

TELEPHONE FACTS

SEPTEMBER

1919



The Wire Chief's Sector

SCAN BY TOM RABE, COPYRIGHT 2009

USED WITH PERMISSION, PDF COPYRIGHT 2009 MIKE NEALE



Saving Money That Is Throwing It Away

In this picture, Mr. Croswell, our Wisconsin representative, is inspecting a sample hay wire guying that inevitably proves the most expensive kind it is possible to install. The telephone man, no matter how small the company he represents, is indulging in a rare luxury when he steadies his poles with twisted hay wire, "to save money."

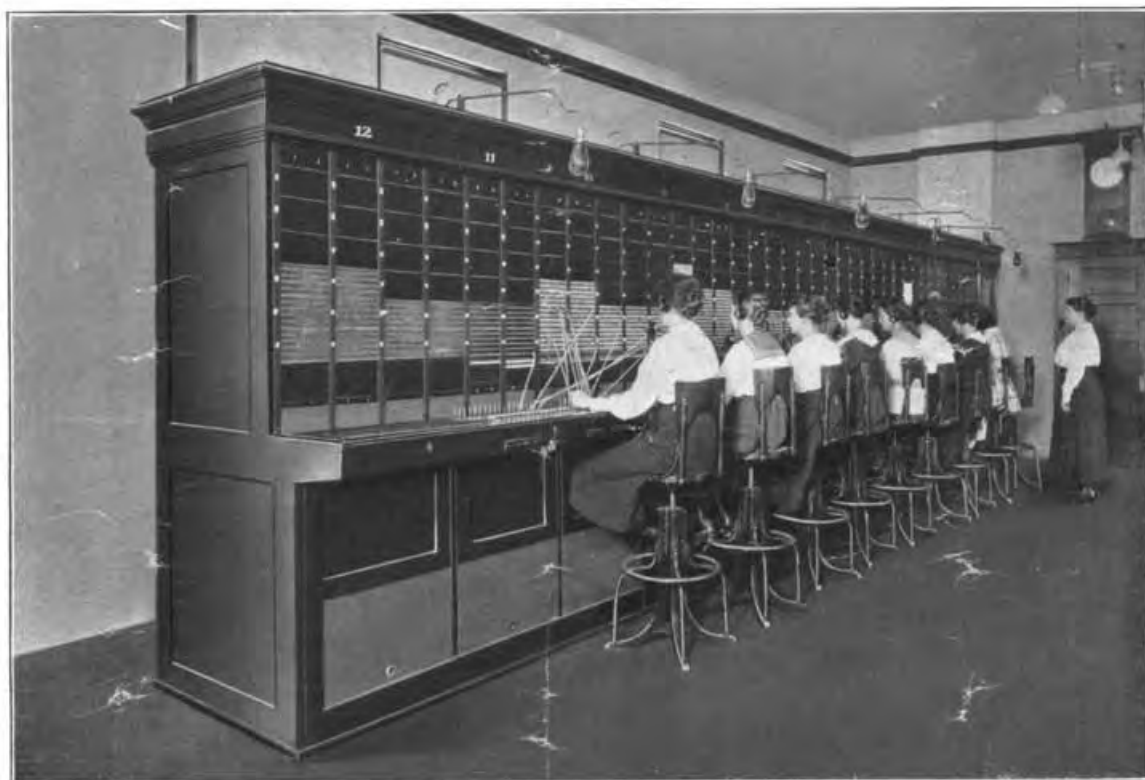
Mr. Croswell says, and he is a telephone man of long experience, "Don't do it."

Here are two more examples of fearfully high priced construction; oak poles, guyed with hay wire, porcelain knobs for insulators — poor work all around. In all line construction, as well as all line supply ordering, "Use is the test."



Service That Speaks for Itself Furnished Townpeople of Alton

By Herman P. Schmidt



Miss Barbara Gerlach, Chief Operator, Standing at Right, States She is Highly Pleased with Operation of Their Kellogg Service Switchboard.

About fifteen years ago The Kinloch Telephone Co. were serving some odd 334 subscribers. Mr. T. W. Atchison then started as solicitor and collector and states that there were about 1200 Bell phones in Alton at that time.

Today occupying a prominent spot on one of the hillsides overlooking the main part of Alton, is a modern two-story brick building which houses a most complete and up-to-date telephone plant. Mr. Atchison, who is manager, states that today they have over 2500 subscribers, in the neighborhood of 500 more than their competitors.

This exchange is unusually well laid out, the rooms being large and airy. The offices are located on the first floor adjoining the entrance. The power room, warehouse, battery room and garage are also located on the first floor. The switchboard room, terminal room, and operators' rest room are on the second floor.

The switchboard equipment recently installed at Alton, Ill. for the Kinloch Telephone Co., consisted of a modern telephone switchboard, manu-

factured by the Kellogg Switchboard & Supply Co., Chicago, Ill.

The switchboard consists of four steel frame sections, the woodwork being of solid mahogany, each section constructed for three operators positions and nine panels.

Fourteen hundred common battery line circuits are wired and equipped, arranged throughout the four sections on a six panel multiple basis, line lamps being associated direct with the multiple jacks located in front of local positions five to ten inclusive, consequently each subscriber, when calling central office, can be answered by any idle local operator.

Rural lines are of the common battery type, a total of ten being provided, wired and equipped with answering and lamp jacks in position No. 5 and multiplied throughout the switchboard. Toll lines are of the ring up lamp signal relay type, a total of ten wired and equipped, located and multiplied through positions two, three and four.

Positions two to four inclusive, are each wired

TELEPHONE FACTS



and equipped with ten toll to toll, and toll to local cord circuits, with double lamp supervision, four party manual ringing on calling cord and single party ring-back keys, wired to a four party master key.

The cord circuits automatically adapt themselves to the different classes of service, the calling side

of the circuits being further equipped for flashing supervisory lamp recall when used on a common battery line circuit.

Positions five to eleven are each wired and equipped with seventeen common battery cord circuits; each arranged for four party machine ringing on the calling cord; keyless listening, with

seizure recall key; secret service; flash recall on the answering cord; double lamp supervision; ringing tone to the calling subscriber, while ringing out on the calling cord; manual listening on calling cord, when used on an outgoing trunk line; generator cut off, when subscriber connected to answering cord restores receiver to hook of telephone instrument in case, subscriber being rung does not answer, and measured service meter register.

Each equipped position is also equipped with breast plate type operator sets, and pilot circuits.

Terminal room equipment is complete with main distributing frame, arresters, arrester pilots, and heat coil alarm circuits, relay rack and cable support racks.

For the supervising of the switchboard a two position sanitary type chief operator's desk has been provided, complete with operator sets, trunks, listening, and monitor taps, two way lines, service taps, desk lines, cord circuits and night alarm.

The wire chief's desk is similar in design to the chief operator's desk, also two positions and is complete with all necessary apparatus to make tests on all lines and trunks.

All apparatus is designed to operate on 48 volts. Power equipment consists of two sets of twenty-two cells each, of storage battery, the elements being placed in lead lined tanks, the batteries being charged by a rectifier or a motor generator charging set, the latter mounted on a slate top machine pier. Pole changing ringing sets furnished, deliver frequencies of 33, 54, 66 and 16 cycles.

The Interrupters for the machine ringing and flash feature of the cord circuit consist of one set operating from 110 volts 25 cycle single phase A. C. and an auxiliary set to operate from 22 cells of storage battery.

A Power board of slate complete with switches, circuit breakers, and meters for the control of power equipment has been installed.

Photograph No. 1 shows the chief operator's desk, arranged so that the chief operator can have a complete view of the entire switchboard.

Photograph No. 2. Mr. F. X. Rivet, wire chief, at his post.

Photograph No. 3. An excellent arrangement of the terminal room with plenty of space for getting around connections.

Photograph No. 4. The home of Alton's superfine telephone service.

Photograph No. 5. Power room. Note how all the wires are run through conduit which makes a practical and neat appearing job.

Photograph No. 6. Mr. Atchison and daughter in Mr. Atchison's office.

Photograph No. 7. Operators' rest room. This room is adjoining the operating room and is a most attractive retreat.

Mr. Atchison has worked hard in building up this exchange and is indeed proud of his present equipment, and the standing of his company. Service complaints are rare and every one seems highly pleased with the kind of service they are now furnishing.

In High With Mack in the Baraboo Valley

After motoring through Wisconsin a solid week in a roadster with M. H. Croswell, one can form definite impressions, especially about the fine way the Kellogg Company is thought of by telephone men in the Badger State, the car, and the roads. Another very definite idea obtained is that business is good and it's going to be better.

Still another hunch one cannot miss on such a trip is the fact there are still a few—but not many—companies whose managers will tell you that they don't need to buy strand when twisted hay wire makes "just as good" guying. May be it does a week or so after it's up, but we have some photos shown on the inside of the front cover illustrating the folly of hay wire guying.

Impressions

That a good sales representative is practical, has good sense and a sense of humor to balance it with—who looks after customers' interests as well as his employer's and who doesn't believe in loading any man down with stuff that isn't good for him.

The car:—It's nice and roomy in the morning, but squeezes in by nightfall. It's a wonderful aid to operating men as well as salesmen as it enables the latter to reach hustling live companies that would otherwise be neglected, saves time all around and if it lives through each day's grind of good stretches and bad—it most always does—it's a worth while bus.

The roads:—Mostly good if you don't mind getting out and wading occasionally after a heavy downpour—but we have it in for those birds who won't put up direction signs; or who make their detours a Chinese puzzle. As B. L. T. says, Wherine'll is Detour, anyway?



The Lines of a Thriving Wisconsin Independent System Run Through These Scenic Miniature Mountains.

Business is good because each year more people realize they need telephones and a lot haven't been able to get them in the last eventful months.

Those hay wire lines! It isn't just the hay wire that makes you sad, its realization that that kind of construction makes grief for every one—from switchboard manufacturer to the farmer's hired man trying to make a date after chores.

Faris is Manager of K. C. Branch



On August 21st President Edwards instructed that, effective September 1st, Mr. H. A. White should become manager of the Kansas City Sales Department and that Mr. H. Faris should thereafter be delegated as manager of the Kansas City branch.

This change will not affect customers throughout the Southwest except to better the service from the Kansas City branch, which has grown too large for a one-man management.

Neither of these gentlemen need any introduction to the telephone trade. Mr. Faris has been in Kansas City territory constantly for the past eighteen years for the Kellogg Company (and only the Lord knows how long before that, for we suspect the likeness reproduced herewith is really his graduation picture).



He has been Sales Manager of the Kansas City branch for exactly thirteen years, during the last ten of which he has had the constant assistance and co-operation of Mr. White, whose services have been fittingly recognized by placing him in charge of the Kansas City Sales Department, thereby enabling Mr. Faris to devote more time to matters of general management of the branch, and increasing its service and efficiency.

Both of these gentlemen will still be available to their former customers, and Mr. Faris bespeaks for Mr. White a continuance of the co-operation he has so long enjoyed, both from the Branch Salesmen and the Telephone operating companies throughout the "Great Southwest."

It's Home-coming day at Grand Rapids, of the Badger state, in this picture and the parade float in the foreground is the telephone company's offering.



Besides the big desk stand in the center, made by M. G. Smart, notice the Kellogg desk stands surmounting the railing posts.

When a Ground Was Ground

The time was about 30 years ago in southern Michigan, when Independent telephone construction was very brisk. A man with considerable money wishing for investment went into the telephone business and had a trouble boy named Ezra, who knew very little trouble or phone business. When their rural lines were being constructed late in the fall, a wire was left over night in the mud that froze on, and when the wire was pulled up the chunk of mud was still on the wire.

The telephone man and Ezra were out to find a ground on this line several days after it had been put in working condition. Coming along the road, they saw the chunk of mud frozen to the wire, and Ezra said: "You get that mud off the line; there is the ground we have been looking for for two days."

Note: This is a true story, and the man's name is Mr. Heisey of Lainsburg, and the boy's Ezra Morgan. Hope they have not forgotten the incident, and now can look back and laugh.



Manufacturers of telephones and switchboards, complete exchange equipment.

We ship promptly, construction material—a large, up-to-date, complete stock of line supplies ready for your immediate needs, at lowest prices.

I. B. Edwards, President and General Manager.
Seymour Guthrie, Secretary and Treasurer.
George Wolf, Sales Manager.
S. A. Bohlman, Shop Superintendent.

Edw. I. Pratt, Editor.
H. H. Ide, Traffic Engineer.
W. R. Brewer, Supply Dept.
H. N. Farris, Kansas City Office.

L. D. Kellogg, Vice-President.
J. G. Kellogg, Vice-President.
H. D. Currier, Chief Engineer.
A. H. Weiss, General Superintendent.

Stanley Duvall, Export Representative.
D. J. Gillespie, Export Department.
Ben Woodbury, Columbus Office.
R. H. Coyne, San Francisco Office.

DISTRIBUTING HOUSES:

Canada West Electric, Ltd., Regina, Sask., Can.
The McGraw Company, Sioux City, Ia., Omaha, Neb. Pacific States Electric Co. Los Angeles, Cal.; Oakland, Cal.; Portland, Ore.; Seattle, Wash.
Northwestern Electric Equipment Co., St. Paul, Minn.; Duluth, Minn.
Tower-Binford Elec. & Mfg. Co., Richmond, Va.
Southern Electric Supply Co., Atlanta, Ga.



Vol. 9

September, 1919

No. 7

Are They Aiding You?

In the operation of switchboards and telephones; lamps, cordage and receiver shells are usually prominent items in upkeep, and in these three items the Kellogg Company takes the greatest pride—not in making idle claims, but in the indisputable maintenance records of all of their exchanges.

"There's a reason," and it is due to three things:

First, the care and experience employed in designing this equipment; second, in the materials used; and, third, and perhaps chiefly, in the complete, the

efficient and the economical equipment of the various shop departments.

Kellogg lamps are the cheapest on the market today because they last. They hold the vacuum. Kellogg vacuum pumps save money, enabling the use of better materials. The filament is made by the Kellogg process, which means it is as strong as it is possible to make. Kellogg lamp terminals do not become loose or lose contact in the jacks.

A visit to the immense Kellogg cord building department is the finest advertisement—next to the actual use of Kellogg cords—that we know of. In almost every mail come letters—unasked for—that tell of Kellogg cord long service records.

Kellogg Bakelite receiver shells, also completely manufactured in our own Bakelite department, are as near being unbreakable as it is possible to produce and still have every other necessary qualification of the highest type shells.

This trio of economy in exchange operating—Kellogg lamps, cords and shells—is thus well serving thousands of companies. They should be aiding you. Are they?

Our magneto, low key-shelf switchboards in Wisconsin, as elsewhere, are making a great record for themselves in extremely low maintenance costs and fast operation.

Wellsville Telephone Company

Frank Burnett, Manager

Wellsville, Kansas, June 16, 1919

Kellogg Switchboard & Supply Co.,
Kansas City, Missouri.

Gentlemen:-

The magneto switchboard with double lamp supervision, which you installed for us February 1, 1919, is giving us excellent service.

We have had only one piece of trouble since it was installed and that was coil trouble, which was easily repaired. The supervision has given us no trouble what ever.

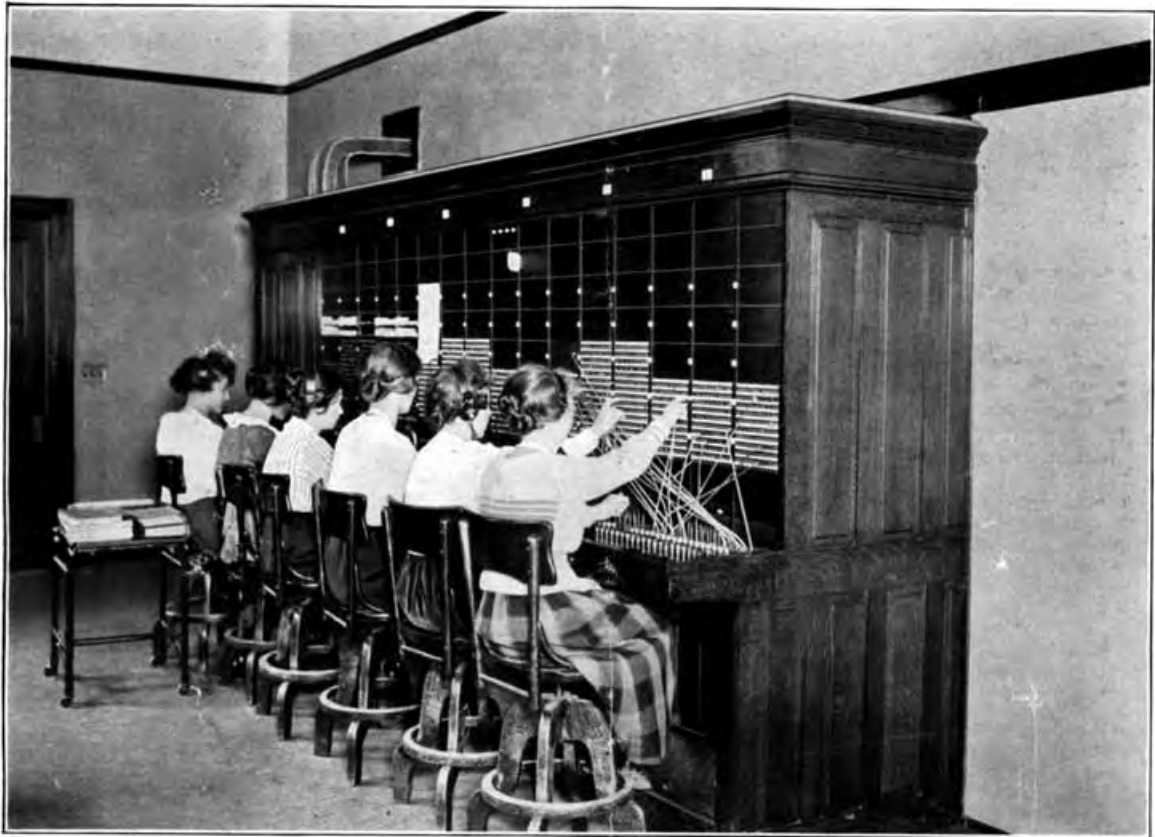
Since this switchboard has been in service the operators have been able to handle our business much faster and give better service to our customers.

Very truly yours,

WELLSVILLE TELEPHONE COMPANY

Frank Burnett
MANAGER.

A Telephone Plant That Looks—and Is Efficient, Grand Rapids, Wis.



The Wood County Telephone Co. was organized and incorporated in 1895 under the co-operative or mutual plan, and was the first mutual company.

The top picture in the left hand column of Page 9 was taken in June, 1898, and shows the first board and office. The man at the desk is W. M. Martin, the one standing is C. M. Dougherty, and the lady is Dora Douville. Martin was the engineer while building, and then manager. Dougherty was night operator and trouble man. The board was a "Standard", built at Madison, Wisconsin, and was in service from 1896 till 1901, when it was replaced by the one shown in the lower picture in the right hand column of Page 9.

This view was taken in 1907. This was a 400-line board and was in service from 1901 till 1907. It was installed by Garrison Babcock, who was then manager. The operators are Blanche Harding, Matilda Stahl, and Tressa Rantz.

The above photograph was taken last month. This Kellogg service switchboard replaced one of the first multiple boards built and the last in service.

The exchange building was built in 1917 and 18, and the present board was cut over in March 1918. The building cost about eight thousand dollars. The older employees are E. B. Smart, manager, with the company since 1898, D. G. Smart, Supt., since 1901, M. G. Smart, Wire Chief, since 1907, Katie Kammerer, Cashier since 1906, Buelah Miller, Chief Operator since 1903, and Fanny Barrett, Assistant Chief Operator since 1903.

Entering the fine new building of the Wood County Exchange, the visitor finds himself in a large and well lighted lobby, with toll booths conveniently arranged along one side, and directly opposite the entrance, are the cashier's and bookkeeper's windows. On the left are the doors leading to the

general manager's office, and into the Exchange proper. The partitions from the business office, however, is entirely of glass, from the top of the counter to the ceiling, which, we think, is a decided advantage, not only in the matter of controlling light and heat for the office, but because of the small



Early Telephony in Wisconsin.

openings for the cashier and bookkeeper, through which all business with the public is transacted, there is less confusion on busy days in the office itself.

The operating room is directly back of the office, on the first floor, which arrangement also has its advantages.



As Businesslike a Building as the Company.



M. G. Smart at Work.

In the many Independent Exchanges, which we have visited for articles or photographs, invariably orderliness and quiet are the rule. These are certainly indispensable in any telephone office where efficiency must be. The Wood County operating room and terminal room are excellent examples of efficient management.

This new switchboard, which has a fine record for service since its installation early in 1918, has an ultimate capacity of 2500 lines, multiplied every five panels. There are six operator's positions, with



The Board That Grand Rapids Quickly Outgrew.

fifty-one local cord circuits, ten magneto circuits, two toll, and fourteen universal cord circuits. The installation included complete terminal room rack, the frame having a capacity of 2500 line and cut-off relays, and a cable rack to handle the ultimate number of cables. The cable installation is an interesting feature of this department. The main distributing frame is of Cook type. All standard features of the Kellogg Service Switchboard, are included in the Grand Rapids equipment.



"E. B." and "M. H."



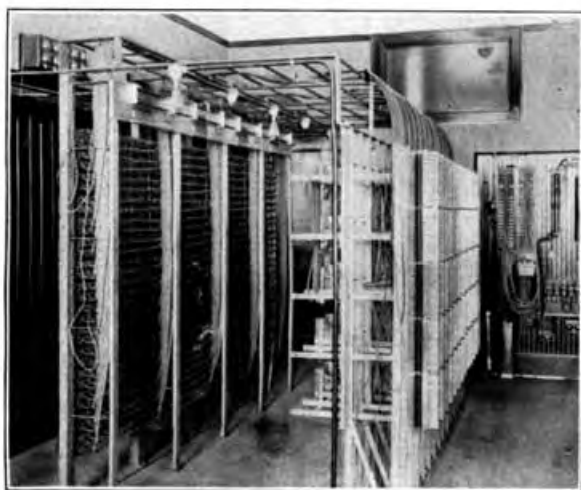
The Chief Operator.



An Office View.

The power plant includes the power panel board, wire and conduit. The Power Panel is of Monson slate, with heavy switches, and the installation is in accordance with the rules and regulations of the International Board of Fire Underwriters.

The standard chief operator's, and wire chief's desks, are of the sanitary type, and it is interesting to note in this connection that the wire chief's desk,



A Rack, Not Only Kept in Perfect Condition, but a Clean, Orderly Terminal Room.

presided over by M. G. Smart, was the subject of a recent page advertisement in *Telephony*. At the time this desk was photographed, Mr. Smart apologized for its apparent appearance of disuse, as being due to the fact that there was so little trouble in the entire exchange.

Hand Grenades For Citizens

A fairly generous proportion of the 15,000,000 hand grenades owned by the War Department of the United States when the armistice was signed are to pass into the hands of America's industrial army through the Government Savings Societies of America's industrial organizations. They will be used as savings banks.

The hand grenades are the genuine articles, just the same hand grenades as those with which the Yanks did such deadly execution in Europe. The only difference, in outward appearance, is that a money slot has been cut through the shrapnel casing forming the body of the grenade. Inside, the explosive chamber has been cleared and a removable screw substituted for the base of the casing. In place of the high explosives so carefully developed by American army experts the grenades, as banks, will hold one hundred dimes or one hundred pennies—the shrapnel of the United States Treasury.

The industrial workers, eager to possess one of these remarkable war souvenirs, has only to purchase, through the secretary of the War Savings Society of his particular plant, factory or organization, three War Savings Stamps at a single time or one War Savings Stamp a month for three consecutive months. The grenade bank then will become his, being received through the Government Savings Society of the industrial organization of which he is a part. Thereafter it may be used for personal and private savings, as well as for money in course of accumulation for further War Savings Stamps purchase or as a beginning toward acquirement of one of the newer Treasury Savings Certificates now issued in denominations of \$100 and \$1,000.

The present hand grenade is one of the most modern and up-to-date of weapons, the American development being richer for three years of hard work on the part of Allied army experts, but the hand grenade itself dates back to 1427. The European military term of "Grenadiers" was first earned in the reign of the French king, Louis XIV, Napoleon's Grenadiers of the Guard being among his bravest soldiers.

"What I Think of Your Letterhead"

Letter heads have a very great deal to do with the success or failure of the message written below.

When I receive a letter from you I am, unconsciously perhaps, but nevertheless surely, influenced by its appearance in my opinion of you.

We receive hundreds of letters daily most of them well written, attractive and with appropriate letter heads, but a good many come to our desk in the

It is useless to try to print a half-tone, or half-tone electrotype, on many papers. It is disastrous to do it on a letter head, and spoils the appearance, in many cases, of what would otherwise be excellent examples of directory printing.

If you want to use some advertising illustrations that are in our catalogue, or that you have planned yourself, remember that if it is a photograph you will have to make a half-tone plate. This is to be



Weston Telephone System

J. SCOTT RUSSELL, OWNER

SERVICE THAT SATISFIES



production of which it is evident that little thought has been given.

Harry Faris, our Kansas City branch office manager, is an enthusiast on good letter heads, and has sent a sample of the Western Telephone System, owned by J. Scott Russell.

We reproduce this letter head, as it is an excellent example of simple, dignified and forceful printing. Incidentally we furnished the electrotypes, and if we had more information about the kind of paper that was to be used, and the mediums in which our electrotypes were to be printed, it is certain we could improve the attractiveness of many letter heads and directories.

used on enameled paper, with few exceptions, and this half-tone must be made in the coarse screen.

Half-tones that are made with vignetting, which is the shaded or cloud-like effect often used as a background, do not print well except on good enameled paper, and then only when handled by an experienced printer.

Electrotypes, of zinc etchings, which are the kind of plates used in all line drawings, are used best for letter heads, and these are the kind of plates Mr. Russell has used in his own printing.

We believe the illustration of telephone apparatus on a letter head is well worth while, and is far preferable to fancy designs or complicated styles.

Listening In On K. C.

Bruce Gemmill of the "United" at Abilene has just returned from an overland trip to the Grand Cañon and Petrified Forest of Arizona with a grand idea. He has some "cultures," procured in the Petrified Forest, with which he hopes to be able to convert to eternal granite all of the wooden poles in the United System. Advance applications for stock will be filed in the order received.

C. A. Anderson, Superintendent of Equipment of the same company, has gone to New Mexico to procure some bronchos, or burros, trained to string wire in inaccessible locations from reels pivoted on the saddle horn.

Fred Coulson, of their Commercial Department, is spending his annual August vacation in Northwest Colorado. Fred's new discoveries will be announced later.

Our manager, H. N. Faris, celebrated his fortieth birthday, Sunday, August 10th, which reminds him of the apt comment of Irvin Cobb, on a like occasion, that "Forty is the old age of youth and the youth of old age."

Miss Edna Ware left August 16th for a well-earned vacation, which will include a trip to California.

Miss Helen O'Shea and R. D. McDuffie both have the sympathy of the Kansas City Office and Kellogg employees in general for the deaths of their fathers, both occurring during the week of August 2nd.

R. A. Feasel, head of the shipping department, who has been laid up in the hospital for repairs during the past few weeks, is again able to be about and supervise this important section of our work.

A new construction material price list, dated August 1st, together with a new telephone price list, dated July 21st, has just been mailed to all Kansas City branch customers, along with a letter urging preparedness for winter and calling attention to neglected maintenance and the danger of "letting things drift."

If you failed to receive yours, or discarded it as ordinary circular matter, please write immediately for duplicate copies.

After being "sold out" for several months past, our Kansas City stocks of 50 and 100-line switchboards have again been replenished and we are prepared to make immediate shipments of standard equipment of these sizes from Kansas City, while the factory is always prepared to make prompt emergency shipment of larger boards in case of interruption of service by fire or other casualty.

Classified Advertising

**Situations Wanted. Miscellaneous Help
Wanted, Business Chances
Address replies to Chicago office**

This classified column is especially for the use of telephone men, and we want you to use it. Write and let us know if you are looking for a position, if you have an exchange for sale, or want to buy one, or possibly, you have some equipment you would like to sell. This service is free of charge. All advertisements will be lettered and replies forwarded promptly. In answering several advertisements, kindly send a separate letter for each, being sure to give the number of the advertisement, so there will be no delay in forwarding the replies to the advertisers.

We want to especially assist the owner in buying or selling; in securing help. And we want to assist employees in the securing of positions. Our space is limited and therefore must be confined to uses above indicated. We cannot publish advertisements of real estate dealers, promoters, or agents.

POSITIONS WANTED.

POSITION WANTED—As commercial manager of a telephone company. Can give the best of references relative to my success and business ability. Address P-311, K. S. & S. Co.

POSITION WANTED—By married man; 12 years' experience in all branches of telephone work. Prefer position as manager of a system. Best of references. Address P-312, K. S. & S. Co.

POSITION WANTED—With good telephone company with a magneto plant of about 400 to 500 phones, as working manager. Can do repair work and keep the plant in running condition. Prefer a plant where my son, an experienced operator, can take care of the switching. Address P-313, K. S. & S. Co.

POSITION WANTED—By an all-around man in magneto work. Have had 20 years' experience and can do any kind of telephone work. Am employed at present, but want to make a change. Address P-314, K. S. & S. Co.

POSITION WANTED—As manager, or a combination job. Prefer west of Nebraska. Employed for 15 years on present position. Address P-315, K. S. & S. Co.

POSITION WANTED—By a retired soldier as a line-man and trouble shooter. Have had 7 years' experience with ground and metallic lines. Can keep all types of telephones in order and repair switchboard. Am married. Can furnish references. Prefer Minnesota or North or South Dakota. State salary paid. Address P-316, K. S. & S. Co.

POSITION WANTED—By married man, experienced in all branches of telephone work. Three years' experience with present employers. Can furnish references from them. Address P-317, K. S. & S. Co.

POSITION WANTED—By married man of 40, good habits. Capable of managing telephone system of one or a number of exchanges. Several years' experience in telephone commercial and traffic work, preparing all State and Federal reports, financial statements and audits. Indiana, Michigan or Ohio preferred. Good reasons for change. Address P-318, K. S. & S. Co.

HELP WANTED.

WANTED—An all-around, experienced telephone man for a 300 subscriber exchange. We will pay good wages to a good man. State experience, references and salary expected in first letter. Address X-147, K. S. & S. Co.

WANTED—Two or three first class linemen, \$90.00 per month. Steady work and permanent position to the right men. Address X-148, K. S. & S. Co.

WANTED—Man to do line work and trouble shooting. Magneto exchange, 200 telephones. Southeast Alabama. This is a good job for the right man. Address X-149, K. S. & S. Co.

WANTED—A practical man with a small amount of cash to purchase a small plant of 135 telephones, 40 miles from Indianapolis, in a live town of 900 population, or he can organize a company and manage the property at approximately \$125.00 per month after it has been fully developed. Plant can be increased to 350 telephones. Address X-150, K. S. & S. Co.

WANTED—Chief operator and bookkeeper combined for exchange of 1,000 telephones. Address X-151, K. S. & S. Co.

WANTED—Experienced lineman and switchboard man, who can repair switchboard and telephones and keep the lines up; 287 telephones in use. Will pay \$125 per month, man to furnish own transportation. Address X-152, K. S. & S. Co.

WANTED—Competent switchboard man and wire chief. Kellogg equipment of the latest type. Twenty-two hundred stations. State salary when making application. Address X-153, K. S. & S. Co.

FOR SALE.

FOR SALE—Exchange in good farming and mill trade district; 300 town subscribers, rural line connections, long distance. Good prospects, both local and rural. Receipts \$1,200 annually; can be doubled in three months. Good opportunity for right man. Price \$2,000 for entire equipment. Address Dr. E. W. Breazeale, Campti, La.

FOR SALE—Will sell controlling interest or all, part time, magneto plant, 190 telephones; good rates. Located in Southern Indiana. Office and residence in exchange building. Address B-319, K. S. & S. Co.

FOR SALE—Telephone exchange with 127 telephones. Income \$3,000 per year. 100 dropboard with 60 drops installed. Ringing machine. Located in good farming district. Town has 5,000 inhabitants. Exchange in 5-room residence, electric light. Can be bought on terms. Address B-320, K. S. & S. Co.

FOR SALE—Telephone property in county seat in Northern Wisconsin. A bargain if bought soon. Good reason for selling. If you want property with a good future it will pay you to investigate. Good terms. Address B-321, K. S. & S. Co.

FOR SALE—First class magneto plant in rapidly growing county seat in southwest Kansas. All Kellogg equipment. Rates recently increased without opposition. Priced to sell. Particulars by mail on request. Address B-322, K. S. & S. Co.

FOR SALE—Live exchange of 350 phones, all owned by company except 70. Six connecting toll lines. Near city. Would consider cash or trade deal. Present owner and manager unable to care for work on account of health. Located in Jefferson Co., Kan. Address B-323, K. S. & S. Co.

WANTED TO LEASE—Plant of 300 to 600 subscribers for one year, with option of buying if found to be as represented. Address B-324, K. S. & S. Co.

FOR SALE OR TRADE—Good up-to-date magneto exchange in eastern Oklahoma. 300 subscribers. Excellent rates. Population 3,600. Exchange can easily be increased to 400 subscribers in six months. Clear income per month, \$600. Will sell for part down or will trade for a good farm. This is an exceptional opportunity. For further information, write. Address B-325, K. S. & S. Co.

FOR SALE OR TRADE—One of best paying exchanges in South Central Oklahoma, consisting of 75 locals and 110 rurals. In prosperous farming belt. Present owner too old to handle. Gross receipts, \$4,000. Price, \$6,000; terms to suit, or will trade for land in Oklahoma. Address B-326, K. S. & S. Co.

FOR SALE—Kellogg magneto switchboard, 150 drops, all installed. In A1 condition. Taken out because too small. Double supervisory circuit, code and buzzer night alarm. Many drops less than one-year old. Southwest Minnesota. B-327, K. S. & S. Co.

FOR SALE—One Western Electric No. 1801 sectional type P. B. X. switchboard, 5 cord circuits—two trunks. 40 lines wire—35 equipped. 30 black steel No. 233K Western Electric wall phones—not for long distance, the thing for factory or hotel where intercommunicating features are wanted. Used a few months, looks like new. A bargain. B-328, K. S. & S. Co.

FOR SALE—Two exchanges, close in and in good repair, close to the Twin Cities. Heavy toll business. All metallic lines. Growth last year, over 100 subscribers, and still building. Good rates. Farm lines average three and one-half subscribers to the mile. Do not answer unless you have some money. B-329, K. S. & S. Co.

FOR SALE—Magneto telephone exchange, in good county seat town, population 1,500. One hundred and fifty phones. Rates \$1.50 and \$2.50 per month. Have connections with three separate companies, for which we get a commission, and do switching for farmer lines. Gross income per month, \$350.00. Cash price, \$6,000.00. Address L. E. Roberts, Starke, Fla. P. O. Box 281.

FOR SALE—Telephone exchange in North Dakota. Located in heart of great grain-producing country. Income, \$4,000 per year. Will sell cheap, one-half cash and balance in monthly payments. All "Kellogg" equipment. B-330, K. S. & S. Co.