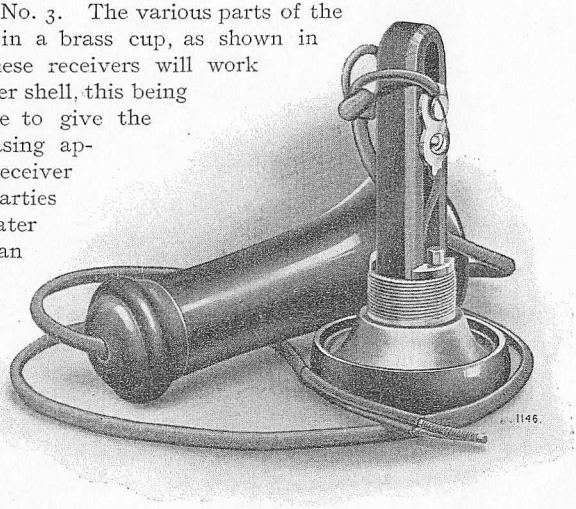


Fig. 38.—Showing parts of No. 6-A Rubber Receiver.

our customers, however, prefer the No. 3 Receiver, because it can not be easily taken apart. Most all telephones on farmers' lines are sold with the No. 3 Receiver, and we furnish telephones equipped that way, unless otherwise specified. Both receivers are assembled in the department shown in Fig. 31, and then tested, as shown in Fig. 29. They are again tested in the Final Inspection Department before being placed on a telephone.

Battery

On farm telephones, and in fact any telephone not subject to regular inspection by experienced men, we advise the use of dry batteries, as they require no attention during their life, are cleaner and do not freeze. But they can not be recharged. They will last from six months to a year and a half, depending upon how much the telephone is used. As will be noted by the colored illustrated insert, we use the Columbia Dry Battery in all of our bridging telephones, and, unless otherwise specified, always furnish two with each telephone. They are included in the price of the telephone. This is recognized as the standard telephone battery.

After the complete telephone has been made up with the various parts, as described on the previous pages, it is delivered to the stock room, and afterwards tested in the Final Inspection and Testing Department, Figs. 12 and 13, before it is shipped. If the telephone is to be shipped immediately, it goes first to the Final Inspection and Telephone Testing Department, where it is examined carefully for any defects in material, workmanship, etc. This test is so thorough that it is impossible for any defect to escape the attention of the inspector. After a telephone has passed this inspection, it is delivered to the shipping department, where it is carefully boxed — *not crated*, as is the practice of manufacturers of cheaper telephones. We have standard boxes in which our farm telephones are shipped. They hold from one to four telephones each. One farm telephone, such as our No. 110, which has a five-bar generator and 1,600-ohm ringer, when boxed, weighs fifty pounds, two of them weigh ninety-five pounds and four of them, packed in one case, weigh one hundred and sixty-five pounds.

Fig. 35 shows our Experimental Department, which is equipped with the most accurate tools and machines made. This department devotes all of its time to the perfecting of apparatus and building of models of new telephone parts. If any new inventions or improvements are made, it is in this department that the model machine is built. After a model has been made, or any improvements made in a piece of apparatus, it is taken to the Telephone Laboratory, shown in Fig. 36, where it is given an exhaustive series of mechanical and electrical tests. This department is equipped with very sensitive and accurate measuring instruments of all kinds, special dynamos for producing electric current in any quantities desired, sound-proof booths for carrying on various transmitter tests, and, in fact, everything imaginable that will aid in finding the weak points in a piece of apparatus from either a mechanical or electrical standpoint.

Our "Sure-Ring" Bridging Telephone

There has always been more or less trouble on farmers' telephone lines, caused by subscribers failing to hang their receivers on the hook the moment they are through talking. This not only prevented their being called, but in some cases made it impossible to ring up others on the line. Another annoying trouble sometimes experienced on party lines, where certain parties have a tendency to listen in, is the difficulty in ringing a party if you failed to get them the first time.

We have devised and patented (Patent No. 743,421, Nov. 10, 1903) a simple, positive and efficient arrangement which entirely overcomes these troubles. It consists of a specially built condenser, connected in the telephone circuit, which is so arranged that the condenser is cut in series with the receiver when the receiver is off the hook. This arrangement makes it possible to ring the twentieth telephone on a line of twenty bridging telephones with the receivers of the other eighteen removed from their hooks, or to ring any party you want with one or more receivers off—that's why we call it the "SURE-RING." You get the party every time.

We will furnish our Farmers' Telephone with this additional equipment, at an additional cost of 50 cents per telephone.

Our "Non-Interfering" Bridging Telephone

We were the first to place this telephone on the market. It is becoming very popular for use on party or farmers' telephone lines where the metallic circuit is used (two wires). The telephone is our regular bridging telephone, provided with a key of the push-button type. With this arrangement you can ring any other subscriber on the line without calling Central, or you can ring Central without disturbing any other subscriber on the line. When you call Central you merely press the button, which is mounted on the left-hand side of the telephone just back of the receiver, and call in the usual way. When calling a subscriber, the button is not pressed, and no signal is given Central. We make this simple addition to any of our regular standard bridging telephones for 25 cents extra per telephone. The arrangement can be used only on metallic lines, but, as all grounded lines will sooner or later be converted into metallic lines, a great many parties are ordering this type of telephone for rural lines, and in that way they have the latest and most convenient instrument built. We can furnish our Farmers' Telephones equipped with both of these devices, if so specified, at an additional cost of 75 cents more than the regular telephone.

Village Exchange Systems

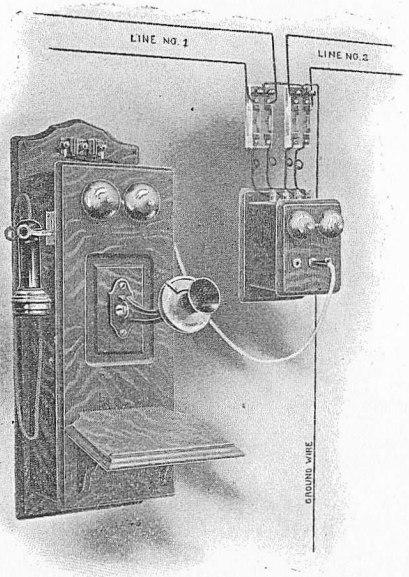


Fig. 40.

IT FREQUENTLY happens that after a rural party line has been in operation for a while, so many telephones are connected to it that it becomes overloaded, making it difficult for parties at opposite ends of the line to ring each other.

When a line has reached this condition, it is necessary to divide it in two sections, and use what we call a two-line switching device for connecting one section with the other. The illustration, Fig. 40, shows a two-line switching device as it would appear in connection with a regular bridging telephone connected to metallic lines (two wires). It can be used, however, on grounded lines as well. This device should be connected with that telephone on the line which, when the line is divided, will make, as near as possible, an equal number of telephones on each section.

The device is used in this way: If a party on Line No. 1 wishes to talk with a party on Line No. 2, he calls this central point, requesting that *they* signal the party he wants on Line No. 2. After the desired party answers his call, the two lines are then connected together.

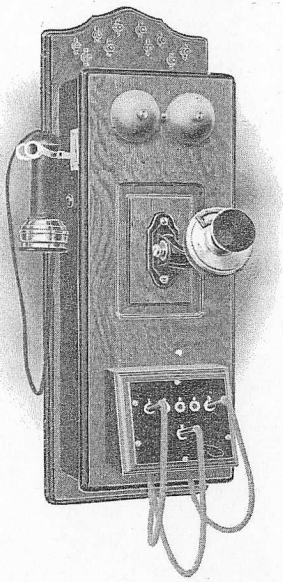
After a system has grown to such a size that there are more than five lines to be connected, it is advisable, in fact necessary, to use a switchboard for making connections between the various lines. We build these, ranging from a capacity of ten lines to any number of lines required. Space will not permit our showing here the many styles that we manufacture. We merely show here two simple arrangements for connecting a few lines and one of our most popular types of switchboards for rural telephone companies.

Let us know your requirements in this direction, and we will mail printed matter describing in detail all of those switchboards that we think would be suited to your requirements.

Combination Switching Telephone

Five Lines Capacity

THIS illustrates one of our standard bridging telephones with an attachment which makes it possible to use it as a switchboard where there will never be more than five lines required. It works very satisfactorily and is entirely satisfactory for the purpose for which it is intended. If parties have any idea that they will ever require more than five lines, we would recommend that they purchase a switchboard, because it will not only be far cheaper in the end, but they will have something they can add to as their system grows.



Regular bridging ringers, known as extension bells, must be used with this equipment. These should be wound to the same resistance as the telephones on the same line with which they are used.

We have a circular describing this telephone more fully that we would be glad to mail upon request to interested parties.

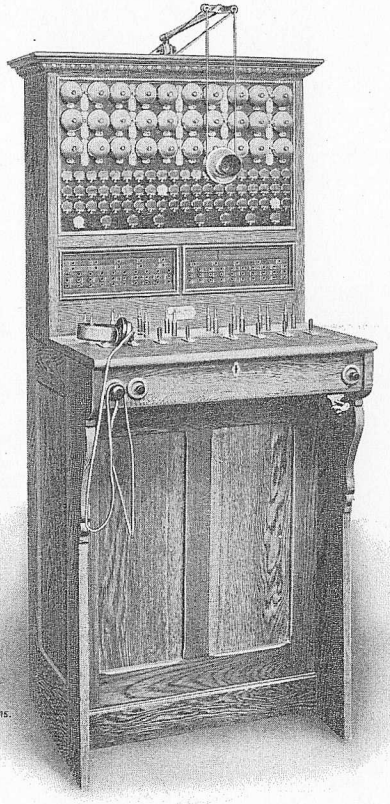
CODE NUMBERS

No. 572. 1,000-ohm ringer. No. 573. 1,600-ohm ringer.
No. 574. 2,000-ohm ringer.

The above telephone is always equipped with 5-bar generator.

Combination Drop and Ringer Signal Switchboard

Cabinet No. 1686



WE ILLUSTRATE here one of the most popular types of switchboards that we manufacture for small rural telephone companies. The board has a capacity of 25 polarized ringers, with latch drop indicators, or it may be equipped with 15 polarized ringers and 60 tubular line drops.

The ringer lines are used for the farmer or rural party lines and the tubular drop lines are used for the local lines in town.

The cabinet shown is equipped with 15 ringers, 60 drops and 8 pairs of cords, ringing and listening keys with platinum contacts and a complete operator's equipment.

We furnish each switchboard with 15 feet of cable and wire the boards for their full capacity so that additional equipments can be added at any time without difficulty.

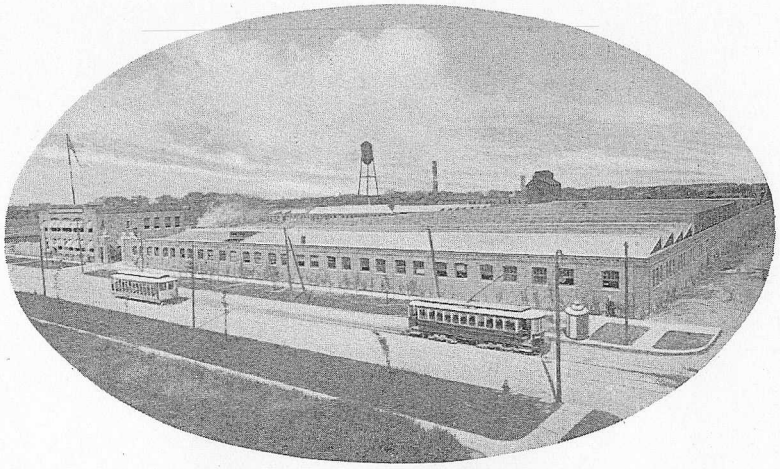
We shall be glad to mail printed matter describing this switchboard in detail to any party interested in this class of apparatus. If parties writing in for prices on apparatus of this kind will state how many rural lines and how many local lines they expect to equip their switchboard with, it will enable us to supply the printed matter and information that they are in need of at once, without the necessity of writing to find out these facts. Please bear this in mind.

Stromberg-Carlson Telephone Mfg. Co.
Who they are. What they have done.

THE STROMBERG-CARLSON TELEPHONE MANUFACTURING COMPANY is a Stock Company, incorporated under the laws of the State of New York, with a full paid capital of $6,000,000.00. It has grown from a company, organized in 1895, making a few dozen telephones a year, to one whose output is nearly one thousand telephones per day, making it by far the largest independent telephone manufactory in the world.

It is almost unnecessary to state that this is the result of merit and efficiency, aided by an established policy of fair dealing and a valid guarantee of all its apparatus. It is easy to conceive why a company of this kind can and does offer greater values for the same amount of money than small and irresponsible manufacturers, since we buy in large quantities and manufacture from the raw material.

As to our reputation for responsibility and the merits of our products, we are pleased to refer you to our patrons; as to our financial standing, this is sufficiently well known as to require no reference.



Headquarters and Rochester Factory, Stromberg-Carlson Telephone Mfg. Co.

Model Constitution and By-Laws

Constitution

PREAMBLE.

We, the undersigned, stockholders of the telephone company to be hereafter designated, in order to form a more perfect organization for the transaction of the business of the company and for the enforcement of such rules and regulations as the company shall deem necessary to protect the individual interests of each member, as well as the company at large, have adopted the following Constitution, By-Laws and Rules of Order:

SECTION 1. This company shall be known as the ————, with central offices in —— and ——, to be managed and controlled by operators selected by the stockholders, subject to such rules and regulations as the company in any regular meeting shall adopt.

SEC. 2. The officers of the company shall consist of a President, Vice-President, Secretary and Treasurer, together with three Trustees, who shall constitute the board of management, who shall be elected by a majority vote of the stockholders present at a regular meeting immediately after the adoption of this Constitution. The President, Vice-President, Secretary and Treasurer shall hold their offices for one year; and the Trustees, one for three years, one for two years, and one for one year, to be decided by lot, to hold their offices until their successors are elected.

SEC. 3. The President shall preside at all meetings of the company, decide all questions that may arise while in session, subject always to an appeal to the house. He shall enforce the provisions of the Constitution and By-Laws, preserve order and decorum in the meeting and see that the rights of all the members are respected.

SEC. 4. The Vice-President shall preside in the absence of the President and shall have all the power and prerogatives of that officer while in the performance of his duty.

SEC. 5. The Secretary shall keep, in a book provided for that purpose, a correct record of the proceedings of each meeting, which shall be presented at the next meeting of the company for its approval. He shall keep a just and true account of all money that shall come into his hands and pay the same to the Treasurer, taking his receipt for the same. He shall have charge of all papers belonging to the company and deliver the same to his successor at the expiration of his office. He shall do all the corresponding for the company and attend to any other business that pertains to his office.

SEC. 6. The Treasurer shall keep, in a book provided for that purpose, a correct account of all the money that comes into his hands from all sources, keep a just and true account between the company and its members. He shall keep his books in such manner that he can at any time report the financial condition of the company when called upon, and shall submit a full report to the company at the end of his term of office. He shall pay all orders on the treasury, signed by the President and Secretary, out of any funds not otherwise appropriated.

SEC. 7. The Trustees shall have charge of the telephone line, keep it in repair and shall have power to employ an expert whenever it is in such condition that it can not be repaired by ordinary skill; may, if they deem necessary, divide the line into three divisions as equally as possible and each have charge of his own division. They shall have charge of all property of the company, and shall report to the Secretary from time to time as they may think necessary.

SEC. 8. The annual election of this company shall be held on ——, and each succeeding year on the same day and date for the purpose of electing a President, Vice-President,

Secretary and Treasurer, and one Trustee to serve for three years, as provided for in Section 2 of this Constitution. All officers of the company shall be required at this election to submit a report of their official acts for the information of the members, which report shall be adopted or rejected by a majority of the members present. Any other business pertaining to the company may be transacted at this meeting the same as at any other meeting of the company.

SEC. 9. The capital stock of this company shall not be increased except for repairs without a vote of the majority of the members. No member shall be allowed to own more than one share of stock, nor shall he be allowed to sell his share of stock until after he has offered it for sale to the company at a price not to exceed the original cost of the share. Any share of stock so purchased by the company shall be held as common stock of the company, but can be sold by the company to any person who is not a stockholder at the time of purchase.

SEC. 10. The property of this company shall not be transferred or sold to any other company without a three-fourths vote of all the members at the time of sale, and in case of said sale the money accruing from such sale shall be divided pro rata among the members.

SEC. 11. The President shall have power to call special meetings whenever it is deemed necessary, and in case of his neglect or refusal to do so, a majority of the members shall have power to call such meeting. At all meetings of the company eight members shall constitute a quorum and each member shall be allowed one vote. The place of holding all meetings shall be determined by the members.

SEC. 12. The capital stock of the company shall consist of the poles, wire, insulators, brackets, cross-arms, guy poles or wire, money and books and other appurtenances belonging to the company, exclusive of the telephones and fixtures, which are the private property of the members and no part of the company stock.

SEC. 13. This Constitution may be changed or amended by a two-thirds vote of all the stockholders at any regular meeting.

By-Laws

ARTICLE I. Each member shall pay to the Treasurer the sum of —— dollars, to be used for purchasing wire and materials for said line after poles are set. And in addition thereto, each member desiring a phone shall pay to the Treasurer the cost of said phone and necessary expenses of putting the phone in place.

ART. II. The price of each pole set shall be rated at —— cents per pole, and the amount placed to the credit of each member in proportion to the number of poles furnished and set; and in the final adjustment of all accounts between the members, the member furnishing more than his proportion of poles shall be allowed a rebate on each pole furnished beyond the required amount at the rate per pole above specified, and each member not furnishing his proportion of poles shall be assessed for each and every pole necessary to make his proportion equal to the other members. Provided, that where poles of extra size and length are required in order to elevate the wires so as to escape the effects of electric light wires or for any other purpose, the member furnishing such poles shall be credited with the actual cost necessary for the erection of such poles.

ART. III. After all the assessments made have been collected, and rebates and expenses paid, the surplus money on hand and not needed for the use of the company shall be refunded to the members in amounts that will equalize the expenses of each member, taking into consideration the cost of instruments furnished and the cost of putting them in the proper position.

ART. IV. No person shall be allowed the use of a telephone for more than five minutes at any one time. Any person or persons using the telephone who shall refuse to cease talking at the expiration of five minutes when requested to do so by any member wishing to use the line shall be fined the sum of 10 cents for each and every offense.

ART. V. Common conversation shall not be permitted when the use of the line is required for the transmission of business messages, and it shall be the duty of all members to see that the provisions of this Article are rigidly enforced.

ART. VI. No member shall allow the use of his telephone free of charge to any person not a stockholder, except it be a member of his family, his partner in business, his employe or guest who is actually visiting his family, or a member of another line who has free exchange with this line, and then only to a stockholder. Any member who shall violate any of the provisions of this article shall be charged with the full amount of the message so permitted.

ART. VII. Any member of any other company having free exchange with this line who shall request to be switched on to this line for the purpose of sending a message for some other person, not a member of this or some interchanging line, in his own name, shall be charged with the full amount of the message, and on his refusal to pay the same, he shall be denied the further use of the line.

ART. VIII. Any person (except those having free use of the line as provided for in the foregoing Articles of these By-Laws) shall pay the sum of —— cents for each and every message to any part of the line, and the additional amount of 10 cents or more when the person to whom the message is sent has to be sent for.

ART. IX. No person shall be added to the present number of stockholders without a two-thirds vote of all the members of the company.

ART. X. No abusive, profane or obscene language shall be permitted to pass over the line. Any person so offending shall be fined the sum of $1 and shall be deprived of the further use of the line until the fine is paid.

ART. XI. No person shall be allowed to take down a receiver for the purpose of listening to a message passing over the line. Any person persisting in the violation of this rule shall be dealt with as the company shall deem most just.

Rules of Order

ARTICLE I. At any regular or call meeting of the company, when the hour for commencement arrives, the President shall take the chair and call the house to order and proceed with the regular business of the meeting in the following order:

FIRST: Reading the minutes of the last meeting, after which the President shall ask: "Are there any objections to the minutes as read by the Secretary? If not, they will stand approved." If no objections are made, he shall declare the minutes so approved.

SECOND: Reports of committees and action thereon.

THIRD: Petitions.

FOURTH: Resolutions.

FIFTH: Bills against the company.

SIXTH: Bills in favor of some member of the company.

SEVENTH: General business.

EIGHTH: Unfinished business.

NINTH: New business.

TENTH: Adjournment.

ELEVENTH: All committees shall be appointed by the President unless otherwise directed by the company.

TWELFTH: When a member wishes to speak on any subject before the house, he shall rise and respectfully address the President. When two members address the chair at the same time, the President shall decide which is entitled to the floor.

THIRTEENTH: No member shall be allowed to speak more than five minutes at one time, nor shall he be allowed to speak more than once on any question before the house uutil after the other members have had an opportunity to be heard.

FOURTEENTH: All questions before the house shall be decided by a majority vote of the members present, unless otherwise provided for in the Constitution and By-Laws.

FIFTEENTH: The rules of parliamentary practice comprised in Robert's Rules of Order shall govern the deliberations of each meeting when not inconsistent with the foregoing rules of order adopted by the company.

Petition to Mayor of Town for Permit to Erect Telephone Lines in Town Limits

County of .....
State of .....
To the Mayor and City Council of.....

The undersigned, residents and tax-payers of..... county, directors of an association known as the..... Telephone Company, in behalf of the subscribers of said association, petition to mayor and city council of.....for privilege to construct and maintain such poles and wires as will be necessary to carry on telephone communication between the subscribers of said association and the residents and business houses of..... Said telephone lines will radiate from city of.....and connect with towns of .....and.....

Believing that such action will be in accord with the will of a majority of the voters of your city, we respectfully and earnestly ask that you grant us this privilege.

SIGNED: .....*President*,
.....*Secretary*,
.....*Treasurer*,
Directors.

Petition to the Board of Supervisors for Right of Way Along Highways

County of.....
State of .....
To the Board of Supervisors, Assembled.

GENTLEMEN,—Your petitioners, residents and tax-payers of..... county, directors of an association known as the..... Telephone Company, petition for right of way privilege along the highways of.....townships, subject to such restrictions as may be imposed by the highway commissioners of said township.

Said telephone company is intended to bring the farmers of..... ..... county into telephonic communication, and will directly or indirectly benefit every resident of this community.

We respectfully ask your honorable body to grant our request.

SIGNED: .....*President*,
.....*Secretary*,
.....*Treasurer*,
Directors.

Petition to Superintendent of Railroad for Privilege to Cross Right of Way

....., 190.....

Mr.....
.....

DEAR SIR,—In behalf of the.....Telephone Company, we, the directors of said company, ask for privilege to extend a line of wires over the tracks of the.....Railroad at .....

Yours very truly,

SIGNED: .....*President*,
.....*Secretary*,
.....*Treasurer*,
Directors.

NOTE.—The right of way for telephone wires at any public highway or crossing can not be denied by any railroad company.

Notice to Purchasers

When ordering goods, give address in full, including county and shipping point. Transportation charges on goods returned must be prepaid.

Terms are thirty days net cash. If your financial standing is unknown to us, a statement of your financial condition and satisfactory references should accompany your orders. This will avoid delay in determining your proper credit basis.

Accounts are due and payable thirty days from date of invoice unless otherwise agreed upon, and will be subject to sight draft without notice after that time.

Cash Discounts are not allowed unless by special agreement.

Goods will be sent C. O. D. if a remittance sufficient to pay express charges both ways accompanies the order. Goods may be forwarded by freight with sight draft attached to bill of lading or by express collect. Remittances may be made by New York draft, Post Office or Express Money Order or registered letter to our general office at Rochester, N. Y.

Shipments. We endeavor to ship standard goods immediately upon receipt of order. Directions as to the proper routing of orders should be given; otherwise we will use our best judgment. Make orders separate from anything else; if information is wanted from any department whatever, write on separate sheet from order and you will get both goods and information more promptly.

Prices. We issue price lists giving the lowest quotations upon all standard goods and endeavor to have in our customers' hands an up-to-date list; yet we do not hold ourselves liable for changes in prices without notice. Prices are always f. o. b. factories, unless otherwise specified. In asking us for quotations, the quantity should always be given, as in many cases it largely influences the prices.

All agreements made contingent upon strikes, fires, accidents or causes beyond our control.

Returning Goods. Under no circumstances return goods to us without first getting our consent; otherwise we will refuse to receive them. We stand ready to correct at any time errors on our part, and expect our customers to accept liability for their own mistakes. No goods will be accepted for credit after ten days from date of delivery. Name and address of shipper should be plainly marked on all returned packages.

Liability. We employ experienced packers and we can not be responsible for breakage after having obtained "in good order" receipt from a transportation company. All claims for breakage and damage should be made to the transportation companies handling the freight.

Goods sent by mail are sent at purchaser's risk of loss or damage.

Stromberg-Carlson Telephone Mfg. Co.

Acknowledgment and Information Blank

Persons who are about to purchase telephones or who want to get a telephone line started will, by sending us this blank properly filled in, enable us to give them just the information they will require. No obligation will be entailed.

Have you a telephone now?_____

Do you own or rent it?_____

Will you build a new line or extend one already in operation? _____

If extending, how many telephones are now on the line?_____

What resistance ringers are used?_____

How many telephones will probably be needed?_____

Have you organized a company?_____

Mutual or incorporated?_____

If you have not been successful in interesting your neighbors can we be of assistance to you by sending literature to them?_____

Will you send us a list of names?_____

If a line were built would you do the buying? If not, kindly give us the name of the party who would.

_____

What information can we give that you would especially like to have? _____

_____

Name_____

Address_____

STROMBERG-CARLSON TELEPHONE MFG. CO.

ROCHESTER, N. Y.
CHICAGO, ILL.

The Largest Independent Telephone Company
in the World

How The Telephone Helps The Farmer

1905

Stromberg Carlson

Scanning and Document Preparation

By

Jack Ryan

16 June 2009