

*Southern
Telephone News
August 1924*





DIXIE LAND

*"I wish I was in de land of cotton,
Old times dar am not forgotten,
Look away! Look away! Look away! Dixie Land."*

The scene on our cover is a familiar one in any of the Southern cotton raising States, and the little darkey in the foreground, with his infectious grin, is fairly typical of his good natured race. It is evident that he, like our telephone folks, puts a smile in his work.

Perhaps it would be rather far-fetched to call him a telephone man, but it is true that he is gathering some of the raw material largely used in the manufacture of telephones, and it is not impossible that some of this very cotton may later appear in the form of cords in a subscriber's set or in a switchboard.

SOUTHERN TELEPHONE NEWS

[Established April 15, 1903, as The Cumberland Telephone Journal]

Published in the Interest of the Employes of the Southern Group of Bell Telephone Companies: Southern Bell Telephone and Telegraph Company; Cumberland Telephone & Telegraph Company, Incorporated; and their Associated Companies.

EDWARD R. AUSTIN, Editor

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No. 8

"WE" INCLUDES WESTERN ELECTRIC

Two or three months ago we published a story telling how the Western Electric Company, through the operation of its stores and shop organization, is furnishing the facilities we need in order to expand and carry on the telephone business in the Southern Group.

In this issue the installation of the Public Address System at Hawthorne is described, and also the adaptation of that apparatus so that it can be carried on a truck, and used by political speakers to address throngs of people. These and other developments in the art are the result of research, study and effort on the part of the Bell System engineers and technical men, and are part of the wonderful history of achievement which is making the wire service of the nation more and more comprehensive and valuable.

All such news and information is of special interest to telephone men and women who desire to keep informed of the progress of the business. Some of our own people may have failed to realize that the Western Electric Company and its army of workers are an essential part of the Bell System—its manufacturing department. While not members of our own operating company, those Western Electric folks here in our territory and up at the big factories at Hawthorne and Kearney, are, like us, part of the "Bell Family," and closely allied to us, say like first cousins. They are striving, as we are, to make the service of the nation-wide system as efficient and satisfactory as possible, and it is only by full and complete cooperation between the manufacturing and operating forces that the best results can be attained.

MAKING FRIENDS

"Hello, there! I've built a house."

He stopped us on the sidewalk, a sturdy little chap in rompers, with an earnest air and engaging smile.

There spoke the pride of achievement. In effect, he was saying: "I have done something myself; come look at it and see how good it is." So we looked at the house. It was a mud house and not prepossessing.

"And, say, I've got a dog, too. His name is Buster. He is terrible fierce. He just eats 'em up. I suppose he's the worst dog in the world."

We opined that it must be a fine dog. Here was an example of the pride of possession.

"My name is Bill and I'm six years old, goin' on seven. What's your name and how old are you?"

We gave our name and glossed over the question of age.

"Well, I know a feller that's named Ed. He drives a ice wagon and he's a good feller. I reckon you're a good feller; I like you."

Here was a democratic spirit and a wholesouled hearty extension of good fellowship, a friendly gesture, a willingness to take the stranger on trust merely on his appearance.

Wasn't he a manifestation of the real American spirit, frank, friendly, unsuspecting and unafraid; perhaps egotistic, but eager to see good in others? Anyhow—whether he is a "type" or not—we mean to keep an eye on that boy.

Gee! Isn't it tough to be a bachelor!

VACATION STUFF

Now that the vacation period is drawing to a close, and our telephone folks have had delightful rests and a

NOTICE

We have had a limited number of our cover design this month printed on heavy paper suitable for framing. These will be sent to our readers on request, so long as the supply lasts.

change of scene, perhaps, in the mountains or by the seashore, or out in the country, we would like them to send us in some snapshots of places and people taken in their holiday time. Haven't you some pictures that will recall the good times you have enjoyed, and that will be interesting to others? We like to get photographs and others like to see them in the News. Our paper wouldn't be half so attractive without plenty of pictures. So send your collection in. It may be we can use some of them.

While writing about matter for publication, let us again urge our contributors not to delay sending in stories and pictures. The account of a meeting, an outing, an application of first aid methods, or any other piece of news, loses its value for publication if you wait a month after it occurs. Send it in, with pictures, the next day or at least within two or three days after the occurrence. Most stories can easily be written the same day or the day after. If you delay too long they cannot be used, as they become stale, "ancient history," as the saying is, and of no interest to anybody.

Typewrite your stories if possible, and please use double space between the lines. We frequently have to add some words, and this saves rewriting.

Another suggestion—whenever photographs are sent, either from a photographer or your own kodaks, please send prints on glazed paper if you can. Those glossy prints make clearer cuts.

Our people in the field are taking much interest in the paper, and to their cooperation is largely due its success. We want you all to feel free to send in any contributions you think our readers will like to see published.

Send them direct to the editor. They need not go through the organization channels.

Putting Georgia Peaches On the Market

The Telephone Enables This Big Crop To Be Moved and Sold to Advantage

By JOHN M. COOK, JR., *Manager Fruit Belt Tel. Co., Fort Valley, Ga*



Toll operators at Fort Valley who handle long distance calls during the peach season. Left to right: Vera Swindal, Adelle Rowell, Gertrude Davis.

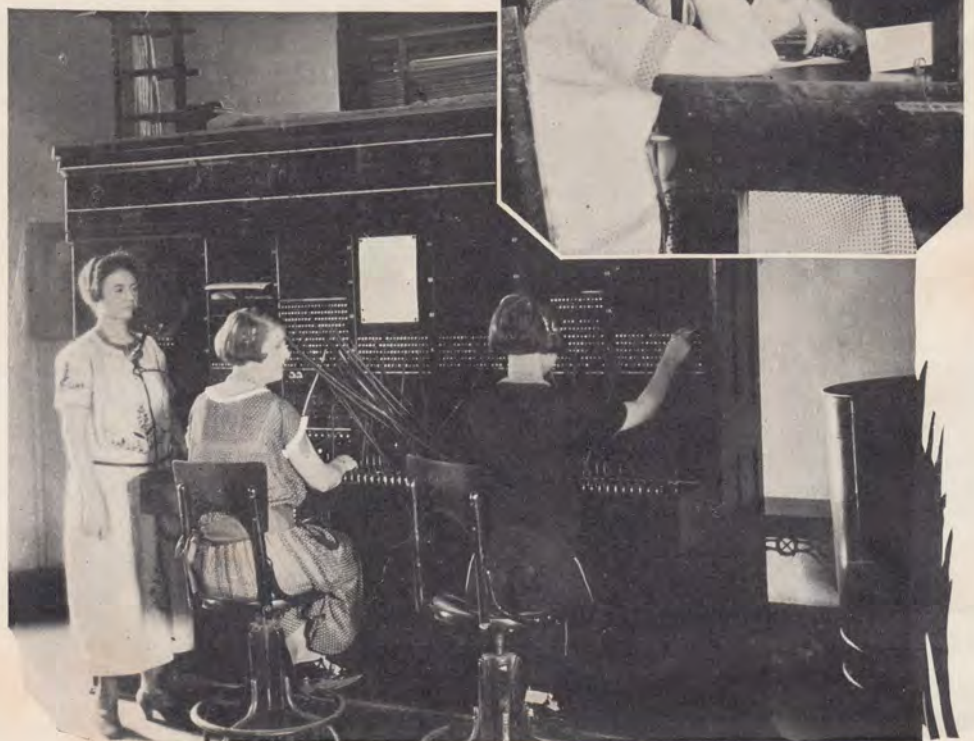
FEW outside the section where the fruit is grown realize the magnitude of Georgia's peach industry. This year some ten thousand cars, five million crates, of this delightful and health-giving fruit will be shipped out of the State and, in return, some ten million dollars will find its way back into the pockets of the growers and those who handle the crop.

Unlike cotton and other staple crops which can be harvested and stored until conditions for selling are favorable, peaches when they ripen must be picked, packed, loaded and started on their journey to the markets all the same day. There must be no delay for, despite the fact that the fruit is shipped in ice cold refrigerator cars, it will keep only a limited time and consequently must be moved immediately. A large percentage of the cars, in fact, are not sold nor even definitely consigned when they leave, but to save time they are started on their way and diverted while in transit to the points where it is found they can be used to best advantage.

Since the peach season lasts only about eight weeks, hundreds of cars must be shipped each day and it is needless to say that everyone connected with the game is kept on the jump and the telephone is an important factor in keeping things moving. It is used for everything. From early morning when the growers start ordering cars and arranging the thousand and one details of the day's shipping, until late

at night when everything is "rolling," the lines and the operators who handle them are taxed to their limit. Not only are the local and short toll lines used to handle the many details of gathering, packing and shipping, but the long lines to distant cities are used extensively to ascertain market conditions and properly distribute the fruit.

Below is the local board at Fort Valley, and at right the toll board. During the season of gathering and shipping the peach crop, the facilities of this exchange are taxed to the utmost.



While peaches are grown to a certain extent in various sections of the State, the major part of the industry centers about Fort Valley. Here the buyers and commission men make their headquarters and, while it has a normal population of only about four thousand, during the months of June and July it assumes the appearance and activity of a city many times as large. The telephone system of Fort Valley is a common battery plant with modern equipment throughout and is owned and operated by the Fruit Belt Telephone Co. The switchboard is a Western Electric No. 1 type equipped with automatic ringing, keyless answering, flashing recall and other features designed to afford the best possible service during the rush period when it is most needed.

Long distance service during peach season is handled at a separate toll board by a corps of experienced operators from the Southern Bell office at



Fort Valley, the heart of Georgia's peach industry. At top left is a business block in town, and on right a glimpse of one of the orchards. In center, solid trainloads of peaches ready to roll to the Northern markets. Below, left, icing refrigerator cars before loading; at right, farmer's lines in the peach country (no "grapevine" construction here). In center, below, J. H. Allen, prominent grower of Fort Valley; L. A. Downs, president of Central of Ga. Ry., which handles most of the fruit, and some choice "Hiley's Belles."

Macon and thirteen direct toll circuits give Fort Valley connection with the outside world.

How the Industry Started

The development of the peach industry in Georgia has been almost coincident with that of the telephone. Forty years ago peaches were cultivated only to a limited extent and orchards were few and of small area. There were then no facilities for icing refrigerator cars and the fruit in its natural state being very perishable could be transported only a short distance. The crop was of little or no commercial value, except for some preserving and canning.

In 1881 a seedling tree was planted by S. H. Rumph on a farm near Marshallville, Ga., which proved to be of the "cling stone" variety and of a very fine quality. Seeds from this tree were planted, one of which produced a large clear stone peach of remarkable beauty and quality, and this peach was named

by Mr. Rumph in honor of his wife, "Elberta."

Some three years later Louis A. Rumph, a brother of S. H. Rumph, planted seed from the original cling stone peach and one of the seedlings produced a peach since known as the celebrated "Georgia Belle."

These two varieties the Elberta and Georgia Belle, have proved to be the finest peaches produced in this section and are the favorite varieties for shipping. The Georgia Belle ripens about two weeks earlier than the Elberta.

After the shipping qualities of these and other varieties were demonstrated, the business grew very rapidly from a few trees and few acres to millions of trees and thousands of acres. Many orchards in Georgia cover as much as 2,000 acres of land and many have more than one hundred thousand trees. The fruit industry gives employment to a great many people during the time when the crop is gathered and sent to market. Great crate

factories are required to manufacture containers for the fruit, immense ice factories furnish ice for refrigeration, long lines of ventilated refrigerator cars are engaged in carrying the shipments and thousands of laborers are to be found in the fields gathering the crop, transporting it to the refrigerating plants and working in them and the packing houses during the feverish activities of the harvesting period.

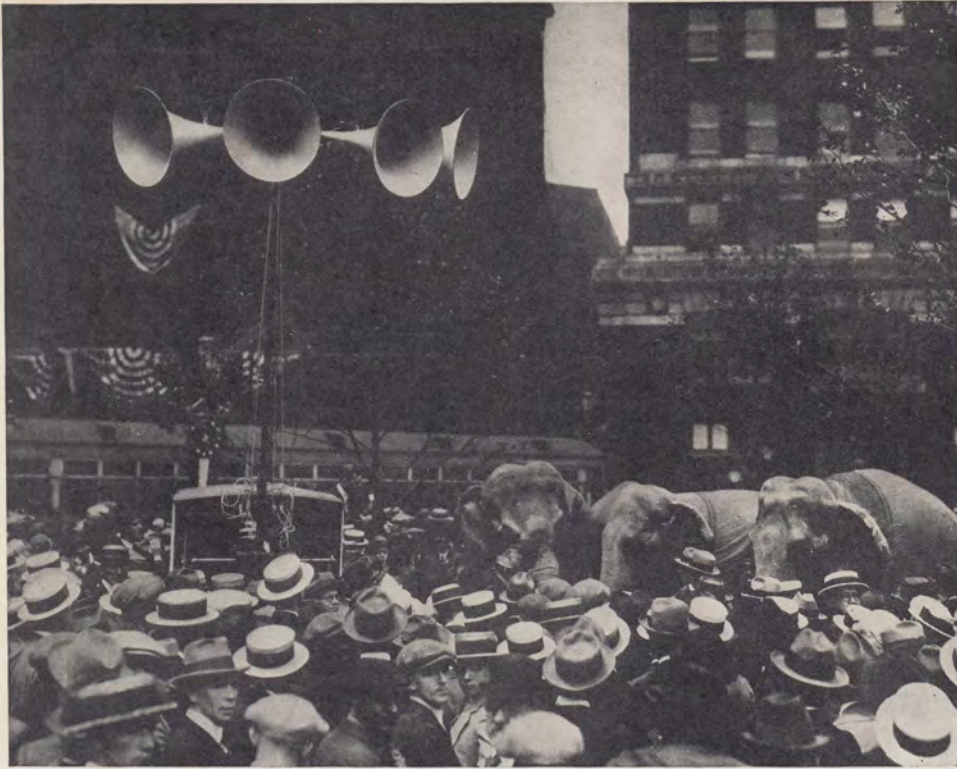
The peach tree has many enemies and the most careful and scientific methods are employed by the up-to-date peach growers in protecting the crop and bringing it to maturity.

The peach blossom is a lovely shade of pink and in the spring time, when these orchards are a mass of bloom, a ride through them is like a glimpse of fairyland. During the cultivation period it is interesting to watch the tractors crawling through the long aisles between the trees and spraying them with chemicals to protect them from

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Now Let the Eagle Scream!

The Soapbox Is Supplanted by Fast Motor Trucks, from Which Political Speakers Will Be Heard by Thousands



laughed with another, as enthusiasm ebbed and flowed just as it did in his presence.

The Public Address System is well adapted to the uses of politics, especially in its mobile form. It is completely self-contained, and apparently just a fast-motor truck. In reality it is a means whereby a speaker may address a hundred thousand people, depending on weather and acoustic conditions, so that everyone in the audience will hear clearly and distinctly every word which the speaker utters.

In less than fifteen minutes the motor truck is transformed and becomes at once a rostrum and a system for carrying the human voice far beyond its natural range without sacrifice of quality.

The equipment comprises a vacuum tube amplifier housed in the body of the truck, and large projectors mount-

(Continued on page 40)

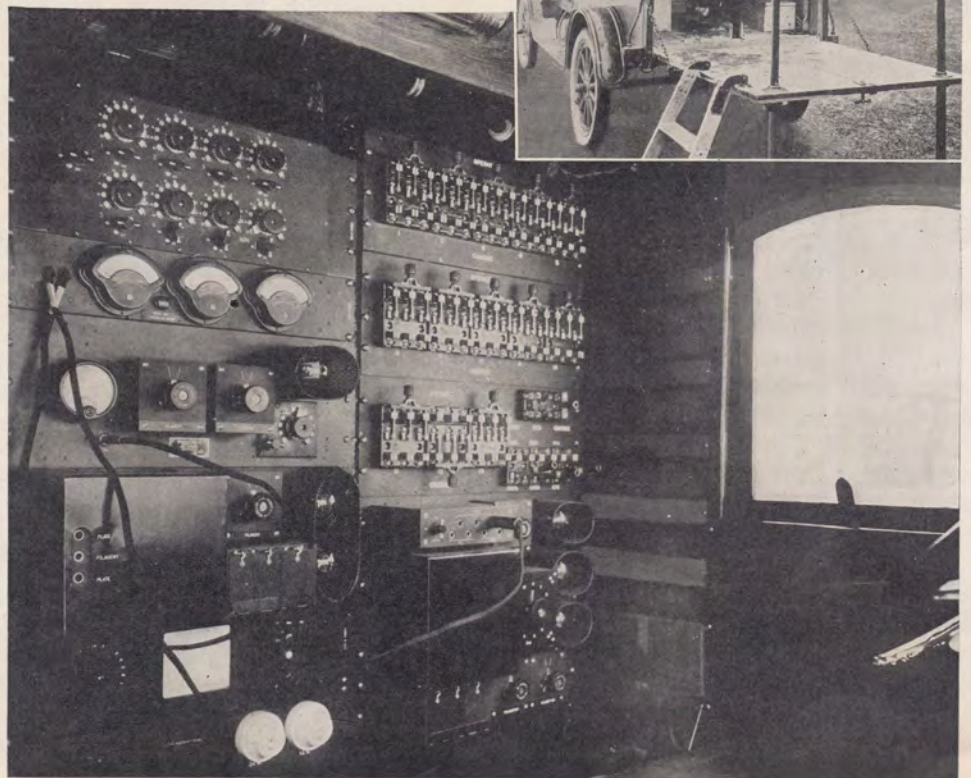
The movable Public Address System is used by a political speaker. Note the G. O. P. elephants.

VOICES of political spellbinders are being raised in the presidential campaign of 1924. The quadrennial return of oratory has come with the usual pointing with pride, viewing with alarm, and saving of the nation.

But nothing is the same as it was four years ago. Voices and personalities are now being projected to audiences so great that in former days they could not be reached by a speaker, even with his voice strained to the utmost; the Public Address System—striking by-product of the telephone art—has come to the aid of the party. And to the aid of the country.

This assistance of science does not detract from the picturesque quality of the campaign; instead it adds to the interest and atmosphere. One newspaper writer described the sound projectors used at the Democratic National Convention in New York as a "cluster of gray morning glories." Even when the speaker was not present—his words being picked up by radio and amplified by the public address system for the benefit of crowds far away from the rostrum—personality carried with striking effect. Unseen crowds warmed to one speaker, cried with another,

The mobile Public Address System all set and ready for the orator. The speaker's words are caught by the microphone, the circular instrument in front, and passed on to the vacuum tube amplifiers, and thrown out through the broadcasting horns, mounted on the mast extending above the truck. The picture below shows some of the apparatus inside.



Stock Sales Still Going Strong



DEPARTMENT LEADERS IN NUMBER OF SALES MADE DURING FIRST SIX MONTHS OF 1924
 Left to right: John H. Schrodt, manager, Thibodaux, La., commercial department, 42 sales; Kendall Weisiger, educational director, Atlanta, Ga., engineering department 12 sales; G. C. Israel, clerk, New Orleans, La., plant department, 23 sales; Hattie Davis, chief operator, Asheville, N. C., traffic department, 16 sales; J. H. Carter, division auditor of receipts, New Orleans, La., accounting department, 6 sales.

THOUGH a number of our States have already sold their quota of stock for the entire year, still these and all the other States are holding well up to their fine average of sales.

During June South Carolina joined the ranks of States having sold the quota allotted for the year.

Although there are still some of the States that have not yet sold their year's quota of stock, still the Southern Group as a whole has passed the mark and every one now is striving to sell double the quota set, by the end of the year.

July is generally thought of as a rather dull business month, yet during the first seven days of the month we sold more than half the total number of shares sold during the entire month of June and June was a good month, too.

On June 20th the Bell Telephone Securities Company was notified that we had sold the quota of 17,000 shares which had been set for us to sell during the year 1924 and at once we received a telegram in reply addressed to the whole organization congratulating us all for the splendid work done.

This year the campaign for the re-distribution of A. T. & T. stock is in effect in ten groups of the Bell System, and while our results have been good, others have been doing a fine job, too.

Through May, the Southern Group stands third in number of sales and fourth in number of shares sold.

We've got just five months left to climb to first place, and of course we are unanimous in our agreement that nothing short of that will satisfy.

Holder of Telephone Stock Number 300,000

The registered shareholders of the American Telephone and Telegraph Company have now passed the 300,000 mark which is a gain of more than 19,000 over the number on December 31 last. The total gain for 1923 was 32,224.

No other American corporation has so large a number of stockholders. The number has grown from 7,500 in 1900 to 40,400 in 1910, to 139,400 in 1920, and now it is more than 300,000. In the short space of three years the number has more than doubled. This stock is all held in America, with the exception of about 1 per cent, so that in every sense of the word it is truly an American corporation.

PUTTING GEORGIA PEACHES ON THE MARKET

(Continued from page 5)

insect pests. But it is in the harvest time that perhaps the finest sights are to be seen in this favored land, for then an army of workers are gathering, packing and shipping this wonderful, luscious fruit, which is familiar to the epicures of all the Northern and Eastern markets.

A. T. & T. Co. Stock Sales to the Public June Results

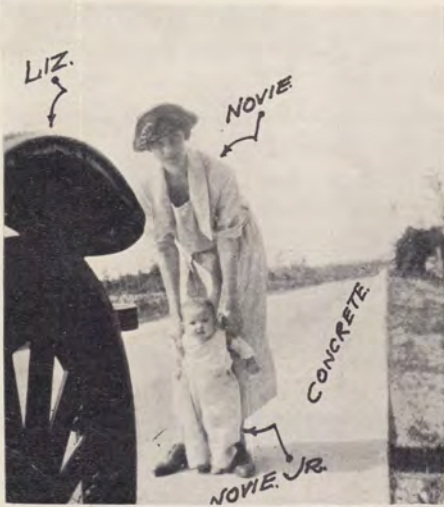
	June		January		Cumulative Quota Shares	Per Cent Attained
	Sales	Shares	Sales	Shares		
Alabama						
Commercial	38	289	150	909	677	134
Traffic	6	27	64	253	225	112
Plant	5	32	65	541	198	273
Accounting	1	1	2	3	25	12
Total	50	349	281	1706	1125	152
Florida						
Commercial	14	86	108	811	457	177
Traffic	3	13	19	87	115	76
Plant	3	7	32	222	127	175
Accounting .....	..	..	9	69	25	276
Total	20	106	168	1189	724	164
Georgia						
Commercial	33	143	450	2310	720	321
Traffic	4	11	65	279	336	83
Plant	5	13	98	500	240	208
Accounting	6	13	25	115	78	148
Engineering	9	110	104	611	126	485
Total	57	290	742	3815	1500	254
North Carolina						
Commercial	21	174	132	1351	407	332
Traffic	3	7	36	278	186	149
Plant	17	56	30	177	132	134
Accounting .....	..	..	3	18	25	72
Total	41	237	201	1824	750	243
South Carolina						
Commercial	15	316	93	830	258	322
Traffic	9	19	51	95	114	83
Plant	5	13	18	70	78	90
Total	29	348	162	995	450	221
Kentucky						
Commercial	48	293	265	2008	737	272
Traffic	11	49	75	505	228	222
Plant	5	11	94	336	210	160
Accounting	1	1	15	44	25	176
Total	65	354	449	2893	1200	241
Louisiana						
Commercial	34	168	263	1608	688	234
Traffic	26	42	217	546	316	173
Plant	14	59	121	597	221	270
Accounting	3	8	35	56	25	224
Total	77	277	636	2807	1250	224
Tennessee						
Commercial	39	277	281	1467	881	167
Traffic	12	32	133	334	348	96
Plant	5	16	107	596	246	242
Accounting .....	..	..	8	13	25	52
Total	56	325	529	2410	1500	161
Group						
Commercial	242	1746	1748	11389	4820	236
Traffic	74	200	656	2299	1867	123
Plant	59	207	565	3039	1459	208
Accounting	11	23	95	301	228	132
Engineering	9	110	104	611	126	485
Total	395	2286	3168	17639	8500	208

Adjustment of departmental credit made in North Carolina.

Headed Home

First Experience of the Bonner Family Touring

By J. S. BONNER, Engineer, Nashville, Tenn.



Some snapshots taken on the trip. At top center is a view of the French Broad river; on right the bridge across the Pamlico. At left is the town of Hot Springs, N. C., and below, Andrews Geysers.

wife, and none of the family having lamped the infant, you can easily imagine the kick I got out of the start (and "starter"). But, "Thanks be," she started and never missed a lick (the exception will come later) on the whole trip.

There are just as many different reasons why the road from Nashville to Knoxville direct is worse than the road via Chattanooga as there are people to ask. So we flipped a Buffalo, heads to Knoxville via Chattanooga and tails to Knoxville direct. The Redskin bit the dust so we set sail for Knoxville direct.

Lebanon, the first night's objective, was made on schedule, after a valiant but losing fight at each of the five toll gates, two bits each.

The next stop was Knoxville, but a Ford can go only so fast and my family can absorb only so many bumps, so we had to stop.

Rockwood was the lucky town, and the fun begins.

I can't recall the name of the hotel but it's right by the Southern Railway. They said, I believe, it is near a "block station"; anyway trains snorted and whistled until about 1 A. M. But first let me tell you, the best thing in that town was this same hotel keeper or manager—Why? He told me to take Mutt in my room with me. There's where he made a mistake. Now backing up to 1 A. M. From then on things quieted down, including the baby, and we all dropped off into a fitful slumber. About 2 G. M. an enormous locomotive (a small one couldn't have made that much noise) cut loose with all her whistles. The baby yelled, the wife screamed, the dog near tore the place down, and I woke up in the middle of the room with a water pitcher in my hand. Honest I thought Gabriel had tooted his horn. I got out early the next morning, paid our bill and left before revenge could be had by the other inhabitants of the hostelry.

Knoxville was made without mishap the day after the disturbance Saturday at noon. Saw Kohlhase, Killibrew, and the rest of the gang, including Mac Cutts. When Mac found I was going home he wanted to go too on the back seat with "Mutt," but "Mutt" objected so Mac wouldn't go.

We left Knoxville at 1:30 P. M. Didn't have time to look at the watch or hubdometer either while passing Dandridge and New Port.

Not a great distance from New Port we saw a sign reading "N. C. Line."

THURSDAY afternoon, June 5th at 4:30 P. M., mounted in my trusty "Elizabeth of Tin," with Novie and Novie, Jr., by my side, "Mutt" (the German police purp) holding down the back seat, and the running board arrayed with hand bags and suit cases, the Bonner family pushed off for North Carolina.

Not having been home in about four years, only my mother having seen the



Maybe that didn't make yours truly feel good. Immediately a ditty that I hadn't thought of for years came back to me.

"I'm a Tar Heel born, I'm a Tar Heel bred
And when I die there'll be a Tar Heel dead."

Others who hail from the Old North State can appreciate my feelings.

At 7:30 P. M. we drove into the prettiest little town I have ever seen, Hot Springs, North Carolina. You see it as you come around the mountains. It is in a valley with mountains all around it and the French Broad River flowing through it. We were hot, tired, hungry, and dirty and when we suddenly saw that little town nestled in the hills we were almost ready to give up the rest of the trip and stay there, for truly it signified "Peace, perfect peace."

With a good supper, a good night's rest, a good breakfast, and 319 miles of the journey gone, without foot brakes, hand brakes, or reverse, and no way to get them repaired, we started out Sunday morning for Newton, N. C., at 7:55 A. M.

We stopped for lunch in Asheville at 11:30 A. M. Mr. Pfaff joined us at the Langren Hotel and our brief visit was very pleasant indeed.

We left Asheville at 1:20 P. M., passed through Marion, Morganton, and Hickory with only brief stops for water and gas, and arrived at Newton at 7 P. M.

As mentioned above brakes were not a part of our equipment. At Hickory we had to cross the Southern R. R. tracks. The train was there and having the right of way it behooved us to stop. To do this we ran into the curb.

At Newton we found a mechanic who was willing to work, so got our brakes relined before leaving Monday morning.



The Bonner home at Washington, N. C., at top, was the objective of the trip. At right is the H. T. river crossing at Marshall, N. C. Below, center, is Holston River ferry, and at right, a chert road in the mountains.

With brief stops at Statesville, Salisbury and Lexington we reached Greensboro at 5 P. M., had quite a nice visit with John Cutts, Mac's brother, and went on our way rejoicing, having decided to spend the night at Durham.

We passed this "City of Opportunity" at about 7:45 and upon looking around to ask if all was well I found the whole family, including "Mutt," asleep. I wasn't tired at all so on we rolled, and passing through Cary the Madam asked if this were Durham. Pardon me Durham, but I said yes and pulled up at Yarborough Hotel in Raleigh at 10:20 P. M. The Madam registered pleasant surprise. I went around to see Johnny Roberts, the wire chief, the next morning, also Mr. Cauthen, the manager. Had a very pleasant visit with both and hit the trail for home, all happy.

Just as we were complimenting "Liz" on her past performance, she got a pain in the middle. Her "palm leaf" fan quit working, the oil got low and she had a bad attack of "bearing-burnt out-itis." If you don't know what that is you can't sympathize with me. I reckon I was in such a hurry that I forgot to give "Liz" any oil. It



cost me two hours time plus, so I didn't get home until six o'clock Tuesday afternoon.

The folks had been looking for us since Monday afternoon and there was a great scuffle going on as the greetings took place.

Needless to say, our stay at home was an endless pleasure, and our departure came all too soon. But as the little dog said when they cut his tail off, "All good things must come to an end," so we realized this and hied us back to Tennessee and work again.

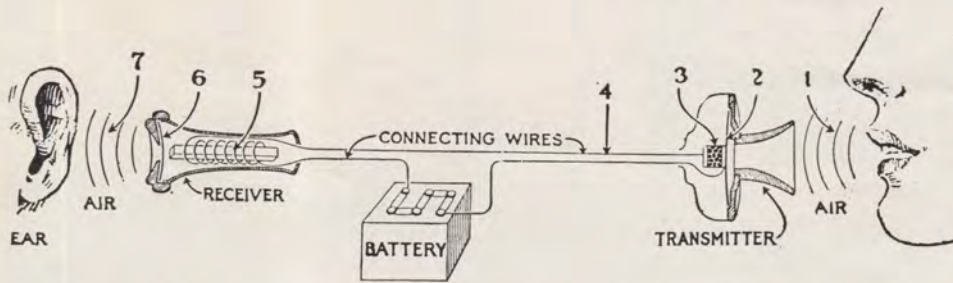
Our return trip was uneventful with the exception of the trip from Chattanooga to Nashville over the mountain. Going up hill that road is awful! Be-

(Continued on page 13)

A Modern Fairy Story

An Explanation of What to Many Is a Mystery— How Speech Is Transmitted Over the Wire

By JOHN MILLS



This picture shows the simplest telephone circuit. Succeeding pictures will show just what happens at the points 1, 2, 3, and so on.

WHAT is the telephone? A marvelous device—it catches a spoken word and turns it like magic into something we cannot see or hear which speeds along the wires to another telephone and there the magic is undone and the hidden word comes forth. In the old fairy stories there was always an enchantment and then later a charm which broke the spell and freed a living person. Our modern fairy story is the story of electricity. The transmitter in your telephone set casts a spell upon each word it catches, sending it noiselessly away along the telephone wires. The receiver breaks the spell and a living word issues, bearing its message from a far distant speaker.

The Spoken Word

What is the spoken word? It is a motion of the tiny particles or molecules which compose the air about us. But it is a particular kind of a motion



Fig. 1. If you could see the molecules of air at 1 in the first picture, this is the way they would appear at one instant. See point 1 in first picture.

which our ears can receive and our brains appreciate. It is started by the voice of the person who is speaking. His breath and tongue and lip positions control it. As he changes these he changes the kind of motion which he gives to the air molecules. And so they produce a different motion of the delicate drum of the ear, of the bones

and fibres within, and hence a different sound for the listener. (See Figure 1.)

The motion which one gives to the molecules of air when he speaks is not like that of the wind where a multitude of air molecules sweeps along. In a spoken word, or in any musical sound, the molecules dance back and

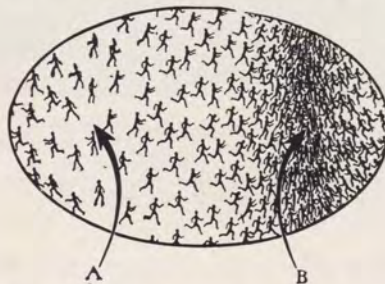


Fig. 1-A. This is an enlargement of part of Fig. 1. Think of the molecules of air as if they were tiny beings as represented in the drawing. They are rushing away from A and towards B.

forth. (See Figures 1 and 1-A.) First they advance, pushing against the eardrum, and then they retire and the membrane of the ear flies back. Over and over again this happens, hundreds and even thousands of times a second. The higher pitched the voice of the

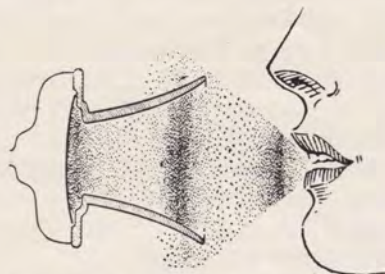


Fig. 2-A. When the molecules of air which are set in motion by the voice of the speaker rush against the diaphragm of the transmitter shown in the first picture, they bend it in.

speaker, the more rapid is the dance. And yet it is a dainty dance, for the weight of a snip of human hair only about one-thousandth of an inch in

length would press as heavily upon the sensitive eardrum.

The Telephone Transmitter

What is the transmitter? It is an electrical ear which receives the shocks of the dancing molecules just as does the membrane of the human ear. Within the human ear these motions are taken up by the tiny bones and nerves and sent on to the brain. We do not know how, for we know less about transmission along nerves than we know about transmission over wires. The transmitter has its eardrum, the diaphragm, indicated by numeral 2 in the first picture, which is set vibrating by the dance of the air molecules (see Figure 2-A); and back of this is a small chamber partly filled with grains of carbon—grains of roasted coal, in fact. Through this carbon chamber and the connecting wires a battery sends an electric current. It

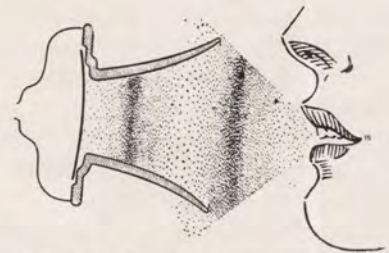


Fig. 2-B. But when the molecules rush away from the diaphragm, it springs back as shown in this picture.

is indicated by the numeral 3 in the first picture.

From grain to grain of carbon and through the wires and battery there is a steady procession of billions of tiny specks of electricity—electrons they are called. Too small ever to be seen, the existence of these electrons has been proved by careful scientific experiment. They are a multitude of little gnomes which reside in the wires and carbon grains; and all the marvels of electricity are due to their activities. The battery causes the procession and under its steady urge billions of electrons march each second around the circuit formed by the wires and the close-packed carbon grains (see Figure 4).

The telephone transmitter is an electric ear and when its eardrum is moved back and forth ever so slightly by the



Fig. 3-A. Carbon grains in a transmitter magnified about fifty times each way. When the diaphragm is bent in, the grains are closely packed together and many electrons can pass through.

dancing molecules of air, the carbon grains behind it are first packed more closely and then less closely (see Figures 3-A and 3-B). Over and over this happens, as often as the transmitter diaphragm vibrates back and forth. Imagine a vast army of men crossing a lake on floating blocks of ice while the wind freshens and dies alternately. When the blocks are blown close together, crossing is easier, and more men get over than when the irregularly spaced blocks are loosely packed and only occasionally are close enough together. This, on an enormous scale, is a picture of what happens when electrons cross from grain to grain in the carbon of the transmitter. Men can move only slowly, but the tiny electrons move with an enormous speed of thousands of miles a second.

If you could stand beside the road leading from the shore of this lake and count the men as they marched past, you would find that there would come a group and then some stragglers; and then another group, and so on. It is

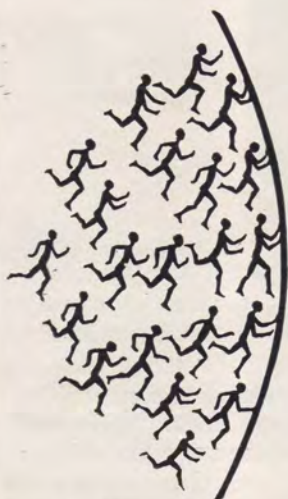


Fig. 6-A. When the receiver diaphragm of Fig 5 bows in, the molecules of air rush after it.

the same with the procession of electrons which move along the wire from one of the plates between which lie the carbon grains. When there are many we say the electric current is larger than when there are few. So the current changes, increasing and decreasing alternately, as the diaphragm compresses the carbon more or less.

The Telephone Receiver

What is the receiver? It is an electric mouth which can utter human sounds. There is a thin diaphragm of

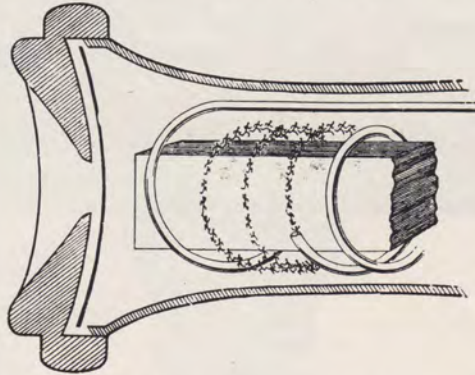


Fig. 5. All along the copper wire there are marching electrons. In the receiver the wire coils around a magnet. When there are many electrons marching through this coil the magnet pulls harder on the diaphragm than it does when there are fewer marching electrons.

iron, indicated in the first picture by the numeral 6, and a magnet-shaped coil of wire wound on the magnet indicated by the numeral 5. The magnet attracts the iron diaphragm, bowing it slightly towards itself. The stronger the magnet pulls, the more the iron bows toward it, but if the pull decreases the iron flies back, like the bottom of a pan which you are bending with your fingers.



Fig. 4. If you could look inside the copper wire in a telephone circuit you would expect to see tiny electrons rushing along between the atoms of copper. They are too small to be seen and the artist has pictured them with human figures.

When the electrons follow through the turns of wire which form the coils about the magnet they increase its pull upon the iron diaphragm (see Figure 5). When a great crowd of electrons is marching, the magnet pulls harder, but when only stragglers come, the bent diaphragm springs back.

The motion of the diaphragm in the receiver is just the same as that of the diaphragm in the distant transmitter. And the air molecules near the receiver



Fig. 3-B. But when the diaphragm springs back the grains are loosely packed and fewer electrons can pass from grain to grain through the chamber.

are sent into the same kind of motion as those which danced against the transmitter diaphragm. That is why the receiver speaks, undoing the magic which turned a spoken word into an irregular procession of electrons. (See Figures 6-A and 6-B.)

"I DON'T"

*My parents told me not to smoke,
I don't.
Or listen to a naughty joke,
I don't.
They made it clear I must not wink
At pretty girls, or even think
About intoxicating drink—
I don't.
To dance or flirt is very wrong,
I don't.
Wild youths chase women, wine and
song,
I don't.
I kiss no girls, not even one,
I do not know how it is done.
You wouldn't think I'd have much
fun—
I don't.*



Fig. 6-B. When the diaphragm bows out, the molecules are pushed away. So these molecules rush back and forth just as do those shown in Figs. 2-A and 2-B.

Birmingham Folks Enjoy Big Field Day

Field Sports and Beauty Contests Keep the Crowd Interested and Much Amused

By HARRY SINGLER



Some interesting sights at the Birmingham Field Day. In center is Vivian Link, queen of festivities. Above are some of the bathing beauties, and below the boys' somersault race.

At left, G. Sudduth clearing the pole at 4 ft. 6 in. to win the ladies' running high jump. At right, C. H. Pool wins high jump for men at 5 ft. 2 in.

ON June 19th the telephone employes of Birmingham and Bessemer held their second annual picnic at West Lake Park.

The day was featured by many close and exciting athletic contests, a prize waltz, bathing beauty contests, barbecue dinner and supper served to all, and last but not least the crowning of Vivian Link as queen of festivities.

The bathing beauty contests brought forth so many pretty girls that the judges had a very difficult task before them in choosing the winner.

Great credit and praise should be given to the members of the various committees for the efficient manner in which they handled the many difficult details connected with the day's outing.

Special street car service was supplied free to all who cared to avail themselves of the opportunity. Automobiles met the street cars at Bessemer and carried the picnickers on out to West Lake Park. These automobiles were furnished by the Motor Livery Company and the Saunders Drive It Yourself Company of Birmingham, as a compliment to the telephone family.



There were lots of thrills at the Birmingham Field Day, in the athletic events and water carnival. In center is Aline Williamson, winner of the bathing beauty contest. At center below are some of the judges. Left to right: W. D. Mercer, J. K. Gray, Col. W. E. Bare, J. E. Wilcox, J. V. Thompson, T. E. Harris, I. E. Wilcox.

H. L. Maddox, chairman of the division plant executive committee of the Employes Association, was in charge, and had as his assistants the following ladies and gentlemen: Col. Walter E. Bare, J. H. Haffner, J. T. Norman, G. L. Scherer, Mrs. Pearl Fountain, W. C. Thornburg, Roscoe Hail, Elsie Metzler, Ethel Gudgen, T. O. Brewer, C. C. Johnson, Mrs. E. L. Holland, Leslie Metz and Miss Candler.

After a barbecue supper in the cool of the evening, the picnickers adjourned to the dance hall where dancing was enjoyed by all until ten o'clock.

At this time the picnic was brought to a close and we all turned our faces homeward, tired but happy, each and everyone having thoroughly enjoyed the day.

The pictures of the athletic and other contests, etc., were taken by W. L. Allison of the Engineering Department.

The prizes awarded for each contest were donated by the merchants of Birmingham, Ensley and Bessemer.

Below is a complete list of the winners of each contest:

Hand Line Throwing Contest—1st, Sam Pass; 2nd, A. G. Peake; Running High Jump (men)—1st, H. C. Bickford; 2nd, C. H. Poole; Standing Broad Jump (men)—C. P. Poole; Running Broad Jump (men)—J. H. DeLaney; Hundred Yard Race (boys 11 to 14

years)—Frank Young; Ten Yard Somersault Race (boys 8 to 11 years)—Forest Higgins; Twenty-five Yard Hop and Skip Race (girls 8 to 11 years)—Jonnie Shaw; Best Rifle Shot (ladies and men)—1st, C. E. Ausburn, H. G. Spurlock and Mrs. H. B. Holmes; Three Legged Race (girls 11 to 14 years)—Misses Shaw and Sudduth; Hundred Yard Race (girls 11 to 14 years)—Miss Shaw; Three Legged Race (boys 11 to 14 years)—Forrest Higgins and Howard Street; Box Ball Contest (free for all)—W. M. Carter and Miss G. Williams; Running High Jump (ladies)—Miss G. Sudduth; Standing Broad Jump (ladies)—Miss E. Metzler; Running Broad Jump (ladies)—Miss E. Metzler; Three Legged Race (ladies)—Mrs. Roper and Mrs. DeLaney; Fancy Diving Contest (men)—J. H. DeLaney; Long Distance Diving Under Water (men)—C. H. Poole; Long Distance Diving Under Water (ladies)—Mrs. Holmes, Mrs. Carter; Fifty Yard Swimming Race (ladies)—Mrs. Holmes; Fancy Diving Contest (ladies)—Miss Rollins; Sack Race (free for all ladies)—Miss Metzler, Miss Ingram; Sack Race (free for all men)—J. C. West, J. Gaines; Bathing Beauty Contest (Bessemer operators only)—Eva Ingram; Bathing Beauty Contest (Ensley operators only)—Grace Gudgen; Fifty Yard Swimming Race (men)—J. H. DeLaney; Baseball

Throwing Contest (men)—C. H. Poole; Baseball Throwing Contest (ladies)—Miss L. Carlisle; Twenty-five Yard Hopping and Skipping Race (men and ladies)—Miss E. Schoettlen and J. C. West; Seventy-five Yard Race (fat men—weight 185 lbs. and up)—John Street; Seventy-five Yard Race (fat men—170 to 185 lbs.)—Geo. Scherer; Fifty Yard Race (ladies—all weights)—Donald Andrews; Hundred Yard Race (men—all under 170 lbs.)—J. C. West and C. H. Poole; Bathing Beauty Contest—Aline McWilliams; Potato Race (ladies)—Miss Schoettlen; Pie Eating Contest—H. B. Jones; Prize Waltz—Miss K. Donkle and Jack Norman.

HEADED HOME

(Continued from page 9)

lieve me I'm a good roads booster and anyone who has ever been over those roads in North Carolina must be also. Their detours are maintained in better condition than the average highway in most other States.

It is 477.3 miles from the N. C. State line to Washington, North Carolina, and about 375 miles of that distance on macadam or concrete roads. That makes driving a pleasure.

We all got back home safe and without mishap; our total mileage was 1,742, and the baby got fat on the trip. I can safely say it was the most pleasant vacation I've ever spent and the most interesting.

Are we going again? You bet, and next year too, if all is well.

Why Gamble Your Future?

A Paper Read Before the Revenue Accounting Conference Held in May

By C. F. RODDEY, Auditor of Receipts, Atlanta, Ga.

THE use of capital in the form of money pretty generally follows two well defined channels: investment and speculation. The distinction is drawn by the degree of risk involved and the expected rate of return.

The conservative person seeks safety as the first consideration and is satisfied with a moderate but certain income. This is investment. Another type accepts a greater or less degree of risk—frequently not realizing how great the risk is—in the hope of securing a proportionately greater return. This is speculation.

Employment, affected as it is by the varying policies of employers and the different degrees of stability in different industries, also partakes of the character of either investment or speculation. The capital of the man who works for wages or salary consists of his time, which once spent cannot be recovered. In the disposition of this "capital" it is therefore of the utmost importance to him that he discriminate carefully between investment and speculation—that he does not fritter it away in shifting from one employer to another or from one industry to another unnecessarily, thus sacrificing the cumulative value of specialized knowledge and other less tangible, but possibly equally valuable, advantages accruing from continuous service in the same organization, especially in ours.

Service in our Company is a gilt edge "investment" that will yield a steady and increasing return for intelligent and conscientious effort. My observation over a period of twenty-odd years convinces me that there is no organization in which a man is more sure to receive recognition in proportion to his effort and ability. In fact, I have seen more men advanced beyond their capacity, on the mere hope that they would make good, than I have seen held below that limit. On the other hand, like the securities of the Bell System companies, our service has little to offer the "speculator" who expects much for little.

There may be some whose qualifications or temperament better fit them for other work. We should not hesitate to advise these to make a change, but once a man is fitted to his work we



Speculation

can sincerely advise him to stick to it with the assurance that in due course he will receive such advancement as he has earned and the steady expansion of the organization offers, and that in the meantime he will have fair and considerate treatment and a rate of pay commensurate with the value of his services.

Looking Forward

There are industries and concerns which from time to time appear to offer more pay or easier work than ours but usually there are offsetting factors of one kind or another. For the man who is building for the future such employment may turn out to be a rank speculation. To this man, where he is going to stand ten years hence is much more important than when he is going to get his next increase in salary.

This matter of the development and training of our people is one which



Security

should have the most careful study by all who occupy supervisory positions. The unusual man who thinks, and on his own initiative learns more than he has to is so outstanding in any group that his advancement is automatic, depending only on opportunity. This class may be termed the "self-starters." However, our chief concern is with average people who have to be "cranked." In this large class there are many who are potentially as valuable as the others and it is up to their supervisors to appraise them, study their aptitudes and stimulate them by guidance and counsel to make the best of their qualifications—and each one presents a separate problem. With all the copy-book maxims, it is too much to expect of the average immature young man that he will have the wisdom as well as the energy to engineer his own efforts to the best advantage. It is this deficiency that we must attempt to supply.

The great majority of the men who are running the great corporations of the country are not geniuses but men of normal capacity who have stuck to their jobs, made the most of their time and been ready for the next opportunity when it came along. This no doubt applies generally to the directing heads of our own Company. This thought should be an inspiration to the great majority of us whose only equipment is an ordinary brain and a willingness to use it.

I want to impress on you gentlemen that this job of training and directing the development of your people, in the broader sense in which I am using these terms, is one that cannot be delegated and well deserves the best you can give it. While it is of the greatest importance that you imbue your subordinate supervisors, who are in closer and more continuous contact with their subordinates, with the proper interest and spirit with regard to this matter, the inspiration and impetus must come from you and you must know your people individually, and their respective temperaments, qualifications and characteristics. You have no greater responsibility, nor opportunity to render a more valuable service to the Company as well as to your co-workers.

I think I should say here that it is a distinct reflection on the management

of any unit of our organization if he cannot satisfactorily fill from his force any vacancy that occurs; and with a force of average size and under reasonably normal conditions he should be able at any time to furnish a man to the general office or for special assignment without seriously weakening his organization. An office without a fair "margin of safety" is in a decidedly unsatisfactory state, no matter how good its current performance may be.

Wasted Chances

The first, and possibly the chief, difficulty to be overcome in the development of young men is their own inertia, or rather their failure to realize the necessity to concentrate their energies on their jobs. Many are inclined to look on work as a necessary evil which interferes unwarrantably with their more congenial activities, or at least to give it no more time nor thought than is absolutely necessary. The frequent consequence is that five or ten years is virtually wasted before the man wakes up to the fact that he is not getting anywhere and that promotions that he might have had are going to others who have applied themselves to better purpose.

We should make every effort by friendly and tactful counsel to make such men realize that they are spending their capital rather than investing it. Because of natural limitations a man may not make good in any marked degree in the race for business success despite his best effort but if he doesn't exert and apply himself it is perfectly certain that he will not. On the other hand many a man of only ordinary ability, by industry and determination, goes much farther than his more brilliant but less industrious fellow-worker. In preaching this doctrine we can conscientiously claim to have the employe's own interest at heart, for the Company can get rid of him but he cannot dodge the results of his own failure to make the best of his opportunities. So let us make our young men face the issue squarely by hammering on this idea; while effort may not bring to all a satisfying measure of success, lack of effort must inevitably result in failure—and since they have got to work why not use their time in the manner that will yield the greatest reward and satisfaction and avoid the vain regrets of later years?

However, there is another and equally important phase of this question. That is our obligation to furnish the reward when it has been earned. No position which offers a promotion



Ambrose Tucker

Tucker Gets Ahead

By H. G. TURNER
District Traffic Manager
Chattanooga, Tenn.

A fine example of determination and thrift is shown in the record of Ambrose Tucker, who is now, at the age of twenty-four, a central office repairman at Chattanooga.

In the space of his six years of service, he has been constantly gaining in knowledge and efficiency, and also by economical management has made a good start toward accumulating a competence. During this time he has cared for his mother, bought two lots, built a comfortable cottage, subscribed for ten shares of American Telephone stock and completed the payments for five, owns a Ford, which he needs to go to and from his work, and has some cash in the bank.

Tucker found it necessary early in life to assume responsibility. His mother by hard work and sacrifice had

to any deserving employe already in the organization should be filled by a new one provided the old employe is competent to fill it satisfactorily. It is recognized that this policy causes more frequent changes and temporary inconvenience but I believe that we will profit in the long run by the creation of a better spirit, a better satisfied force and consequently more efficient work. Besides, it is the right thing to do.

When you have an employe in one of the higher grades who deserves promotion which you cannot give within a reasonable time and who is willing to transfer you should report him as available for transfer from your organization.

made it possible for him to complete grammar school, but as his father was a disabled Spanish-American war veteran, young Tucker realized that his help was needed and went to work. At the age of eighteen Tucker was in quest of greater opportunities. On July 16, 1918, he left a mill job at \$14.00 per week and entered the service of the company at \$11.00 per week.

To Tucker his new field of work was a big buzzing mass of confusion. The only part of the equipment he knew was the subscriber's set, and for several months he did not even get a chance to see the operating room.

His first assignment was cable splicer's helper and within a few weeks he began showing aptitude and exactness in his work. Within six months this eager youth could pour the hot lead and wipe a respectable joint. Within seven months from the day he entered the service he was splicing cable.

Next Tucker was assigned to the installation department and the same characteristics of exactness, thoroughness and inquisitiveness were noticeable. To the foreman, Tucker became a regular questioner, for he was constantly asking questions and theorizing. It soon developed that Tucker was spending his evenings and spare time studying an electrical correspondence course and reading constructive books from the company library.

He was soon transferred to trouble clearing, and then to central office work and it was there that he got his first experience around an operating room. The flash of line signals, the cords, jacks and keys, and the hundreds of jumper wires on the I. D. F. and main frames, the carbons, heat coils, fuse panels and storage batteries, and the hum of ringing and charging machines, all seemed to charge and set in action a fiery and indomitable zeal for knowledge.

During all spare moments and on his own time Tucker would devote himself to assisting anyone that had a case of central office trouble to clear and would invariably ask to be given the first chance. Today, Tucker has developed to be one of the best all-around telephone men in the local organization, and the record he has already made gives promise of continuing and larger success in the years to come.

INDUSTRIOUS

Applicant—"Are you hiring any men?"

Employer—"Yes, but there is not much work now."

Applicant—"That's all right. I don't want much."

Another Group of Our Operators



(1) Vick Grant, Alexandria, La. (2) Mrs. Kathleen Strickland, Birmingham, Ala. (3) Mary Sully, Chattanooga, Tenn. (4) B. Koone, Lake Charles, La. (5) Mary Wilkins, Fulton, Ky. (6) Mrs. Jo Rogers, Shreveport, La. (7) Grace Boley, Birmingham, Ala. (8) Mrs. Mary McBride, Birmingham Ala. (9) Left to right: Mrs. Mae Walton, Lucile Jordon, Shreveport, La. (10) Jennie Fowler, Goldsboro, N. C. (11) Left to right: Viola Cannon, Jessie Maxwell, Ora Cowan, Grace Springer, Chattanooga, Tenn. (12) Left to right: Ollie Schaeffer, Mallie M. Keller, Henderson, Ky. (13) Mary Eddings, Birmingham, Ala. (14) P. Chofn, Lake Charles, La. (15) M. Carruthers, Gainesville, Fla. (16) Mrs. Martha Johnson, Gainesville, Fla. (17) Beatrice Criteer, Henderson, Ky. (18) Rebecca Williamson, Shreveport, La. (19) Left to right, first row: E. Walters, L. Boudreaux, M. Golden. Second row: M. Landry, A. Schmidt, H. Sallasi. Bottom row: E. Ellerbusch, E. Archer, A. Wallace, New Orleans, La. (20) L. Hargis, Nashville, Tenn. (21) Mrs. Florine Markham, St. Augustine, Fla. (22) Emily Robecheaux, Alexandria, La. (23) Bessie Beavers, Sheffield, Ala. (24) A. LaGrange, Lake Charles, La. (25) Grace Scheffel, New Orleans, La. (26) Malinda Huffstutler, Birmingham, Ala. (27) Fannie Harmon, Nashville, Tenn. (28) Maurine Dorsey, Shreveport La.

Who Have Fine Attendance Records



(1) Hazel Cailleteau, Alexandria, La. (2) D. Lansing, New Orleans, La. (3) Doil Pardue, Shreveport, La. (4) R. Kaller, New Orleans, La. (5) Mrs. Mae Brandon, Woodlawn, Ala. (6) Josephine Ward, Shreveport, La. (7) Mattie B. King, Ruston, La. (8) A. Foster, Lake Charles, La. (9) Etta Liner, Ruston, La. (10) Ladys Massey, Birmingham, Ala. (11) M. Holloway, Ruston, La. (12) Lela O'Neal, Alexandria, La. (13) Kate Givens, Bessemer, Ala. (14) Olive Leonard, Wilmington, N. C. (15) Anetta Lewis, Nashville, Tenn. (16) Mrs. Alma Coker, Woodlawn, Ala. (17) Mamie McCorkle, Sheffield, Ala. (18) LaFoil Morrison, Birmingham, Ala. (19) First row, left to right: Rosa Estep, Lizzie Herndon, Lizzie Land. Second row, left to right: Mary Meadows, Ida Richards, Jewell Burke. (20) Rosaleen Moore, Madisonville, Ky. (21) Ruth Bogan, Shreveport, La.

DuBois Talks to 35,000 Telephone Workers

Dedication of First Permanent Installation of Public Address System, at Hawthorne



Part of the largest industrial audience in the world. Some of the forty thousand makers of telephones at the Hawthorne works of the Western Electric Company listening to Charles G. DuBois through the first public address system to be installed permanently in an industrial center. On the platform are several employees of more than forty years' service.

THE largest industrial audience in the world—thirty-five thousand men and women telephone workers, all of the Bell System family—heard their boss speak at a single noon-hour assembly on June 4th.

Intimate personal contact between factory head and factory people through the medium of the spoken word has been established once more, after being lost for years because of the sheer size of modern factories. The honor of ushering in a new era of industrial relationships has gone to the Western Electric Company and its Hawthorne Works in Chicago.

The occasion was the dedication of the first Public Address System to be permanently installed in a manufacturing plant. Charles G. DuBois, President of the Western Electric Company, delivered a brief address, using the new system to carry his words to each one of thirty-five thousand listeners. He dedicated the apparatus to "the doing of the job, the tradition of fairness and the spirit of friendliness."

A clear day, an enormous throng, and the presence on the platform of Western Electric veterans of thirty years and more, made the event im-

pressive. Mr. DuBois spoke feelingly of the problems of telephone-making and the way those problems are being met.

"I welcome this opportunity to meet you all face to face," he said. Many of you are old friends; some indeed for more than thirty years. All of you I think of as friends as well as fellow workers. It is a help and an inspiration to me to believe that a real interest in our company brings you here.

"That interest is worthwhile because we are engaged together in a work of great importance to our country. That work is the manufacture of the telephone apparatus and cables needed for the continuous upbuilding of our national telephone system.

"So accustomed has everybody become to the telephone that we forget its far-reaching contribution to the life and prosperity of the entire country. It has completely changed our living habits and our business methods. It has woven the entire country together with a network of fine wires. It has made neighbors of a hundred million people.

"Two-thirds of all the telephones in the world are in the United States.

Why? Not because it was an American invention. Not because America is a prosperous country. No, there is a deeper reason. From the beginning all of the activities needed to build up a great American telephone system have been kept working together. Invention, design, engineering, manufacturing, installation and operating, though done by many companies and departments, have all been held together in one general organization—the Bell Telephone System—headed by the American Telephone and Telegraph Company. Our Western Electric Company is an important, even a vital part of this great telephone organization.

Our Great Aim

"For many years this Bell Telephone System has directed all its resources and activities toward one aim—a complete and reliable telephone service all over the United States. This work will not be completed during the lifetime of any here present. In the single year 1923 more telephones were added to the Bell System than in the first twenty-five years of telephone history.

"No great undertaking like this ever made progress without continued

hard work day after day, year after year.

"Our work is not crude; it is exact and fine. It must be so to serve its purpose. And in that, it seems to me, is our privilege. The great telephone system whose equipment we make is greatly worthwhile. The fine workmanship of our product is greatly worthwhile.

"Now because our product is complicated and must be accurate, each of us, whether in shop or office, must be skilled in some special part of the work; and because each of us depends on the faithfulness and skill of others, no one of us can be sufficient to himself.

"If a clerk makes a mistake in a shop order or a buyer purchases too little of a certain material, or an inspector passes defective work, or a toolmaker uses poor steel, or a powerhouse man neglects the care of a great turbine generator, the trouble is not on him alone but it reaches to men at machines and assemblers whom he has perhaps never seen. It hurts their work. It delays filling an order. It makes trouble for storekeepers. It holds up installing telephone equipment perhaps and people wait for telephone service. Like a stone dropped into a pond, the little ripples extend in every direction.

"Ways to prevent or correct most of these bad effects are a part of the shop system. But there is no safeguard so sure as doing every little thing right each time. This, then, is the responsibility which is yours and mine. It is a personal responsibility to each other. It is a personal responsibility to the work itself. That work calls to us with a cry that can no more be denied than the call of a child in trouble. No one of us alone could do much. Together we can meet our responsibility to the work that needs us all. So, too, as we accomplish the task, as we get the output at which we aim, the right to a satisfaction in the result belongs to all of us jointly and to every one of us individually.

The Hawthorne Story

"The production record of Hawthorne last year and so far this year is more than good; it is superb. We want our friends and customers to know the facts about it. At many meetings of telephone officials throughout the country during the past few months I have had opportunities to tell the Hawthorne story. It is worth telling and I am proud to tell it.

"A number of telephone executives have recently paid visits to Hawthorne.



Some views of the famous Reelfoot Lake, near Tiptonville, Tenn. Above is a moonlight scene on the lake.

Many more are coming. We want them all to know about this great workshop of the Bell Telephone System and to have confidence in it. We deserve their confidence. They depend on us to meet their needs, greater now than ever before. I answer for Hawthorne that they will not be disappointed in us. We are determined to do our part for the future even more fully than we have in the past.

"We have a right to be proud of our record but we must beware of pride. Nothing is so dangerous as thinking a past record means a future performance. Always ahead of us are new problems. Every new day calls for new energy, greater steadfastness, more skill.

"We are here today to dedicate this marvelous apparatus made by Hawthorne for the use of Hawthorne. It typifies Hawthorne—fearless in its attempt, skillful in its construction, accurate in its result. And so I dedicate

it to the doing of the job, to the tradition of fairness, to the spirit of friendliness. These are the things for which our company and our Hawthorne shall stand to the end."

Blind

By NOLA DEAN

*With reverent eyes I daily see such
beauty in this world!
Where sun and rain so gently mold a
blossom, dew-empared;
Where hill and field and swaying
bough, a mighty paean sing,
Of peace and love, good law, content,
and glory to their King.*

*Yet when I cry to those who pass,
their eyes upon the sod,
To see, to share, this priceless wealth
—the holy gifts of God,
They do not heed—and pity fills my
heart with tears to find
That those who walk beside me are
in darkness—they are blind!*

Under Dual Moons

A Twentieth Century Adventure

By J. W. GOOSTREE

Photographic Illustrations by C. J. HOLLERAN

CHAPTER IV

Vedovia

WHEN the surveying party returned to the little oasis they found a very different situation from what they expected—the dead Ooz beside the water-hole, one of their men seriously injured, with an arm torn off and at the point of death from the loss of blood.

Replenishing their supply of water and providing stretchers for the wounded man, they started for Centimar, the chief city of Central Mars. After days of monotonous travel, over the sand-covered wasteland, they reached their destination. Marcion Sanchese took Captain Anderson and Pierre in charge for the time being. The next day he, Captain Anderson and Pierre, in company with Movon, called on his Majesty, Shyst Zaurel, to whom he told the story of how he had found the two strange men and of the message he believed they had brought from the earth. The Shyst was pleased and anxious to learn their story. He appointed a special physician to look after the injured Kistle. He told Movon to explain to Captain Anderson, if he could, that he desired him to stay at his palace while Movon and two professors of languages whom he would appoint were learning the language of the strangers and teaching them their own.

He also sent a searching party over the desert in quest of the machine Movon believed the two men had used in making the trip from Earth to Mars.

Days merged into weeks and months, while the unique committee studied each other's language. In the fields, in the forest, on the mountains, on the canal, and in the city. Stacks of notes and data were compiled. Kistle was able to be with them now and proved a valuable addition to the group.

Captain Anderson and de Selle had learned enough of the Martian language to verify the story of Movon who had first suspected them of being from the Earth. One day a runner from the searching party announced that the machine had been found in the sand, and they needed more men and camels to bring it in.

Vedovia, the beautiful daughter of the House of Zaurel, where members of the language committee were staying,



Vedovia

had rendered much valuable assistance, through her keenly womanly intuition in learning and teaching the languages.

She seemed never to tire. She was patient and painstaking, and what she learned she remembered.

Movon said to her one day, "I have been with Ee Captain two months longer than you, and I am sure you understand him better than I."

One afternoon Vedovia and Captain Anderson were seated in the garden. Two men met on the street opposite them, each raised his right hand to his forehead and bowed to the other, a regular Martian salutation. Captain Anderson arose and extended his right hand to Vedovia, who placed her hand in his. Gripping her finger tips lightly, he said:

"Good evening, Vedovia."

She understood that he was explaining the words and customs on a salutation on Earth.

"Good evening, Ee Captain," she replied, laughing.

"Tomorrow we will read to His Majesty, your father, the message from Earth. You write it in your own language as best you can, from my interpretation, then I will read it to you in my language and you write it as best you understand it, then rewrite it from the two copies."

At the end of an hour's study, writing and rewriting, she looked up at him and said, "I think I understand and have interpreted the message correctly. Greeting to the brave, daring Ee Captain!"

In taking the pencil she handed him he let his hand close over hers, pressed it ever so slightly. As he held her hand within his own, their eyes met; and although they were of a different race, and could understand but a few of each other's words, she read in his deep blue eyes a message as old as time, a message that had overthrown kingdoms, dethroned kings, wrecked lives and homes, built and rebuilt them. The call of youth to its mate.

"We'll go in now," said Vedovia, dropping her long, dark lashes over beautiful brown eyes, as she withdrew her hand from his.

Side by side they passed down the vine-covered walk, toward where Pierre, Movon and the professors of language were poring over volumes of words and symbols, and for the first time that day they were aware that the birds of Mars were singing.

* * * * *

A BEAUTIFUL gondola reared its slim bow above the cool, placid waters of the great transplanetary canal, as if trying to outdo the tall ferns that grew along the banks of the main and tributary canals.

In the bow, with bare arms folded across the handle of a dripping paddle, sat the oarsman, motionless and silent.

In a wicker seat that swung from the top of the passenger compartment, Captain Anderson, oblivious of everything except the beautiful Vedovia by his side, the unfathomed depth of her soft, brown eyes reflecting the twinkling of the evening star, whenever she turned them up to meet the deep blue

eyes of her lover, who was pleading for her love, wooing as lovers have wooed since the beginning of time.

"Dear Vedovia, never as long as Mars turns around its invisible axis will your confidence in me be betrayed. My every thought, act and deed will have its inception in you. Tell me, beautiful one, will you let me share the joys and sorrows of life with you? Will you let me spend my future in making you happy? Trying to be the man you deserve? Make me the happiest man on Mars tonight! . . . Tell me you love me! . . . Tell me you will be my own!"

Her face colored with a maiden's blush of mingled love and happiness, the long-lashed lids of her soulful eyes fluttered like the wings of a charmed bird. The mask of night robbed him of her angelic beauty at this moment, but in the next her reply repaid him in full his loss.

"Ee Captain," she said, "to know you is to love you. When you are not with me memories of you are my soul's companions, and have been since first we met. I gave you my heart, long before you asked it! My love for you is like yonder star, it is infinite. To become your own is impossible. Can you become what you are already? I am yours now . . . Take me . . . Command me . . . I will obey . . . Lead, my own, I will follow through endless time!"

He leaned forward and there in the mellow moonlight, lips met lips, life met life. Their souls blended. True love reigned supreme, and the Great Good Ruler of the countless spheres made them one. Only empty words were left to be said by the man who would bind them.

"My own," he breathed in a voice that spoke volumes of true love and devotion. With her small white hand folded in his own brown palm, they drifted on and on. The great white concrete wall of the lock stretched away across the silvery moonlit water like the milky way across the heavens. The murmur of rushing water through the flood gates of the lock, the swish of the oarman's paddle, and the clinking chains—that moored the barge to the pier—brought the lover to the end of their never-to-be-forgotten evening on the canal.



Captain Anderson spent many hours with his sweetheart . . . on the shores of a lovely little lake near the city.

At the top of the stone steps that led from the canal to the street Vedovia paused, "Ee Captain," she whispered, "Oh, Ee Captain, I am so happy."

CHAPTER V

The Beginning of the End

THE searching party returned with the Aermar. Then during the next few months Captain Anderson and Pierre were busy from early morning until late at night. A portion of the shops of the Dawn Bay, Sun Lake and Elysium Transportation Route had been turned over to the Shystdom of Centimar, and hundreds of skilled workmen, drawn from all parts of Mars, under the supervision of Captain Anderson and Pierre, were reproducing various types of machinery, similar to those used on the earth, but heretofore unknown to Mars.

Carmond Sanzalez and Muois Lacareze, language experts, interpreting between the Earthmen and Martians, were finding little time for play. They were explaining prints, drawings and instruction sheets, from daylight to twilight.

When not engaged in his many activities, Captain Anderson spent many happy hours with his sweetheart, sometimes at the palace, sometimes in boat rides on the great canal, or on the shore of a lovely little lake near the city, which was one of their favorite resorts.

Then one day His Majesty the Shyst of Centimar, who had been confined to his room for a few days with a malady the best physicians had not been able to define, lapsed into a state of coma, and passed away that night. The whole of the Shystdom was plunged into

sorrow and mourning for a fortnight. One evening, following the last funeral rites of the beloved ruler, Captain Anderson called on Vedovia. It was then he learned the entire Shyst-

dom, including Pierre and himself, were facing a desperate crisis.

"My father's death may cause you trouble, Ee Captain," Vedovia said. And in way of explanation she told the story of the customs of her people.

"For two hundred years (about four hundred of Earth years) the Shystdom of Centimar has been ruled by two factions, or houses. The Zaurels and the Rostileze. Bitter enemies!

"My dear father was the last male member of the Zaurels, and Mayterre Rostileze automatically becomes the ruler of this Shystdom, of which you are a subject. You and Pierre may never suffer violence at their hands, because of your great worth to them, but you have been friends of the Zaurels, consequently you are their enemies."

"And what about yourself?" he queried.

"That is the reason you never knew until now, the seriousness of my father's death. Your associates, loving you as they did, could not summon the courage to tell you the truth.

"Strange as it may seem, considering the political feud between the two factions, a Zaurel and Rostileze must marry within the opposite family when required, in order that the rule of this Shystdom will remain within the two houses.

"And," continued Vedovia, turning away to hide the tears now streaming down her cheeks, "I am the last of the House of Zaurel, socially, politically and duty bound to wed a Rostileze, if the dynasty require it."

The manner in which Vedovia told the story to Captain Anderson had completely disarmed him, and it was a full minute before he could realize the full import of her meaning. Meanwhile, Vedovia had moved over to the duliphoin, (a musical instrument resembling the Egyptian harp of the Earth), and was playing a soft, dreamy selection she knew he liked.

Music expresses the mysterious depth of the soul, and he heard not the wonderful strains of "Aooloo," but the sad appeal of a broken heart. He heard through the unconscious expression in her wonderful rendition, her appeal for surcease from sorrow. Lamentation of blighted hopes for the future, her sad resignation to the fate that awaited her, and above all, her unspoken love for him.

Crossing the room to where she was playing, taking a seat on the stool beside her, with one arm around her shapely shoulders, he listened not to the last strains of "Aooloo," but to a pathetic prayer of a saddened heart

that came to him on the wings of her perfect rendition of that sweet old Martian masterpiece.

Her fingers ceased their graceful movements across the strings of the duliphoin and relaxed limply into her lap. Leaning her head on his shoulder she cried, softly and silently, silent except for the little sobs that shook her shoulders.

She realized that she was already condemned to bear the burden of a law and custom that was not only unwelcome to her, but was unwise, unjust, if Mayterre Rostileze willed it so.

"Can't you leave the Shystdom?" asked Captain Anderson. "Isn't there some way to avoid this old law and custom?"

Vedovia's eyes flashed as she turned them to meet the expression of hope so plainly visible in his own blue eyes.

"Ee Captain doesn't understand," and after a moment's hesitation, she added emphatically, "A Zaurel never breaks a pledge."

Nothing could have convinced him more fully that she had completely resigned her future to the fulfillment of an ancient feud, than the resolute expression on her face.

"Ee Captain must come often," she said, when he was leaving, "for I am sorely in need of the sunlight your presence brings into my life. My love for you, dear Ee Captain, and your love is the only thing left to me, now that my dear father is gone. It is the one thing that helps me to live through my triangle of troubles."

"My own sweet Vedovia," he said, as he kissed the trembling lips that were in themselves a silent appeal for a ray of hope with which she could fight the inevitable, "until some stronger power than I tears me away from you, I am yours, and you are mine! Dearest one, I would fight all of Mars, to the last trench for you, but I don't know how to fight your unalterable determination to uphold, even at the sacrifice of your life and happiness, an old custom that is so firmly rooted in your dear heart. But we must make the best of the situation. There must be a way out. At least, the blow could never fall any harder than now."

As Captain Anderson passed down the flower-bordered walk, out through beautiful grounds that surrounded the palatial home of the late Shyst, his mind was a seething volcano.

That night, after he had gone to bed, and long after he had ceased to recognize them voluntarily, his thoughts refused to be ignored; sleep was out of the question.

How to weaken Vedovia's determination to carry her father's and forefathers' code of honor to its ultimate end? And should he succeed in this, could she evade the law? What would be the attitude of the incoming dynasty? Would the new Shyst release Vedovia from her supposed obligations to the new regime? Or, would he force her to marry one of his sons, in accordance with the old customs? These and hundreds of other questions of the same import, passed through his mind, single file and in groups, each fighting for supremacy.

TWO weeks later, Mayterre Rostileze became the ruler of Centimar. Then came many sweeping changes in the personnel of all public offices. The followers of the Rostileze took the places of the deposed members of the Zaurel faction. The majority of the deposed officeholders accepted their bitter downfall calmly and stoically, but the younger set (who were inclined to see the right side of the subject), knew the old custom was wrong and did not have the principles of good government embodied in it, and now that it was interfering with their social and financial welfare, they were voicing their sentiments freely. Several of them were arrested and sentenced to prison, and a few were banished to the ice-clad Isle of Jusityti. Then the conservatives of the Zaurels began a systematic propaganda-spreading campaign against the present ruler.

More of the leaders were imprisoned or sent to Jusityti. The new Shyst was beginning to rule with an "iron hand."

Shyst Rostileze was, in almost every phase of government, the exact opposite of the late Shyst Zaurel, who instead of ruling by the virtue of his power, had shown kindness and mercy to all the people of the Shystdom.

The only men of the old regime retained on the staff of the new order were the professors of languages, who were practically indispensable, because only Zaurel subjects had been allowed to learn the language of the two adventurers from the Earth.

The two professors resigned, but Shyst Rostileze refused to accept their resignations.

Vedovia was allowed to continue her residence at her late father's home, but the Shyst refused to release her from the bonds of the age-old custom.

At the Shystary, the executive office of the Shystdom, pandemonium reigned. Shyst Rostileze and his three sons were leading a wild, riotous life.

Clashes between the Zaurel and the Rostileze factions increased daily, se-

rious outbreaks were reported from all sections of the Shystdom, a crisis was expected momentarily, and a war between the two factions was imminent.

"Pierre, we're in for it," said Captain Anderson one day as he and Pierre stood on the door of the factory office, watching a squad of soldiers close a business house, and make the owner, who was a follower of the Zaurels, a prisoner. "How's the work progressing with the Aer-mar?"

"About finished. I am pumping the air from between the walls now."

"Good! I'll go ahead with the radio station and you see that everything is in readiness aboard the Aer-mar. Load all the rocket tubes, refill the oxygen tanks and smuggle in a supply of food and water. We may have to use it soon."

"Yes, very soon, I'm thinking, if that monkey-faced Shyst doesn't change his policies," said Pierre.

CHAPTER VI

The Fight for Love

A FEW evenings later, as Captain Anderson and Pierre were going into the hotel, Captain Anderson saw Savette, Vedovia's maid, come out, and on a small table in the center of his room lay a letter, addressed to him. Opening it he read:

"Dear Ee Captain:
I must see you tonight. The gate near the canal will be open. I will be at the lower fountain. Be careful.

Vedovia."

After dinner, Captain Anderson slipped his automatic in his pocket and started toward the Zaurel home. Cautiously entering the gate to which Vedovia had directed him, he made his way to the fountain, being careful to keep in the shadows and avoid the moonlit places.

He found her in the deep shadow of a lespedee.

"Why, my dear, you're all aquiver, what's the trouble?" asked Captain Anderson as he helped her to a seat beside the pool.

"Oh, Ee Captain," she sobbed, "how can I tell you, my tongue rebels at the cruel words necessary. My heart is breaking, my mind is dull, my thoughts wander."

"What is it, Vedovia? Tell me what's the trouble, dear?"

"Before I tell you I want you to know, dear Ee Captain, that after I met you and loved you I could never

form was slipping from his arms. She had fainted.

Laying her on the bench, he applied a handkerchief, wet from the pool, to her face, until she returned to consciousness.

When she again spoke she was more composed.

"Ee Captain," she said, "this is good-bye. I must never see you again!"

"What do you mean to do? Will you marry him?"

"Yes," she replied, as she unconsciously raised her hand to her bosom.

Captain Anderson heard a slight rattle of paper, and immediately surmised its contents. He knew she was not telling him the truth. He knew she intended taking her life, that night. He drew her close to him.

"Look!" cried Vedovia in a whisper as she glanced across the lawn to a man in uniform who had started pacing to and fro along the fence that surrounded the place. "They have placed a guard around the house. Oh! what will you do?"

Captain Anderson's mind acted swiftly.

"Where is your maid?"

"There," said Vedovia, "in that clump of lespedees."

"Can you get her over here?" he asked.

At a low call from Vedovia the shrubbery parted and the maid slipped across the intervening space to the bench where they sat.

"Ask your maid to take this note to Pierre, in the room opposite where she left the note for me."

Scribbling a note he handed it to the maid.

She was stopped at the gate by the guards, but was allowed to proceed when she told them she was going after refreshments for her mistress.

Captain Anderson's note transformed Pierre from a sleepy man into an active boy. Nodding his understanding to the maid as she departed he got busy immediately.

When the maid returned Captain Anderson and Vedovia were so deeply



His pistol was hot from the stream of death-dealing lead that poured through its barrel.

be happy with any other. You are my life, my all, my own."

As he drew her close to him and kissed her trembling lips, she buried her face in his shoulder and whispered, "Today the Shyst announced the approaching marriage of his eldest son to the last of the House of Zaurel!"

"You!" he cried.

But Vedovia did not hear. Her limp

occupied discussing their precarious position they did not see Savette until she was upon them.

"Savette delivered your message all right," Vedovia interpreted.

"Vedovia," continued Captain Anderson, as the maid returned to her station in the clump of lespedeas, "don't be obstinate. Think of yourself. What has gone before is beyond recall. Think of the future. You are not bound to marry a man who is not only repulsive to all that is good in you, but who is also your enemy."

"Ah, Ee Captain, you don't understand. It may not be necessary for me to marry him."

There was a significance in her voice she tried to hide, and at the same time tried to let the man she loved know, that she would never marry the son of Rostileze.

"But, Vedovia," he pleaded, "what you are about to do is a thousand times worse than coming with me and fighting for your life and happiness, even if we are both killed. Listen, sweetheart: The all wise Ruler of unnumbered spheres never intended that any person or number of persons should sacrifice their life, body and soul, their happiness, honor and hopes of the future to an old custom.

"He created man and beast with a desire to live, and from the beginning self-preservation has been the first law of nature. The fact that this old custom that has been handed down from generation to generation is blinding you against your duty to yourself, and to the man that loves you and only you, does not prevent my seeing the whole affair as it really exists.

"Vedovia, your duty is with me. You love me. You know that I love you. Dearest Vedovia, 'Ee Captain' knows. Please don't hesitate . . . Neither of us may ever leave here alive, but I have a plan that I believe will work, and you must go with me. If we are both killed in the attempt to escape it will be better to die together than to live separated and you the wife of a Rostileze! Or dead by your own hand. Remember, you told me the night on the canal, 'Lead and I will follow.'"

He kissed her tear-wet cheek and then full on her red lips. Holding out his hand, he said, "Give me that little package you have in your dress."

Like one in a dream she obeyed.

"There," he said, as he scattered the powders over the grass, "this was never intended for your sweet lips."

"Send Savette for a cloak to cover your white dress," he said.

He placed the coat Savette brought around her shoulders.

Not once did she ask where they were going, but with her hand resting confidently on his arm, she kissed her maid good-bye, looked once at the only home she had ever known, then turning, she said, "Lead, Ee Captain!"

CHAPTER VII

The Fight for Life

CAUTIOUSLY they approached the gate he had entered early in the evening. The guard who was patrolling that side of the yard, was at the corner about twenty paces from the gate. Opening the gate wide to get through, Captain Anderson crouched in the shadow of the huge column until the guard, on the return trip, was opposite him, then with the agility of a tiger, he sprang through the open gate, landing squarely on top of the unsuspecting guard with a force that took him off his feet. But he failed in his intention to prevent an outcry. The guard had raised his hand in time to ward off the hand clutching for his throat, and as he fell he broke the still night air with a piercing cry, just as the heavy automatic in Captain Anderson's hand stretched him insensible on the ground.

"Quick," said Captain Anderson, as they darted across the street into an alley, and out on a side street, as the other guards rushed around the corner.

"They saw us," whispered Vedovia. "Yes, and here they come." On they ran, and on came the guards, their cries echoing through the silent streets.

"Whang-g." A steel dart from one of the guard's pneumatic rifles struck the corner of the wall they had just turned. On and on, down through a maze of narrow streets, they ran in a hail of darts from the pursuing guards.

Giving Vedovia all the assistance he could with one hand, the Captain returned the fire of the pursuing guards with the other.

"Can you hold out a little longer?" he panted.

"Yes."

Captain Anderson stopped to fire from behind a corner they had just turned. Then on they ran. Vedovia reeled as he released her to slip a

fresh clip in his automatic. She was weakening under the great excitement and strain to which her frail body was being subjected. As they reached the yards of the Transportation Route, she fell across the tracks. Assisting her to her feet, he half carried, half led her across the yards, turning to fire at his pursuers at every opportunity.

Nearer and nearer came the Rostileze guards. Then the Transportation Company's guards joined in the chase. Step by step they fought. Rostileze's men with their pneumatic rifles and Captain Anderson with the automatic pistol, hot from the continual stream of death-dealing lead that fairly poured through its blue steel barrel.

As they rounded the end of the railroad shops, another automatic barked, and Pierre de Selle, standing beside the Aermar, saw the foremost of the guards throw up his hands and pitch headlong down the embankment from where he had been raining a veritable hail of steel darts around the fugitives.

With Vedovia across his shoulder, Captain Anderson worked his way along the wall toward where Pierre, with a smoking hot automatic, was holding the mob off.

Reaching the Aermar, Captain Anderson lifted Vedovia through the door and climbed in after her. Pierre followed, backing up the ladder, pausing on each rung to rain lead on the ever-increasing horde of attackers. Snapping the door closed, Pierre pulled the detonator lever. A solid shaft of flame from the rear rocket tube sent the guards scampering to safety.

The steady increasing pull of the propeller lifted the giant space-flyer off its moorings. Off it went with increasing velocity, up and out into the dark blue space of everywhere.

* * * * *

LEAVING Pierre to guide the machine, Captain Anderson and Vedovia stood for a few minutes looking through the rear periscope at the fast receding planet of Mars.

Vedovia sighed tremulously as she turned away from the planet which had, up to this time, been her world. But, on looking into the reassuring eyes of her lover, her regrets subsided, and it was with a thrill of pleasure that she turned, with Captain Anderson, to watch Pierre as he steered the Aermar toward the Earth—their future home.

THE END.



TELEPHONE ENGINEERING AND HOME STUDY

*Being a Letter from the Educational Director to a Plant Man
Who Wants to Become a Telephone Engineer.*



MY recollection is that you are a high school graduate and that you made fairly good grades in your last year. If this is so, there is no reason why you could not continue to carry on your studies along with your work, and thereby broaden the scope of your knowledge, and your ability to develop yourself as a telephone engineer.

To begin with, it will require more than ordinary determination, very close application and a good deal of time, to acquire through home study, the equivalent of the book knowledge ordinarily gained in a four year college course. Many men have done it, so there is no reason why you shouldn't.

There are two principal benefits that a man gets from going to college. One is the knowledge gained from books, and the other is the knowledge and varied experience gained from contact with the men and women composing the faculty and making up the student body.

Of late many well informed educators have said that the latter was as important, if not more so than the former. With this viewpoint I am inclined to agree, although I would not want by any means to discount the value of knowledge to be gained from books.

If the foregoing is true, you can readily see the impracticability of hoping to gain from home study the full equivalent of a college education, using this term in its broadest sense.

When a man goes to college he is not only thrown into a studious environment, but study becomes his daily objective and the contact with others similarly inclined and with the instructors tends to promote and facilitate the routine of study. The inspiration gained from the instructors, the knowledge gained from the recitation of other members of the class and the competition in class work with men of exceptional minds, are all stimulating to increased interest and greater effort in the matter of study.

When one studies at home he loses the benefit of all of these stimulants but this is no reason why, in the absence of opportunity to go to college, you should not endeavor to gain just as much as you can from the pursuit of a course of study that will tend to equip you to become a telephone engineer.

To this end I have prepared for you a list of subjects to be studied, and in doing so I made some inquiries into the fundamentals of engineering courses of study. One thing that helped me materially was a recommendation made by the National Industrial Conference Board, an organization made up of representation from the great industries of the nation. Here is what they set up, after mature deliberation, as constituting the basis of engineering education:

- (a) Mathematics;
- (b) The important principles of physics (mechanics, heat, light, sound, electricity, magnetism), chemistry, biology and geology, the inter-relations of natural phenomena and the application of these principles to practical problems;
- (c) The principles of economics and their application to industry and commerce;
- (d) The principles that govern the relations between people, not only as applied to managers and men, but also as applied to governments and society;
- (e) The history of nations;
- (f) The art of clear and correct expression in speaking, writing and drawing.

The list of subjects that I have prepared as a guide to your studies is appended to this letter and it could well be followed in the order in which the subjects have been arranged.

Under the first five subjects I have not listed particular books since the books on these subjects used in your local school system will be adequate, and they can be picked up at low cost at your local book stores.

I suggest that you first review your mathematics and then take up the study of physics, as these two sciences form the basis of all engineering.

Most of the books recommended are obtainable at your public library; if not, you could buy them one at a time from a local book store. If a particular book enumerated is not available the public librarian can undoubtedly help you to find an equivalent substitute, although I have taken pains to recommend in each case the best book that I was able to find, after consulting a number of sources of helpful information.

You may be curious to know why such subjects as economics, accounting, and a study of human nature are included in engineering education. All of these subjects will tend to round out your knowledge of all of the things that an engineer ought to know if he is to be fully useful in his capacity as an engineer.

I hope you will carry out your determination to get all the knowledge that you can, for I'm sure that you will directly benefit not only from the knowledge but by the self discipline that regularity of application will impose upon you.

When I can help you or any of the boys down there I hope you'll feel entirely free to call on me—for that's what I'm here for.

The List of Books Mentioned in the Letter

Arithmetic

Any available book on the subject.

Algebra

Any available book on the subject.

Plain and Solid Geometry

Any available book on the subject.

Physics

Any available book on the subject.

Drawing

Practice in Free Hand and Mechanical Drawing.

Electricity & Magnetism

Elements of Electricity—Timbie.

(Continued on page 42)

"Things Aren't Like They Used To Be"

By R. G. SPEARMAN

Decorations by R. M. GOODMAN

THROUGH the operation of the natural laws governing life and conduct, every new day brings with it many changes. When we look back a few generations and note the way we used to do things, how we reasoned, how we thought, and how we acted, we can but exclaim: "Things aren't like they used to be!" But who of us today would like to live as our ancestors did?

We are today living in a most wonderful age and the world about us is so beautiful, as compared with what "used to be." There is so much good in the world of today, there is so much bad in the world of today, that we

conscience, we may all make still further progress?

While this is indeed a wonderfully beautiful world, so full of good, the spirit of evil has not been asleep. There are bad people, with evil minds, and narrow vision. We have some ugly places, we have much uncleanness, and many temptations.

It's really funny and yet profoundly serious to think of some of the many changes. Our ideas, opinions, thoughts, method of doing things are so different from what used to be, it sometimes appears that our fundamental truths and faculties of reason change. Our conscience or faculty for judging right and wrong is different. We sometimes, today, use an argument on the affirmative that we used to use on the negative side of the same question.

A long time ago our idea of God used to be just about the average conception today of the devil. In the dark early days of the race, we thought it right to kill and steal.

A selfish person today is just about the most foolish thing imaginable because he appears not to have sense enough to see that it pays best not to be selfish. Jesus Christ taught the principle of unselfishness in service and proved to humanity that "He who serves best profits most." Any unselfish service brings with it its reward.

No, "Things aren't like they used to be." A long time ago a fellow might get a better job if he had a pull. It is different today; a fellow must pull and put to hold the job he's got.

It used to be that a fellow might have an opportunity of a lifetime but today a lifetime is crowded with opportunities. Opportunity is really out looking for men and women big enough, honest enough, and broad minded enough, to trust with the many big business jobs. In other words there used to be many good, honest, capable men and women but the opportunities were few; today big jobs are out looking for the right people, and they are hard to find. If a fellow therefore has the qualifications, he has every chance to make good.

If a fellow today has sense enough to see and do right, he may have lots of fun helping, serving, building, and doing his bit toward elevating humanity to a new and higher life. The rewards offered are many times greater

than "they used to be." The delights, thrills, opportunity, satisfaction offered, are equaled only by the absolute peril and disaster which will overcome those who haven't sense enough to see, and strength enough to act out, this philosophy.

We used to think that a man who could "shoot-the-bull" had a lot of sense as well as nerve; today our idea of a real smart fellow is one who seems to have sense enough to know that he has no sense, and the other fellow has.

Some old heads used to think that to be a success one had to be a "hail-fellow-well-met"—which meant that he could stand up with a reasonable amount of good whiskey under his



The girls don't wear many clothes

wonder sometimes which is making greater progress. We have so many good, clean, broad-minded people with extraordinary quality of thought. We have built so many pretty places, playgrounds, and amusement palaces. We have developed so many nice things to eat, so many new and wonderful inventions, our clothes and shoes are so nice and comfortable, as compared with what "used to be." So much is being done to make life more pleasurable, healthful and happy. There are today so many opportunities to do something big and good. So much is being done today to elevate life and business, thought and action, to a higher plane. Our method of communication and transportation is so wonderfully different. Who knows but that when we have developed higher mental intelligence, physical strength, and moral



The old-fashioned boys used to "bawl you out."

shirt, could with discretion use a certain amount of profanity, and be able to lie graciously. It was thought that organization and supervision would so regulate things that honest and proper conduct would be compulsory. There seems to be no objection to what a fellow did when off duty. Today it is different. Employers inquire into the home life, habits, and character of employes because it is known that what a fellow does when off duty affects his efficiency when on duty. His associates and habits determine his moral fiber, which not only affects his business but his own integrity.

There used to be a bunch of good fellows who would hang on the street corners to watch for the pretty clothes the girls would wear; today they are watching for the girls who do not wear many clothes.

(Continued on page 42)

The Glorious Fourth Is Celebrated

By JOHN T. BOIFEUILLET, in the Atlanta Journal

ONE of the most earnest, delightful and successful celebrations of July 4 this year in Georgia was by the employes of the great audit department of the Southern Bell Telephone Company, in Atlanta, consisting of the numerous members, men and women, of "Local No. 80, Southern Association of Bell Telephone Employes."

The observance of the anniversary of the birthday of the American nation occurred on the afternoon of the 3d instant, in order for the employes to have holiday on the Fourth. The exercises were held on the second floor of the company's building, corner of East Hunter and South Pryor streets, in the presence of an imposing and enthusiastic assembly, many of whom were charming and beautiful young ladies—lovely rosebuds from the matchless and wonderful "garden of girls" for which the Southern Bell is famous in song and story.

The most conspicuous feature of the attractive decorations was a large national flag which extended for quite a distance across the room, suspended high between the floor and ceiling. The gorgeous ensign of our country's liberty furnished much inspiration for the patriotic occasion. Its streaming colors and clustering stars constitute a pageantry of surpassing glory.

All references to the flag were greeted with fervent applause. Each person thrilled with pride in the thought that the living light of victory has blazed upon the cherished banner in every conflict in which it has been carried.

A Popular Presiding Officer

The large audience entered happily and thoroughly into the full meaning of the occasion, and all caught the true spirit of the hour.

J. R. Walsh, one of the most efficient and popular members of the numerous force of the auditing department, presided at the celebration. He opened the exercises with highly appropriate remarks, which glowed with patriotic fervor.

Then the Lord's prayer was devoutly repeated in unison by the entire assembly, standing. This feature was exceedingly impressive, and no doubt each soul breathed the sacred words as a special invocation for God's perpetual blessing to rest upon this country. The bowed heads and reverential tones



J. R. Walsh, Chairman

presented a striking picture and produced a marked effect. Reflect for a moment: A great business department, of a mammoth corporation, suspends operations so its employes may engage in the performance of a patriotic duty, but before entering upon the celebration they invoke the Divine favor. Under the inspiration of such scenes, the American people will never cease to have a full appreciation of the bounties and mercies of Providence, the joys of freedom, and the benefits of good government.

Following the recital of the Lord's prayer, the audience joyously united in singing "Columbia, the Gem of the Ocean."

Miss May Doyle, a handsome and gifted young lady, one of the genuine favorites in the auditing department,



May Doyle, who gave a reading at the celebration

gave the assembly a delight by her splendid reading of the selection, "The Fourth of July." Her elocution was faultless, and it and the charming reader were given an ovation by the appreciative and highly entertained listeners.

"The Star Spangled Banner," historic and honored, was next sung by the audience.

Vice-President J. M. B. Hoxsey

Presiding Officer Walsh, at that juncture, announced that he would yield the chair to J. M. B. Hoxsey, the able first vice-president of the Southern Bell Telephone and Telegraph Company, a most cultured and delightful gentleman, who would take charge of the further exercises of the occasion. Mr. Hoxsey was spontaneously and enthusiastically accorded a rising ovation by the gathering, thus showing the esteem and popularity in which he is held by the employes of his company.

Mr. Hoxsey spoke with earnestness, impressively and entertainingly, emitting an occasional flash of humor and wit. His utterances were received with soulful applause. He closed his remarks by introducing the writer of these lines, who delivered a patriotic address.

The celebration came to a close with the singing of "America" by the assembly.

Across the front of the printed program was this quotation from Thomson: "Hail, Independence, Hail! Heaven's next best gift to that of life and an immortal soul." It is a noble sentiment. The swell and roar of Webster's voice struck upon the ears of his entranced auditory "in deep and musical cadence, like waves on the shore of the far-resounding sea," as he exclaimed: "Independence now and Independence forever!"

I have been informed that the exercises of which I have written were the first formal celebration of July 4th by the telephone employes, and it is their intention to set a splendid example. They have sown the seed. As the years come and go, a golden harvest will be garnered.

IN A BIG HURRY

Motorist—"I'd like a dozen eggs, please."

Farmer—"I haven't a dozen; I got only ten."

Motorist—"Well, are they fresh?"

Farmer—"They're so fresh the hen didn't have time to finish the dozen."—Williams Purple Cow.

Birmingham Installs Some Big Cable

Foreman W. B. Smith and crew pulling in the first 1212 pair cable on Ave. G., in Birmingham, Ala.



ON May 19th, notice was received from the Western Electric Company that the cable for Estimate A-79, which provides for a continuous run from the Main Exchange on Second Avenue to South Highlands, at Birmingham, Ala., was being shipped. In a few days it arrived and orders were given to Foreman W. B. Smith to "pull her in."

While this was easy to say but quite another thing to do, it was only one of the jobs that are handled by the fellows in their every-day work. The shipment consisted of 45 individual reels of 1212 pair cable, requiring four large freight cars to haul it from the factory to Birmingham. It consisted of 15,104 feet or 24,597,136 conductor feet. If the wire in this cable was stretched out in a single pair it would reach from New York to San Francisco and nearly back again. The splicing of this cable after it has been installed will require the making of approximately 116,000 individual splices.

The installation of this large cable was made difficult because of the fact that the greater portion of the conduit system in Birmingham consists of fiber duct. This duct was laid many years

ago and it has come unjointed in some places and has warped so that it is next to impossible to get cable through it. In rodding and mandreling the duct it was often necessary to dig up the streets and make repairs to the ducts. The manholes were built for small sized cables and in some cases the mouths of the manholes are so small that it was necessary to dig them up in order to pull in the large cable.

Pulling of this cable required the maximum of power and the last word in carefulness. The large two-ton model 20-45 White truck used on this job provided ample power of even flow, while Foreman "Tobe" Smith and his assistants M. D. McRae and J. W. Walsingham provided the rest.

When this project is completed it will provide adequate facilities in one of the most popular and fastest growing residential sections of Birmingham, that is, Forest Park, Milner Heights and Mountain Terrace. In addition to the many new homes which are being built there are also three apartment houses costing in the aggregate \$2,000,000.

P.B.X. switchboards are being installed in these apartments and when they are ready for occupancy, which

will be between June 15th and September 1st, will require the installation of approximately 300 telephones.

This estimate is one of the many large underground and aerial cable projects which are scheduled to be handled in Birmingham during 1924 in order to provide for the nearly 1,000 unfilled applications for service which we have on hand.

Thirty Years' Service Only One Accident

John Banks started his telephone career as a groundman in a pole setting gang under W. P. Mangum at Ripley, Tenn., April 30th, 1894. In a few months he was promoted to lineman and worked with this same construction gang until September, 1896, at which time he was transferred to Memphis under E. L. Powell. He worked in Memphis as lineman until May, 1904; he was then promoted to foreman of a construction gang in Mississippi. In 1908 he was placed at Tunica, Miss., as troubleman and stayed at that exchange until 1910, when he was transferred to Memphis where he is now located as a truck driver in the construction department.

John is proud of the fact that he is a stockholder of the American Telephone and Telegraph Company; he is proud of the fact that he owns his own home; he is proud of the fact that he educated his wife's sister and is now educating her motherless children; but above all, he is proud of his thirty years service with the telephone company, with one lost time accident.



John Banks (col.)



Think First--It Pays

By C. H. POOLE, Division Supervisor of Safety Methods Birmingham, Ala.

SAFETY men throughout the country who have made a careful study with reference to accidents and their causes have agreed that the safest man is one capable of thinking in a thorough and cautious way about his job, and one who continues his thoughts as he observes the progress of his work.

It takes self-training to teach yourself to anticipate unusual conditions which may arise in connection with your every-day duties, but it is part of your job to measure up to this requirement.

Men should not forget that they are to foresee danger as well as difficulties and this foresight, coupled with experience and trained thinking, will be the means of reducing accidents, and at the same time save countless lives and broken limbs.

Advancement and promotion are desired by all who are ambitious, but there are several qualifications necessary to convince the boss that you are the man; one of which is to be a thoughtful and safe workman. This, with your experience in the business and willingness, is one of the greatest assets an employe could have to gain recognition. Always remember that you are hired not only to think, but to think first, because it pays.

Review of Plant Accidents, June, 1924

Divisions	Number Male Plant Employes	This Month's Accidents	Lost Time Accidents	Lost Time Accidents Per 100 Male Plant Employes
Carolinas	636	9	5	.79
Florida	313	2	0	..
Georgia	680	6	1	.15
Kentucky	386	7	0	..
Louisiana	695	7	0	..
Mississippi	331	3	1	.30
Tennessee	730	4	2	.27
TOTAL	4208	44	9	.12

This Month's Accidents Classified

Poles breaking off	3
Falling from pole	1
Spurs cutting out	7
Hands or feet cut by spur	1
Objects striking, crushing or jamming	3
Slipping and tripping	3
Automobile collision	3
Cranking Ford cars (back fire)	2
Electric shocks	4

Slipping on ladder	1
Particles entering eye	5
Burns—paraffin	1
Burns—gasoline	1
Overcome by gas	1
Strains and sprains	3
Handling tools	1
Falling tools	1
Falling material	2
Electric fan	1

Comparative Standing of Divisions First Six Months 1924, Based on Number of Lost Time Accidents Per 100 Male Plant Employes.

Divisions	Average No. Male Plant Employes Five Months	Number of Lost Time Accidents	Lost Time Accidents Per 100 Male Plant Employes
Florida	299	3	1.00
Kentucky	383	4	1.04
Louisiana	682	8	1.17
Georgia	677	8	1.18
Alabama	410	5	1.22
Carolinas	569	11	1.93
Tennessee	680	17	2.50
Mississippi	334	10	2.99
Average for Group			1.64

Ten Years a Motorist and Never An Accident

A motorist who has driven for ten years without an accident, traveling one hundred and twenty-five thousand miles in the most crowded region of America, is privileged to offer a word of advice on those problems of traffic safety with which Atlanta is keenly concerned.

"While I do not wish to boast," says Mr. Abraham Hattenbach, of Brooklyn, "I am gratified at my record, and attribute it mainly to the fact that I try always to drive with care." If this seems a trite comment on so rare an achievement be it remembered that the beginning and the end of wisdom in avoiding automobile accidents is that simple virtue to which Mr. Hattenbach credits most of his distinction as a motorist—care: care to observe all rules of the road, care to keep invariably within moderate speed limits, care at crossings and in making turns, care in looking out for pedestrians, particularly for aged persons and children, care in every detail of the responsibility resting upon a man or a woman at a steering wheel, care and consideration for the rights of others.

Evidently this good driver is blest with keen powers of observation and presence of mind. Evidently, too, he knows something of the mechanics of his machine, at least enough to be aware of what it can do and cannot do. His attainments, however, are primarily a matter of keeping his mind on the business of driving. "Do not permit other passengers in the car or the passing flapper on the walk to distract your attention, not even for a moment." Observing that most accidents occur at street crossings, he counsels, "Slow up and sound your horn when approach-



Shirley Wilson and his crew, of Louisville, Ky., have had no lost time accidents during the past two years. Left to right, back row: H. Evans, W. Wheat, C. Grimes. Front row: H. Massey, C. King, Shirley Wilson, foreman; E. McLendon, L. Massey, C. White and C. Thomas.

ing them. Many ignorant drivers rush across main thoroughfares when least expected; to avoid them drive with care, and with the idea that other drivers are natural-born idiots; watch them closely, for many of them are." Another injunction of Mr. Hattenbach's is, "Keep your eye on the man ahead; he may stop short, or turn, and fail to signal. Yes, they do queer things, and it is only the careful driver who concentrates that avoids mishaps."

A cool head, a keen eye, a prompt hand and foot, are all essentials of safe driving; but there is another, without which these will not suffice, and that is a good heart. Our happy motorist who for ten years has threaded the traffic mazes of New York and its environs, with never an accident, is a firm believer in the worth of courtesy and considerateness. "Do not overlook the rights of pedestrians," he pleads; "they have privileges which must not be denied. The fact that you have the price of a flivver does not mean that you are their superior. Pedestrians can not walk as fast as a machine can travel; therefore be considerate of them. Use consideration in the sounding of your warning signal. Do not scare elderly people by a sudden loud toot of your horn. Some have heart disease, and a sudden fright may prove fatal. Rather, slow up or stop, while they cross the road. Children when suddenly hearing the sound of a horn, in their endeavor to run to safety, often become confused and dart in the wrong direction. Many times, in the path of an approaching car, their minds do not work as fast as an adult's; therefore, I say, be as considerate in the use of your horn as you try to be in the general operation of your machine."

Given the knowledge and skill which every driver who ventures into traffic should possess, care and regard for others will enable any motorist to maintain a gratifying record for safety. Atlanta would never have witnessed twenty-seven deaths and more than six hundred injuries in automobile accidents from January to May of this year, if all drivers on her streets had been duly careful and duly considerate. Police and courts are responsible for enforcement of the traffic safety laws, but motorists are responsible for their observance.—Editorial in Atlanta Journal.

AHEM!

"Did any of your family ever make a brilliant marriage?"

"Only my wife."—Boston Transcript.



Rene Gonzales

25 Years' of Fine Service Has Gonzalez

By G. O. TAYLOR

Rene W. Gonzales, toll wire chief at New Orleans, who completed his twenty-fifth year of service on July 1st, although still a young man, is a "pioneer" in every sense of the word. Rene, as he is called by his host of friends, has grown up in and with the telephone business. He just naturally "belongs" there.

His inclination in this direction was demonstrated when he accepted his first and important position as messenger on July 1st, 1899. This brought him in contact with the telegraph office. The magic click of the sounders fired the ambition of this little messenger,—he was little in those days. His ambition aroused, there was only one thing to do—he would become a telegraph operator, so a year later he quit his job as messenger for that of check boy in the more attractive atmosphere of the telegraph room.

The Morse code at that time was a jealously guarded secret of the telegraph fraternity. Rene, however, managed to obtain a copy of it. He studied it hard. Off duty at midnight he remained in the office until three o'clock every morning practicing on the key. Becoming more and more proficient in sending and receiving, he would copy some sure enough telegrams off the wire. This was strictly against the rules. Early one morning he was caught and immediately fired. He got a job as

telegraph operator and remained there until 1905, when he started with the Cumberland Company in New Orleans as repeater attendant. He has been in the toll test and Morse office ever since, being promoted successively to toll testboard man and then head toll testboard man, or toll wire chief, as it is commonly called.

During twenty-five years of service he has had many strenuous experiences. The tropical hurricane of September, 1915, was undoubtedly the most severe in history. Along the entire storm swept gulf of Atlantic coasts, hundreds upon hundreds of lives were lost, property damage was totaled in the millions of dollars. Telephone plant suffered heavily. With the gales blowing continuously at 120 miles per hour, Louisiana and Mississippi were seriously crippled. Lines everywhere were down. New Orleans was completely shut off from communication with the rest of the world. During all of this "RG" was the "man of the hour." For three days he remained at his post with little sleep, directing the restoration of service and the building up out of the debris of important circuits.

Where Rene is on the job universal service is assured so far as the area under his control is concerned. He is quiet and unassuming, but solid as granite in his direction of the proper maintenance of the toll and morse service.

In speaking of his life-work, Rene has this to say, "I am proud of my twenty-five year service record, with the numerous benefits,—sickness, accident, life insurance, loans and stock purchase plans, in effect with all Bell Companies. I realize the value of it, and hope to add many more years to my record."

THEN SHE SWOONED

The Smiths had started on their vacation.

"Oh, George," suddenly shrieked the wife, "I forgot to turn off the electric iron."

"Nothing wil burn," replied George. "I forgot to turn off the shower bath."

YOUTHFUL WISDOM

Little Jimmy: "The Bible says there will be no marrying in heaven, I wonder why?"

Little Edna: "I don't know, unless it's because there won't be enough men to go around."—Chicago Daily News.



"Thank you, Sir," we said to the Postman



THE annual reunion of the Confederate veterans are occasions when the people of the South delight to honor these old heroes who wore the grey. The reunion this year was held at Memphis, Tenn., and every effort was made by the operators and other telephone forces to have the service during this time of the very best quality. That their efforts were successful and appreciated by the city authorities was shown by a cordial letter received by District Manager Flournoy from St. John Waddell, secretary to the mayor, in which he said:

"I want to take this opportunity to express to you my personal appreciation and the appreciation of the Executive Committee for your splendid cooperation with us during the Confederate Reunion.

"We realize that while some of the requests we made of you were almost excessive, you granted them all without hesitation, and we are deeply grateful to you for this attitude.

"Incidentally, I might say that if you had not given your personal attention to the immediate installation of those last eight telephones, there would not have been any Confederate Veterans Parade on Friday, June 6th."

* * *

H. S. Teal, president of the Pell City Fire Brick Company, Pell City, Ala., commended the local service in a letter to our group manager at Anniston, saying:

"The writer has used telephone services in practically every important city between Niagara Falls and New Orleans, and have never found any that excels that rendered by your kind and polite operators, and here is hoping that you can maintain this record indefinitely."

* * *

In making final settlement of her account, Mrs. H. G. Hollingsworth, a former subscriber at Hattiesburg, Miss., wrote to the manager: "Many thanks to you and best regards to each of your operators. You have a very nice set of girls. They were so very nice to me."

* * *

An appreciative letter was received from Philip Lieber of the Shreveport Mutual Building Association of Shreveport, La., thanking the manager for prompt and satisfactory service in moving his telephone to a new part of the city.

The fact that when he called the chief operator at about six o'clock in the morning her voice "was fresh and cheerful" impressed one of our subscribers, H. W. Colson, general claim agent of the A. B. & A. Railway Company, at Atlanta, who thereupon wrote to District Manager Bowden as follows:

"Through you I write to thank the young lady telephone operator in the chief operator's office for most efficient and prompt service in an emergency that arose with me this morning. I was called about 6:25 A. M. by our telegraph office at my house, phone H-3666, and given information that made it necessary to send one of our men out on a train leaving the Terminal Station at 7:50 A. M. This was Mr. J. P. Smith, whose house phone is D-1002-W at 210 Fifth Avenue, Decatur, Ga. The operator advised me that D-1002-W was out of order. I then

I could have sent a taxicab out with a note, especially in view of the distance to be covered; furthermore the expense of a taxi would have been considerable but on account of the emergency I would have had to try it had not your operator been able and kind enough to get my message through. I have never had better or more satisfactory telephone service."

* * *

Another highly appreciated letter, together with some baskets of fruit, was received by the local operators of the Main exchange at Atlanta from L. W. Rogers Company, who operate a chain of stores. In this letter they said:

"We wish to thank each of you for the prompt, courteous and efficient service rendered the L. W. Rogers Co. at all times, more especially during the hours when we call the Atlanta stores every afternoon.

"The cheerful way in which you perform your incumbent duties greatly relieves the irksomeness of the task of our callers, and at the same time breeds a spirit of closer cooperation.

"As a token of our appreciation and gratitude we are sending some fruits to be distributed among yourselves, which, we trust, will in a small way convey the message of thankfulness we are trying to express."

* * *

In a kindly letter from Peeples & Sherman, wholesale distributors of Valdosta, Ga., they said:

"We do not believe in waiting until the undertaker arrives before sending our flowers, but believe in passing them on as often as possible while they may be enjoyed.

"With this thought in mind we would like to express to your long distance operators our sincere thanks for the excellent service and the courteous treatment which we receive every day."

* * *

A. A. Lowenstein, a member of the firm of Taylor, Lowenstein & Company, naval stores factors and exporters, of Mobile, Ala., who in a postscript mentioned that he talked "a lot over long distance—about \$500.00 a month," commended the service he was receiving in the following terms:

"Please allow us to express to you our appreciation of the good service you are giving Taylor, Lowenstein & Company, long distance calls and local calls. We are giving you plenty of business, but you give us the service. Your long distance operators are mighty good to us in locating people in the country and we certainly appreciate it.

"We also want to let you know what good service Mr. W. B. Hahn is giving us; he is on the job the minute we call him."



Mrs. Pauline Nelson, the popular and efficient operating agent at Coffeeville, Miss., has eight years service record. She handles all the business there, and always has 100% collections.

called the complaint desk and they connected me with the chief operator. Notwithstanding the early hour the lady's voice was fresh and cheerful and I was especially impressed with the fact that she knew what to do and was going to do it. In a little while I got a response sufficient to inform Mr. Smith, with a word or two what was wanted and he got on the job. "The time was so short that I doubt if

A letter received from Mrs. Allene Hynson of New Orleans expressed her sincere appreciation for the excellent service given during her husband's serious illness and her thanks "to each and everyone of the young ladies who answer my telephone." She added: "When it comes to quick service and courtesy, I don't believe our Lafayette exchange can be beat."

The service at Brunswick, Ga., was highly praised in a cordial letter received from R. L. Phillips, president of the R. L. Philips Company, real estate and insurance, in which he said: "We wish to take this occasion to compliment you and your organization upon the very efficient service you are rendering the community through the Brunswick exchange."

"We have frequent occasions to use your long distance service and wish to especially comment on the efficient and affable service of this department. At the same time we wish to state that the service and affability of the operators at your local switch is equally as efficient."

"If at any time our office can be of assistance to you please do not hesitate to call upon us."

B. A. Hagood, a prominent attorney of Charleston, S. C., in writing to thank District Manager McCullough of Greenville, S. C., for prompt installation of a telephone at his summer residence at Pickens, took occasion to mention our new president, Mr. Read, saying:

"I had the pleasure of meeting Mr. Read, the new president of the Southern Bell, in Atlanta last night at dinner and I am sure that everybody connected with the service will be delighted with him."

As a general thing the secretaries of the Chambers of Commerce in our various cities are perhaps more fully informed about such matters as telephone service than the average business man, and for that reason we were especially pleased to note in a letter from E. J. Trotter, secretary of the Chamber of Commerce at Camden, S. C., his statement that "We believe that the telephone service in Camden is as good as can be found anywhere, and no agency has helped more in the progress of our little city than this service."

One of our linesmen at Huntsville, Ala., was able to be of assistance to some motorists who were having trouble and this was the occasion of a letter of thanks from S. L. Terry, proprietor of "The Big Cash Store" at Huntsville, who wrote to Manager Moore:

"A few days ago, my wife and daughter were going to Monte Sano, and one of your linesmen, Mr. Campbell, rendered assistance to them in helping them get up the mountain when they were having trouble with their car. Had it not been for him and his

VACATION TOURING FROM A TO Z

WESTERN ELECTRIC NEWS

<p>A is for Auto you bought 'good as new'</p>	<p>E is for Everyplace else than you town</p>	<p>I is for Increase - (gas never does drop)</p>
<p>B is the Bunch that you draw of a crew</p>	<p>F is for Fine when The Squire shakes you down</p>	<p>J is for Jar when your head hits the top</p>
<p>C is for Camer, left on the shelf you leave everything home except your FORGETORY</p>	<p>G is for Guide who directs you all wrong THEN YOU TURN LEFT AT THE RIVER - THEN</p>	<p>K is for Knickers - Don't dare turn your head</p>
<p>D is for Detour. (Calm down! Be yourself)</p>	<p>H is the Hotel where you toss all night long</p>	<p>L is for Lake where the fish are all dead</p>

magnanimous spirit of helpfulness, they would have been in precarious predicament. This young man showed his colors, and I think he should be commended for his action. I also wish to thank you for the help that he rendered my family, since he is in your employ."

Long Service Wins Honor Badges

Thirty Years
Harvey W. Armstrong, Chattanooga, Tenn.

Twenty-five Years
Rene Gonzales, New Orleans, La.; Wm. C. Johnson, Tenn. Div.; Bernard W. Vogt, Nashville, Tenn.; Richard F. Walker, Wilmington, N. C.

Twenty Years
Earnestine Bauner, New Orleans, La.; Stella R. Betbeze, New Orleans,

La.; O. F. Camp, Ga. Div.; Etta Heady, Bardstown, Ky.; S. C. Jacobs, Murfreesboro, Tenn.; R. F. Smith, Ala. Div.

Fifteen Years

Nida Bell, Manchester, Tenn.; Thos. E. Byassee, Clinton, Ky.; M. W. Francis, Atlanta, Ga.; May L. Gum, Memphis, Tenn.; Mrs. Julia Johnson, Nashville, Tenn.; J. C. Scott, Greenville, S. C.; Annie Sinclair, Paris, Tenn.; Daisy B. Slawson, Charleston, S. C.; J. L. Stark, Ga. Divn.; Allen Warford, Frankfort, Ky.

Ten Years

Laura Apperson, Bessemer, Ala.; Sadie L. Carter, Mobile, Ala.; Taylor Daniel, Tenn. Divn.; Gertrude L. Green, Ashland, Tenn.; Olean Griffith, Birmingham, Ala.; Montine Jackson, Gainesville, Fla.; Louis J. Jones, Shreveport, La.; Clonie McNeal, Me-



Heileg, Salisbury, N. C.; Patrick S. Hinton, Ky. Divn.; Wm. J. Hodge, Jr., Louisville, Ky.; I. I. Ingram, Columbia, S. C.; Wm. H. Jentzen, Jacksonville, Fla.; Olive F. Johnson, Nashville, Tenn.; Marsel L. Johnston, Atlanta, Ga.; Bessie Jones, Macon, Ga.; Helen Jones, Raleigh, N. C.; Nell Jones, Pensacola, Fla.; Ruth H. Keller, New Orleans, La.; Armetta Kelley, Florence, S. C.; Edgar M. Kemp, Tenn. Divn.; Wm. E. Kendrick, Fla. Divn.; Maude J LeBlanc, Houma, La.; Geo. M. McCarroll, Meridian, Miss.; Alice McCown, Atlanta, Ga.; J. S. Mars, Ga. Divn.; Rosa M. McMeans, Athens, Ala.; Willie I. Nunnally, Atlanta, Ga.; Lucile Overstreet, Valdosta, Ga.; Zelma Padgett, Georgetown, Ky.; Lela I. Paschall, Lake City, Fla.; Thos. B. Perry, Tenn. Divn.; Luther H. Pierce, Ky. Divn.; Hattie C. Potter, Atlanta, Ga.; Mrs. Violet Raley, Jacksonville, Fla.; Norma Redd, Augusta, Ga.; Mrs. Rubye Reynolds, Nashville, Tenn.; Nettie D. Rice, Nashville, Tenn.; Mrs. Avie L. Ringo, Nashville, Tenn.; Grace L. Rouse, New Orleans, La.; Mrs. Victorine Savoy, Eunice, La.; Chas. T. Shelton, Louisville, Ky.; Gladys L. Simpson, Nashville, Tenn.; Martha J. Smith, Gainesville, Fla.; Fla.; Rosa L. Smith, Springhill, Tenn.; Mrs. Hettie Stephens, Oakdale, La.; Rosa L. Smith, Springhill, Tenn.; relie Temple, Baton Rouge, La.; Clara Thatch, Jasper, Tenn.; Mrs. Elizabeth W. Thornton, Atlanta, Ga.; Hazel Thornton, Daytona, Fla.; Arthur W. Wages, Blackville, S. C.; Ethel Waldron, Birmingham, Ala.; Lewis T. Weeks, Paris, Tenn.; W. Don Weeks, Millen, Ga.; Edna F. Whitman, New Orleans, La.; Lillie B. Williams, Atlanta, Ga.

ridian, Miss.; Ada W. Melton, Columbus, Ga.; Rosa L. Newman, Charlotte, N. C.; Dora Palmer, Atlanta, Ga.; C. C. Skinner, Donaldsonville, La.; Mabel Warble, Birmingham, Ala.; Thelma Welch, Jacksonville, Fla.; Raymond S. Wood, Atlanta, Ga.; Martha S. Wren, Stanford, Ky.

Five Years

Annie Adams, New Orleans, La.; Jos. L. Adams, Ga. Divn.; Lena M. Adeock, Meridian, Miss.; Evelyn Alexander, Montgomery, Ala.; Mrs. Maude S. Atkins, Ruston, La.; Mrs. Mary L. Boeshan, New Orleans, La.; Helen M. Brandt, Savannah, Ga.; C. E. Brown, Car. Divn.; Lizzie Burrell, Winston-Salem, N. C.; Agnes C. Carlin, Birmingham, Ala.; Wm. H. Carnes, Greenville, Miss.; Philomine Clarisse, Gulfport, Miss.; Mrs. Nannie Clemmons, Georgetown, Ky.; Edna M. Cooper, Athens,

Ga.; Pauline Corley, Atlanta, Ga.; Cecil L. Cothey, Columbus, Ga.; James A Cragon, Nashville, Tenn.; Annie Crowell, Nashville, Tenn.; Carroll W. Culpepper, Geneva, Fla.; Thos. W. Daggett, Car. Divn.; J. C. Delafasse, Opelousas, La.; Lucy M. Desroche, New Orleans, La.; Audie Fields, Columbus, Miss.; Mrs. Florence Fisher, Louisville, Ky.; Mary L. Forester, Memphis, Tenn.; Mrs. Alice Foster, Jacksonville, Fla.; Eunice B. Fowler, Athens, Ga.; Willie John Freche, New Orleans, La.; Cassie A. French, Hammond, La.; Alexis German, Franklin, Tenn.; Lois Gorman, Atlanta, Ga.; Alvin J. Hanler, New Orleans, La.; Frank J. Harper, Jackson, Miss.; Minnie O. Harris, Louisville, Ky.; Mrs. Tessie Harrison, Rutledge, Ga.; Mrs. Vera H. Hartrampf, Atlanta, Ga.; Mrs. Alice T. Hazelwood, Gallatin, Tenn.; Pauline

Organization Changes

Plant

W. H. Hamilton, to frameman, Birmingham, Ala.
 R. T. Carter, to cable splicer, Birmingham, Ala.
 W. H. Tatum, to located lineman, Montgomery, Ala.
 H. F. Chandler, to located head lineman, Alabama division.
 J. B. Hodnett, to cable splicer, Alabama division.
 C. L. Miller, to located lineman, Alabama division.
 R. S. Dugan, to located lineman, Carolinas construction.
 W. E. Rankin, to unlocated lineman, Carolinas construction.

H. V. Satterfield, to district plant chief's clerk, Columbia, S. C.

F. A. Gaddy, to chief foreman installation, Asheville, N. C.

R. O. Cochrane, to chief foreman installation, Charlotte, N. C.

L. M. Crofts, to line and station repairman, Greensboro, N. C.

L. H. East, to frameman, Greensboro, North Carolina.

C. F. Stewart, to plant chief's clerk, Winston, N. C.

To combination man: M. J. Lynn, Jesup, Ga.; F. Murdock, Waycross, Georgia.

H. T. Bacon, to central office repairman, Savannah, Ga.

W. J. Grimes, to C. O. repairman, Nashville, Tenn.

M. A. Candler, to outside plant engineer, Atlanta, Ga.

To exchange engineers: H. B. Bartee, J. W. Davis, Atlanta, Ga.

Arthur Glenn, to clerk division plant accountant, Louisville, Ky.

O. Anderson, to unlocated lineman, Owensboro district.

M. G. Wheeler, to frameman, Louisville, Ky.

F. G. Miller, to assignment clerk, Louisville, Ky.

William T. Bishop, to combination man, Pineville, Ky.

P. L. Miramon, to supervisor of cable testing, Louisiana construction forces.

C. A. J. Berger, to transmission engineer, division plant engineer's office.

Lee Thompson, to right of way agent, division plant engineer's office.

G. O. Selle, to foreman of station installers, New Orleans, La., district.

H. P. Haggart, to field man, division plant engineer's office.

S. L. Shippey, to clerk, New Orleans, La., district.

E. W. Henneka, to cable splicer, Louisiana construction forces.

To line and station installer, Alexandria, La.: J. T. Lee, E. C. Milstead, O. P. Rabalais, Albert Wales.

To line and station repairman, Alexandria, La.: O. J. Dufour, R. H. Rushing.

T. M. Campbell, to bridge man, Louisiana construction forces.

R. R. Brown, to line and station installer, Shreveport, La.

E. S. Bazoon, to central office repairman, Jackson, Miss.

S. J. Biggs, to head estimate clerk, division plant accounting office, Jackson, Miss.

F. H. Brunner, to head time clerk, di-

Current Regulation

Franchises Granted Cumberland Telephone & Telegraph Company, Incorporated, at Henderson and Adamsville, Tennessee, Approved

By E. D. SMITH, General Solicitor

ON July 1, 1924, upon separate applications by the municipalities of Henderson and Adamsville, Tennessee, the Railroad and Public Utilities Commission of the State of Tennessee approved franchises previously granted the Cumberland Telephone & Telegraph Company, Incorporated, in those municipalities.

These franchises were granted and their approval sought in connection with the proposed purchase by the Cumberland Telephone & Telegraph Company, Incorporated, of the telephone properties of the Allen Estate in Alabama, Mississippi and Tennessee.

Montana Public Service Commission Renders Important Decision

On February 26, 1924, the Public Service Commission of Montana, in a proceeding instituted upon its own motion against the Mountain States Telephone and Telegraph Company, handed down a most comprehensive opinion, dealing with the telephone business as a whole in the State of Montana.

The Commission approved the state-wide basis of fixing rates; theories of principles controlling valuation in rate proceedings; rejected reproduction

cost new as an exclusive method of fixing a rate base; made an allowance for construction work in progress, and allowances of physical value for omissions and contingencies and for interest during construction; fixed the amount of working capital; made allowance for going concern value; determined the rate base; ascertained the proper depreciation charges for depreciable property; approved the license agreement of the Mountain States Telephone and Telegraph Company with the American Telephone and Telegraph Company and the contract between the Mountain States Telephone and Telegraph Company and the Western Electric Company; approved a return of 8%; the Commission then grouped and classified the exchanges, established rates for each group and provided that exchanges should be automatically raised or lowered to the groups in which they should belong in the future as the number of stations should increase or decrease.

This opinion and the decision of the Commission will be found in Commission Leaflet No. 148, published by the American Telephone and Telegraph Company, beginning on page 666.

ACTIVITIES OF THE EMPLOYEES' BENEFIT FUND COMMITTEE

The Employees' Benefit Fund Committee submits the following informal report of its activities for the six months ending June 30, 1924:

Pensions	\$ 8,370.00
Accident Disability Benefits	11,483.00
Accident Disability Expenses	9,729.00
Sickness Disability Benefits	72,106.00
Accident Death Benefits	12,616.00
Sickness Death Benefits	6,216.00
State Insurance	196.00
	\$120,716.00

In addition to the above, "Other Benefits" to the amount of \$17,649.00 were paid out. The following figures for the same period are for completed cases only:

PENSIONS	
Number of pensioners at end of period:	
Service Pensioners	27
Disability Pensioners	13
	40
ACCIDENTS	
Number of Accident Disability Cases	282
Payments	\$ 31,898.00
Average Payments per Case	113.11
SICKNESS	
Number of Sickness Disability Cases	848
Payments	\$ 75,416.00
Average Payments per Case	88.94
DEATHS	
Number of Cases—Accident	3
Payments	\$ 11,370.00
Number of Cases—Sickness	10
Payments	6,216.00
LOANS	
Number of Loans made	77
Amount of Loans	\$ 9,347.70
Average number of employees during period	15,685

EMPLOYEES' BENEFIT FUND COMMITTEE

LELAND HUME, Chairman
 J. C. THOMPSON F. L. WOODRUFF W. D. MOORE J. E. WARREN
 L. D. SHARP, Secretary

(Continued on page 35)

(Continued from page 34)

vision plant accounting office, Jackson, Miss.

T. J. Carnes, to plant dispatcher, Jackson, Miss.

W. F. Carty, to American Tel. and Tel Company, Atlanta, Ga.

T. E. Dodd, to combination man, Durant, Miss.

E. L. Freeman, to head statistical clerk, division plant accounting office, Jackson, Miss.

J. W. Gunter, to manager, Lexington, Miss.

T. T. Hinton, to construction department, Mississippi.

T. O. Majure, to clerk construction department, Mississippi.

N. L. Miles, to combination man, Sumner, Miss.

B. M. Pullen, to combination man, Rolling Fork, Miss.

M. L. Richard, to equipment installer, Winona district, Mississippi.

J. D. Stansbury, to head material clerk, division plant accounting office, Jackson, Miss.

To central office repairmen, Nashville, Tenn.: J. C. Pennington, O. B. Huddleston, E. V. Stuart, J. M. Marlin.

To chief clerk: J. T. Stepp, Memphis, Tenn.; H. E. Welch, Chattanooga, Tennessee.

S. E. Wade, to acting district plant chief, Memphis, Tenn.

Traffic

Vinnie Brown, to chief operator's clerk, Columbus, S. C.

Loretta Blanchard, to information operator, Charleston, S. C.

Mattie Riggsbee, to central office instructor, Raleigh, N. C.

To supervisor: Dezzie Courtney, Florence, S. C.; Annie Julia Parker, Wilmington, N. C.; Goldree Rogers, Durham, N. C.

J. D. Kennedy, to toll traffic manager, Atlanta, Ga.

To central office clerk: Irma Reid Mitchell, Augusta, Ga.; Clemmie Mayfield, Atlanta, Ga.

To supervisor: Eva Jones, Atlanta, Ga.; Magnolia Hartley, Augusta, Ga.; Mary Augros, Savannah, Ga.; Marion Thompson, Savannah, Ga.

Jessie Hoffpauir, to toll supervisor, Shreveport, La.

Hattie Riggan, to information operator, Monroe, La.

Maude Atkins, to operator-in-charge, Arcadia, La.

Bessie Whittaker, to supervisor, New Orleans, La.

Georgette Simmons, to chief operator, New Orleans, La.

To information operator, New Or-



J. D. Schultz

Deserved Promotion Comes To J. D. Schultz

In chronicling the promotion of J. D. Schultz, who goes from the Atlanta branch of the Western Electric Co. to Chicago as superintendent of the dis-

tributing house shop, the W. E. "Sunny South" says:

tributing house shop, the W. E. "Sunny South" says:

"J. D. Schultz has not been in Atlanta very long, but he has managed, during his short stay, to make a lot of friends.

"Mr. Schultz's early Western Electric history reads like the life history of a Montana horse thief,—always on the move. His first work with the Bell System was assembling subsets in the Clinton Street Shops, in Chicago, in 1904, where he remained until 1907. After that he spent a year in the PBX installation department of the Chicago Telephone Company, and was back with the Western again for a few months in 1908. A long jump took him to the Los Angeles shop of the Pacific Telephone & Telegraph Company for a short time, and 1909 found him starting with the Western again in San Francisco. He transferred with the shop to Emeryville and managing somehow to stay there, was gracefully wearing the title of assistant shop superintendent, in charge of production, at the time of his transfer to Atlanta as shop superintendent in November, 1921. Unable to remain with us long he is now leaving for Chicago as superintendent of the Chicago distributing house shop."

leans, La.: Bertie Blanchard, Anna Brady, Mabel Raftery, May Myers, Ada Whitney.

Camille Cali, to supervisor, New Orleans, La.

Elise Smith, to supervisor, Clarksdale, Miss.

Francis Latham, to chief operator, Eupora, Miss.

Alice Colton, to operating agent, Marks, Miss.

Genevieve LaPresto, to operator in charge, Rosedale, Miss.

Mrs. Marguerite Alexander, to operator, Memphis, Tenn.

Willie Belle Gross, to supervisor, Memphis, Tenn.

Bertha Minor, to supervisor, Memphis, Tenn.

Donnie Warner, to supervisor, Memphis, Tenn.

Mrs. Lillian Nolen, to chief operator, Nashville, Tenn.

Mrs. Sammie White, to assistant chief operator, Nashville, Tenn.

Ruby Murrey, to supervisor, Nashville, Tenn.

Gertie Hopper, to supervisor, Nashville, Tenn.

Louise Dodson, to evening chief operator, Nashville, Tenn.

Margaret Agnew, to supervisor, Chattanooga, Tenn.

Mabel Long, to instructor, Chattanooga, Tenn.

Accounting

H. M. McDonald, to accounting head toll clerk in division auditor of receipt's office, Jackson, Miss.

G. H. William, to assist revenue accounting supervisor on installation of stub accounting plan at various offices.

In Memoriam

Sam Rossie, line and station repairman, Memphis, Tenn., age 39; entered service October 1, 1911; died July 5, 1924.

Humphrey C. Wilson, line and station installer, Atlanta, Ga., age 44; entered service August 7, 1916; died July 3, 1924.

Terry E. Eason, line and station installer, Orlando, Fla., age 39; entered service June 18, 1919; died June 21, 1924.

Mrs. Margaret L. Banta, operating agent, Little Rock, Ky., age 48; entered service December 1, 1909; died July 10, 1924.

Carolina Companies Hold Conference

THE Carolina Telephone & Telegraph Co. has recently completed a new central office building, switchboard and other telephone equipment of which the city of Washington, N. C., should be very proud. The building was designed to house adequate telephone equipment to take care of Washington for many years to come and every feature of economy, convenience, and satisfactory service was considered in its design and erection. The switchboard and central office equipment was made and installed under contract by the Western Electric Co., Chicago, Ill., and consists of what is technically known as a No. 1D switchboard and central office equipment. It is of the modern common battery multiple type and so designed that flexibility can be obtained and additions can be made to take care of changed conditions and an increased number of subscribers. Every contingency for the attainment of reliable and efficient service is embodied in the design of the equipment and there is no reason why subscribers in Washington should not receive efficient and satisfactory local and long distance service.

The outside plant was entirely rebuilt and additions made thereto to take care of considerable growth in subscribers and it is hoped that Washington's business activities will improve and that the character of the service rendered by the telephone company may be conducive to a considerable growth in subscribers' stations and the use of the long distance lines connected therewith. Additional toll facilities are being provided by the Carolina Telephone & Telegraph Co. and its various connecting companies, that prompt and efficient service may be had to the entire country, including Canada and Cuba.

The object of the conference held in Washington by the Carolina Telephone & Telegraph Co. was to become acquainted with representatives of the various connecting companies and to discuss plans and means of improving service to nearby towns and communities served by connecting companies. Representatives of these companies were present and talks were made by quite a number of them. It is the policy of the companies to aid in the development of territory and to improve facilities and service that the demands of the public may be met, and

the Carolina Telephone & Telegraph Co. is particularly interested in improving the service to the various towns and communities in eastern Carolina.

A very delightful barbecue luncheon was served by the Carolina Company at Riverside Park, and through the courtesy of Capt. Osborn boat rides were enjoyed by a number of the guests. This barbecue was prepared under the supervision of M. E. Matthews, plant manager of the Carolina Telephone & Telegraph Co., assisted by D. W. Bell, local manager, H. L. Williams, and P. L. McCabe, of Tarboro. The barbecue was cooked in old Edgecombe style by Bat Lewis, who has been preparing barbecue for some twenty-five years.

A delightful address of welcome was made by Mayor C. H. Sterling. The meeting was presided over by A. McDowell, of Scotland Neck, president of the Carolina Company, and talks on various subjects were made by Geo. A. Holderness, secretary and treasurer of the Carolina Telephone & Telegraph Co.; M. B. Speir, Carolina manager, Southern Bell Telephone & Telegraph Co., Charlotte; J. R. Porter, general manager, Home Telephone & Telegraph Co., Henderson; Guy C. Myers, special agent, Southern Bell Telephone & Telegraph Co., Charlotte; W. C. Manning, manager, Williamston Telephone Co.; C. P. McCluer, general manager, Carolina Telephone & Telegraph Co., and W. C. Darrow, traffic manager, Carolina Telephone & Telegraph Co.

The Punster's Trip To 'Phoneville

By B. FRANKLIN HUNTER

*A trip like this is not amiss,
It gives a moment's pleasure;
Perhaps you'll find life's daily grind
Is lessened in a measure.*

*If you can smile for just a while,
It cheers the world around you;
It's good for you and others, too,
If in such moods they've found you.*

*So once again my punning pen
May cheer in cloudy weather;
In other times and other climes
We all may smile together.*

* * *

Talk, if you will, about the arctic explorers! Why there's not a day but that the linemen travel from "Pole" to "Pole."

* * *

Do you remember that old wooden shelf where mother used to hang that leather strap? Nowadays we might call it the "Switchboard."

* * *

And, painful to recall, there was a certain parental force that gave it its momentum. It wasn't an "automatic switch."

* * *

The telephone business holds well together; it's so well "wired."

* * *

Yes, gentle reader, the bells are rung and the belles answer them.

* * *

And the heart of many a belle is wrung by the inaudible and inarticulate voice at the other end of the line.

* * *

Speak gently, dear patron! There's many an unkind "slip" 'twixt the 'phone and the lips.



Financially as solid as the Rock of Gibraltar, and yet there is not a day but that the entire telephone business goes on through a "Receiver."

* * *

Not a great variety—only a "single line" but, Shades of Croesus! the volume of the 'phone business!

* * *

A conversation at the gate of heaven:

Telephone Girl—"I would like to get my harp."

St. Peter—"Number, please."

* * *

A scolding wife may find it somewhat inconvenient to call up hubby on the "Long Distance" and suffer the three-minute limit to the conversational episode.

* * *

It's all perfectly legitimate; but the 'phone companies do a great deal of "underground business."

* * *

And while they recognize the authority of their officials, yet there is a great deal done "over their heads."

* * *

A slogan for wash-day—"The line's busy."

* * *

We will all now arise and sing the hymn of 'Phoneville—"Blest be the tie wires that bind."

MISTAKES WILL HAPPEN

First Bandit: "How's business?"

Second Bandit: "Rotten! I stuck up a guy this morning who looked to be a bootlegger and he turned out to be only a bank president."

Why Not Give the Sun a Chance?

By A. M. BOROUGHS, District Traffic Manager, Winona, Miss.

EVERYBODY knows that sunlight is the best light to work by. It strains the eyes less than electric light—and it costs nothing.

There has come from time to time to my mind the enormous amount that we spend yearly for lights and power, and I have often wondered just how much saving could be made, if the proper attention was given to turning off lights when not needed. Now it is true we have a little placard attached to every drop and over every switch with something like this printed thereon—"Please turn out the lights, help save." No doubt this has in a measure saved many a dollar, but it is not the real answer.

When this placard was first placed on the drop or switch everybody would naturally look at it through curiosity, then for a few days the lights would be turned off dutifully, but as time wore on the placard was accepted as a part of the scheme of things, and naturally the "eye would see without seeing" and we again relaxed into the old habit of not turning out the lights.

Not very long ago I went into one of our medium sized exchanges of about sixteen hundred subscribers. The day was bright and sunshiny. As I walked into the manager's office, I noticed over his desk the light was burning with unusual brilliancy. I asked him why all the light, and his reply was: "I wasn't conscious of the fact that it was burning." I found the light burning in the storeroom, in the room where batteries were being charged, in the plant chief's office and in the wash room, and not a soul other

than the manager and cashier in that part of the building. I went up to the traffic quarters, and found the light on the stairway burning, and about four in the operating room that were unnecessarily burning. In the wire chief's room I found the "daddy" of them all burning. I think it was a 175 or 200 kilowatt. I don't recall. I know it was so big it fairly radiated heat to such a degree as to keep the wire chief continually mopping his brow.

When the plant chief came in I asked him casually just how much we paid for lights and power at that exchange per month. He said that it would average about \$125.00 to \$135.00. Well, we all had a conference from chief operator, manager and plant chief down to the janitor, and we discussed the question of turning out lights and changing the size of the globes to standard specification, and as a result of this meeting for the last three or four months our light and power bill is about \$75.00 per month, according to the record—an average saving of \$50.00 per month or \$600.00 per year.

We have no doubt any number of exchanges throughout the Bell System the same size as the one I am trying to write about where the same saving can be made. The secret of the whole thing is going into the matter personally with every employe on the payroll, and arousing his interest in these questions. Then when he does a good job tell him about it, as I know was done in this case. In other words, get in personal contact with those you are working with, inject the human element into "the system" and the results obtained will far exceed your greatest expectations, and it will not be necessary to have the stereotyped cards: "Please turn off the light, help save."

A QUEER CASE OF TROUBLE

The telephone people are called upon to do many unusual things, but Jackson, Miss., claims the distinction of clearing the most unusual case of trouble.

A lady called in very excitedly and told Testboardman Moore that her telephone wire, running through the cellar, was on fire. Mr. Moore got in touch with Troubleman Carr and rushed him to the scene. On inspection he found a lightning bug on the wire, the cause of the confusion. He promptly removed the bug and saved the fire department a trip.



Chief clerks to district plant chiefs in Mississippi. These men prepare and handle all reports of and to the district offices. Left to right: C. H. Foster, Winona; A. A. Smith, Hattiesburg; W. J. Lollar, Jackson.

EMPLOYEES · ASSOCIATION · ACTIVITIES



Big Doings at Greenville In June

By W. H. CRITZ

Our local had one of its very best meetings on June 24th at Moon Lake Country Club, a very beautiful place situated on the bank of Moon Lake, one of the largest and prettiest lakes in this delta section of Mississippi.

We had a good attendance, and had as our guests on this occasion Jim Gillespie, president from Nashville and Howard Askew, our secretary from Atlanta and W. A. Deale, Mississippi manager from Jackson.

The meeting was called to order by chairman, and after roll call 42 members were present. A paper was read by W. H. Critz on the subject of collection methods.

Our president and secretary each gave us excellent talks, and each seemed to be at their best, after enjoying a wonderful dinner at the club.

We enjoyed bathing, fishing, and dancing, and all members went away feeling like they had been to a real meeting where they had enjoyed mingling with members of the telephone family.

Enjoyable Picnic At Princeton

By BESSIE BRELSFORD

On Saturday evening, June 14th, local No. 17, Princeton, Ky., met at their office and motored out to Lake Rabbit, a beautiful lake about three miles from the city, for a picnic.

After spending several hours swimming, we enjoyed the delightful picnic supper served at sunset.

Nearly all members of the local were present and we were pleased to have Mr. Semm and Mr. Habish, switchboard men from Louisville, also Mr. Beavins and Mr. Jones, Owensboro construction men, as our guests.

We have a very wide awake local and all members thoroughly enjoyed this outing.

NOTICE

Articles and photographs for publication in the News must reach the editor by the 10th of the month, to be used in the issue of the month thereafter. Please use double space in type-writing, to allow interlineations.

Paris, Tenn. Local All Subscribe

By CLAUDEYNE HOWELL

On the third Thursday evening in May, the Paris local, No. 237 met for a brief business meeting with the object of discussing the employes' plan of purchasing A. T. & T. stock. The employes have been for some time very much interested, but hesitated because, I suppose, we did not thoroughly understand the plan, having never taken the time to think deeply on the vital importance of "Saving up for a rainy day through the purchase of A. T. & T. stock."

Mr. Fisher, district traffic manager, Mr. Jacobs, district manager at Jackson, and Mr. Berry, manager Union City, honored us with their presence, and Mr. Fisher, who has the distinction of never letting a prospective buyer get away, gave us a splendid talk on the employes' purchase plan. So vividly did he draw the picture of an independent old age through the purchase of telephone stock, that at the close of the meeting over half of those present were ready to subscribe for at least one share. The result of the meeting was that in less than one week the traffic force had subscribed one hundred per cent strong.

Cake and fruit cream was served after the meeting adjourned and every one present spent a most profitable and enjoyable evening.

TRAINING

"Why is it that a red-haired girl always marries the meekest type of men?"

"She doesn't. They just get that way."



This happy looking bunch of girls is the operating force at Paris, Tenn., who have subscribed 100% strong for A. T. & T. stock. Top row: Mrs. Susie Adams, Ruth Kirkland, Mrs. Annie Clark, Rubye Jackson, Rava Winchester, Pearl Trotter, Mrs. Claudayne Howell. Bottom row: Lillian Hill, Annie Laurie Phillips, Annie Sinclair, chief operator (who has fifteen years service), Annie Davis, Lena May Smith, Martha Marrs.



The telephone people at Columbia, S. C., celebrated the Fourth of July with a picnic and swimming party.

Columbia Local Celebrates The Fourth

By H. V. SATTERFIELD

Those of us in Columbia who intended to wake up on the morning of July 4th and yell, "Hurrah for the glorious Fourth" were tempted, upon looking out of the window that morning, to groan instead and say, "What a h— of a fourth!" for a picnic at Boyden's Arbor had been planned and a steady, dreary rain was falling.

Well, some of the most determined of the crowd gathered at the office anyway and watched it rain until about noon, when the clouds stopped to rest awhile. About twenty had congregated and we "lit out" as soon as the rain hesitated a few minutes. On the way, the truck broke down and we had to walk a "piece" of the way, but we intended to have that picnic, regardless.

We did! The dinner was fine, the boating was fine, and the water was great—at least, those who didn't shiver to death said so! At any rate, a "good time was had by all," and after the swimming, some of the crowd elected to dance, while others went back to finish the eats.

Luckily, it didn't rain any the entire afternoon and, of course, we didn't mind the clouds. We hated to see night coming on, however, for we had had our third annual Fourth of July picnic and those who missed it missed a fine time.

City of Jackson Entertains Linemen

By E. L. FREEMAN

On June 5th, the city of Jackson, Miss., through Mr. Williams, the city electrician, invited the linemen of Jackson to a banquet at the Bon Ton Cafe. About thirty-five linemen were present, including representatives of the various wire using companies, the Western Union, Postal Telegraph, Illinois Central Railway, City of Jackson, the Fire Department and a dozen telephone linemen.

The banquet was presided over by Mr. Williams, who explained that the meeting was for the purpose of showing his appreciation of the hearty cooperation he had received from all the linemen located here. He stated that he had never called on a telephone lineman for assistance and cooperation in any way and failed to get it.

Talks were made by Mayor Scott, and representatives of the wire using companies. Mayor Scott spoke on the growth of the city of Jackson and how the telephone company was helping by furnishing telephone service.

Such meetings serve to cement tighter the bonds of fellowship and service that unite men in the same work and it is to be hoped that get-together meetings may be held again in the future.

Charlotte Has Big Picnic

By N. R. REYNOLDS

Friday, June 13th, will long be remembered by the telephone folk of Charlotte.

We began to assemble at Lakewood Park about 2:30 P. M. with baskets laden with everything good to eat. It was, indeed, a glorious place in which to enjoy an afternoon as the trees were swarming with sweet singing birds and the children as well as the older folk found great pleasure in listening to the music and watching the various species of animals in the zoo.

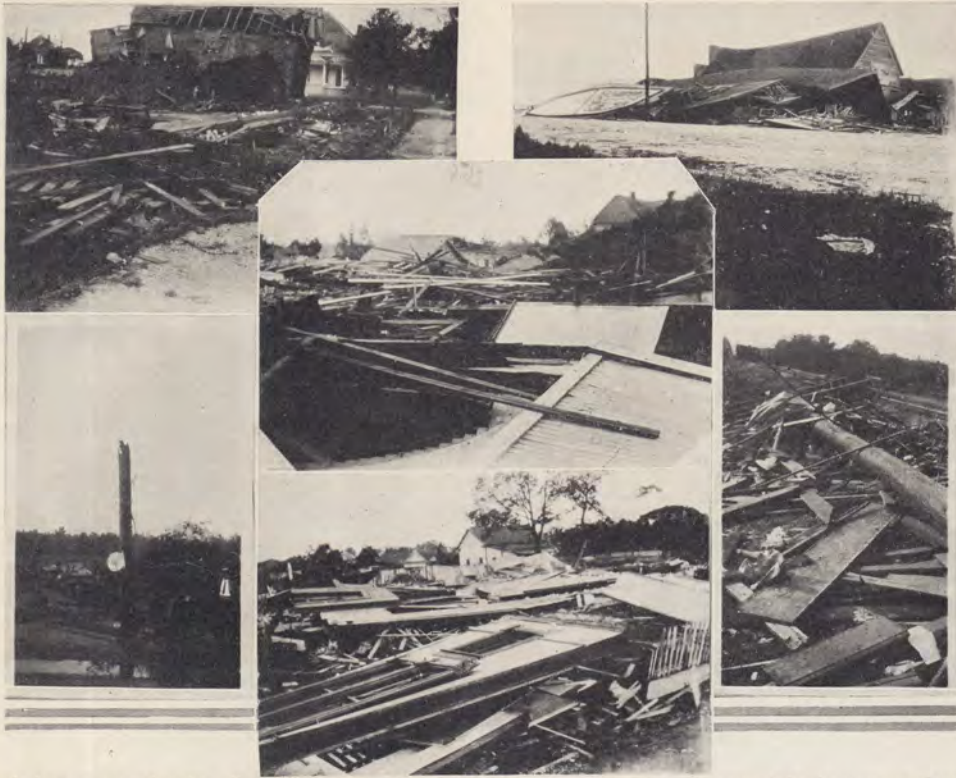
Our fun was not yet under way for there remained a delicious dinner to be served and numbers of fried chickens to be stowed away.

After dinner some went to the pavilion where they enjoyed the dance while others had rides in motor boat and canoes.

Twelve o'clock found most of us at our respective abodes, tired but happy and ready to repeat the occasion any time.



C. A. McCurdy, chief foreman of construction at Jackson, Miss., is back after four months' sick leave. This picture was taken at Hot Springs, Ark. Mr. McCurdy has a 30-year service record, and is well known and popular in our Southern territory.



A few scenes showing disastrous effect of the Collins, Miss., tornado. At top, left, is the wreckage of the chief operator's home, right, the printing office. In center, the ruins of the Baptist church, and below, the place where two girls were killed by the storm. On left, a 35-ft. pole whose top was blown off, and at right, another big pole that was uprooted.

Mississippi Tornado Leaves Wreckage

Serious storm damage occurred when the town of Collins, Miss., and adjacent territory was swept by a tornado during the month of May. The wind blew with terrific force and many buildings were demolished.

Among the houses destroyed by the tornado at Collins were the Baptist Church, the Commercial Printing Company, the home of the chief operator and another residence where two girls were killed when the house collapsed. The telephone service was entirely suspended on account of the damage done to poles and wires and much damage was also done to toll lines. At Johnson Station, near Summit, Miss., the wind blew the top off of a 35-foot cross-topped pine pole and other poles were uprooted.

Repair crews went immediately to work and the service was restored within a short time.

Jacksonville Locals Have Second Annual Beach Party

By DONALD G. HALL

On Friday evening, June 20, 1924, the Jacksonville locals joined hands in putting over their second annual beach party in a successful manner.

A flock of Seminole busses met the

throng of pleasure seekers at the Main exchange and transported them safely over the eighteen mile highway which was under reconstruction. Due to the roughness of the road, the trip, according to one party, was made in two laps—the lady's on his left and his wife's on the right.

Quite a number of the folks drove their own cars in lieu of riding a bus. After the first car pulled out, we represented a full grown motorecade bound for somewhere or bust.

Arriving at the beach, a large part of the folks took to the water. Tide was just right for bathing and the moon was just right for—oh, hang the detail. Who, among us, hasn't been to the beach?

After the late bus, which waited for some of the girls that had later reliefs, had arrived, the secret leaked out. Eats were spread at one of the restaurants for the relief of the hungry. A check up as the last sandwich was conquered revealed that 120 persons had taken part in the fray and each and every one did noble work.

Then, as they say in paper bound editions, we repaired ourselves to the shin dig. A dance pavilion had been reserved for the Blue Bells and their guests, at which the many phases of present day dancing were displayed.

NOW LET THE EAGLE SCREAM!

(Continued from page 6)

ed on a telescopic mast fitted to the truck. It is the work of only a few moments to erect the mast to its full height with the horns at the top.

When the tail board of the truck is lowered, it becomes a well devised speaker's platform, supported by legs of iron pipe. The platform also has a railing of pipe and rope for the sake of convenience and safety.

The speaker mounts the platform by means of portable steps and finds a large stand placed conveniently on the front rail to serve both as a reading stand and as a support for the microphone of the Public Address System. There is ample room on the platform for the speaker to move about and feel perfectly at ease.

It is the microphone which picks up the words of the speaker and passes them on to the vacuum tube amplifiers. After the voice is amplified, it is projected through the horns at the mast-head, so that even the outskirts of a large crowd will hear perfectly.

A phonograph is carried with the truck and ordinary records used to entertain the crowds by the same system of amplification and projection. If the radio habitue brings a radio receiving set to the truck, radio programs can be used in the same manner.

This truck with the Public Address System and its complete speaker's platform, is the embodiment of everything a public speaker needs except, perhaps, the usual pitcher of water, and that can readily be placed on the stand. But with the new system of voice amplification, water is fast becoming a tradition, and speakers do not need any first aid for the throat.

Politics is one of the newer jobs of the Public Address System, but coming to the aid of the party is not its only or even its principal service. Great cathedrals have installed the system in some one of its forms; theatres, auditoriums, and steamships make use of it; through it have come important speeches and addresses, announcements at races, and at sporting events. The mere list of the uses to which the system has been put would take considerable space. But this year is the spell-binder's year.

"Ladies and gentlemen, I am indeed glad to look upon all these bright and smiling faces—"

He's off!



A group of picnickers at the outing of the Louisville auditor of receipts office.

Auditing Force at Louisville Give Picnic

By R. Y. SPALDING

After several weeks of planning and one postponement due to inclement weather, the employes of the Kentucky division auditor of receipts' office together with their friends started early on the morning of June 29th for an all day picnic.

The entertainment committee had left nothing undone to provide a most enjoyable day for all, the program containing contests for both men and women, many of which were hotly contested, and as for the refreshments, we had everything imaginable that was under one-half of one per cent.

The feature of the day was the ball game between Perkin's Peerless Performers and Baird's Bat Busters, which resulted in victory for the former by a 4 to 1 score. Men and women of the accounting office were the players and it was a hard fought game, being marred only by an accident to the leader of the Bat Busters, who sustained a sprained ankle in the ninth inning while trying desperately to push over another run for his team.

After the evening meal there was so much left over that it was announced that a party and dance would be given on Monday night. Nearly all turned out for the dance, and all had a good time and agreed that another picnic be arranged later in the summer.

Delightful Picnic at Jackson, Miss.

On July 14th it was decided to hold a picnic at Livingston Park for the benefit of the members of the division traffic office force at Jackson, their wives and husbands and a few invited guests.

The members of this local entertain in rotation and Miss Miller, traffic accountant, acted as hostess.

The class taking central office instruction, together with the instructor, Mrs. Ruby McClendon, the Jackson toll and local chief operators, Mrs. L. McKay, matron, P. H. Boger, A. M. Boroughs and H. H. Grimes, district traffic managers, with a few outside friends were invited.

Mr. Cates and Mr. Ball took everyone (and the refreshments) out to the park in their cars, and considering the amount of "eats" we had, this was no small job.

Most of the crowd went swimming, and while none of us received a leather medal, nor have had any flattering offers from Mack Sennett as yet, we are all expecting to do so.

A. M. Boroughs, from the Winona district, couldn't come, but the other two traffic managers were our guests. Everyone was "too full for utterance." Fried chicken, potato salad, pickles, rolls, sandwiches, baked ham, soft drinks, ice cream, cake and watermelon will, if persisted in, cause one to feel that way.

Miss Rietti had a beautiful cake cov-

ered with white frosting with a blue border on the edge and a blue bell, with "Cumberland Telephone & Telegraph Co., Local 86" on it.

After doing all the damage to the above that we possibly could, Mr. Ball and Mr. Cates got their cars under motion and took everyone home.

Everyone present wishes to thank Miss Miller and Mrs. Ball for making the picnic such a success.

Here's A New One--- A Breakfast Party

By VIOLET MINK

"Good morning, folks!"

Um! just smell that bacon and eggs.

The Chattanooga Hemlock local No. 41 conceived the idea of having a "breakfast party."

Meeting at the office at the early hour of 6 A. M., Sunday, June 29, a bunch of hikers started for Indian Springs. They were soon overtaken by a Ford containing the cooks and eats, which arrived in time to prepare breakfast for them.

Oh! the joy of it, coffee, bacon and eggs, hot rolls, butter, canteloupes—My! we sure did eat.

After breakfast the time was spent in jolly conversation, combined with picture taking.

One thing certainly can be said of Mrs. Ada Harrell, chief operator, and Floyd Hodge, construction foreman, they can't be beat when it comes to cooking.

Thirty-two including invited guests attended the breakfast. All voted it a big success.

THE BEST CUSTOMERS

"What's tickling Hickey so?"

"A bootlegger offered him a commission for new customers, so Hickey, by way of a joke, gave him the membership roster of the Civic Dry Enforcement League."

"Well?"

"Today Hickey got a commission check for \$550."



Some of the Chattanooga Hemlock local on their hike to Indian Springs.

"THINGS ARE'NT LIKE THEY USED TO BE"

(Continued from page 26)

Superstition has changed to Faith. If you have faith in yourself, in the business you are engaged in, in your fellow man and in God, and with every degree of intelligence train your minds to think only good thoughts, eat only good wholesome food, take plenty of exercise, and keep your bodies clean, you will not be subject to the ills, troubles, and pain which might be caused by disobedience to the natural laws.

It is amusing to some of us today to think how we hated to be called on the carpet before the "big boss," who seemed to think that to obtain best results, he had to "bawl-you-out," and tell you how little sense you had; and compare that with the present day conference, where the boss sits back and listens, and seems to think the boys out in the field have as much sense as he has. Our best executives today fully realize that to obtain the best results, they must stimulate their assistants to greater action and better judgment by words of praise and expressions of confidence.

We used to think that money was the greatest asset possible for us to have, because with it, we could buy the things we wanted, and do most toward helping our fellow man. Today our idea is different; we know that money is the least thing in life. So many things are worth more than money. The things which really count in

life's game, that make sunshine and happiness, cannot be purchased with money.

While "things aren't like they used to be," who is it that wants them to be?

Careful Motor Driving Reduces Accidents

The fact that drivers of motor vehicles in our territory have been devoting much thought and attention to the subject of avoidance of accidents by careful driving is indicated by the number of cars in each division that carry insignia showing no accidents. In the Carolinas division fifty-two cars are decorated with insignia indicating that they have had no accidents in two years, and twenty-three cars carry the 1923 year plate showing no accidents during that year.

In the State of Kentucky the highest mileage per gallon was made by the following:

Ford roadster, 22.03 miles per gallon, L. S. Lemond, Fulton, Ky., driver; one-ton Ford truck, 9.25 miles per gallon, S. Tucker, Henderson, Ky., driver; 3/4-ton White truck, 11.6 miles per gallon, N. Jones, Winchester, Ky., driver; 3/4-ton Reo truck, 8.39 miles per gallon, Fred Metcalf, Louisville, Ky., driver; two-ton White truck, 5.6 miles per gallon, J. M. Butler, Winchester, Ky., driver.

Similar excellent records were made in other divisions, but detailed information is not at present available.

TELEPHONE ENGINEERING AND HOME STUDY

(Continued from page 25)

Electricity & Magnetism and Their Application to the Telephone Plant—a series of 5 pamphlets by the A. T. & T. Co.

Telephony

Telephony—McMeen & Miller.

Telephone Service—Bureau of Standards Circular 112—Government Printing Office, Washington, D. C.

Business English

Correct Word and How to Use it—J. T. Baker.

Business Man's English—Bartholomew & Hurlbut.

Manual for Writers—Manly & Powell.

English & Engineering—Aydelotte.

Principles of Accounting

Elements of Accounting—Kline.

Accounting Theory & Practice—Vol. I & II—Kester.

Accounting Principles—Vol. 9 of Alexander Hamilton Course.

The Philosophy of Accounts—C. E. Sprague.

Cost Accounting

Cost Finding—Vol. 10 of Alexander Hamilton Course.

Cost Accounting Principles & Practices—Jordon & Harris.

Economics of Business

Economics of Business—Vol. 2 of Alexander Hamilton Course.

Some Problems in Current Economics—M. C. Rorty.

Commercial Law.

Business Law—Corrington & Bergh; or,

Commercial Law—Vol. XII, Alexander Hamilton Course, Edition of 1914.

Human Nature

Human Traits—Edman.

Human Efficiency and Levels of Intelligence—Goddard.

Psychology in Daily Life—Seashore. The Executive and His Control of Men—Gowin.

Personal Development

Developing Executive Ability—Gowin.

Addresses to Engineering Students—Waddell & Harrington.

How to Live—Fisher & Fisk.

Efficient Life—L. H. Gulick.

Mind and Work—L. H. Gulick.

A Tulsa (Okla.) concern recently held a sale at reduced prices by telephone only. Many customers who visited the store expecting to benefit by the bargains were told that their orders would not be filled unless given over the telephone.



Greenville, Miss., local on their outing at Moon Lake.

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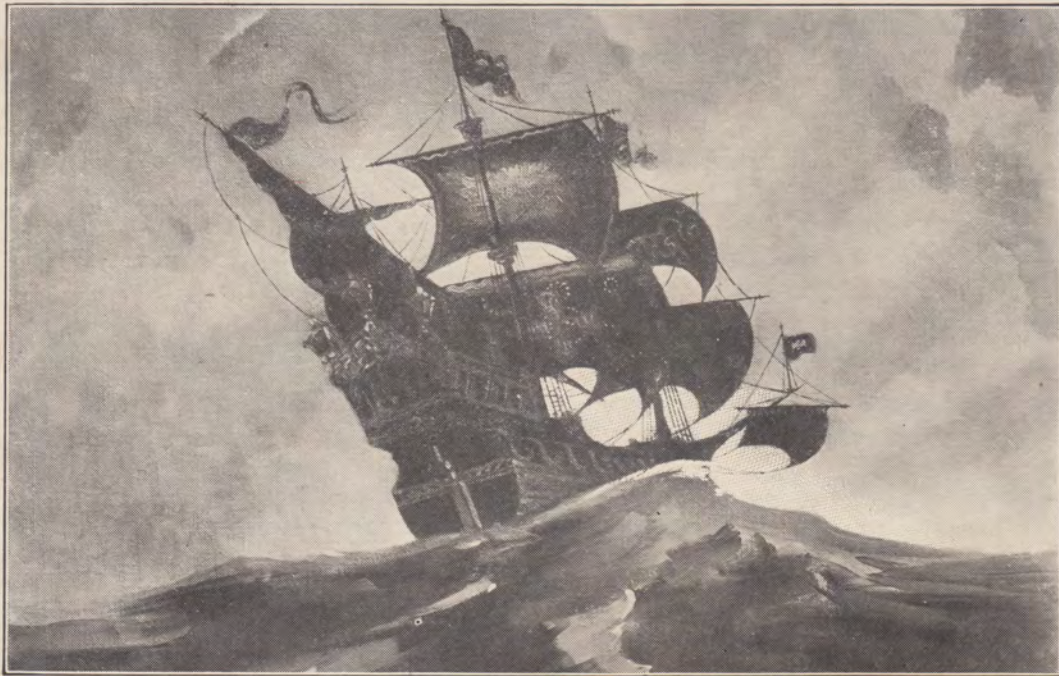
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The general executive committees are composed of the chairmen of each state executive committee of each department and meet semi-annually with the general department heads of the Company.



The Spirit of Pioneering

Impatience with present facilities, a restless searching for perfect things—these have driven men to discovery and invention. They possessed the early voyagers who turned their backs on the security of home to test opportunity in an unknown land. They explain the march westward that resulted in this settled, united country. And they have inspired the activities of the Bell System since the invention of the telephone.

The history of the Bell System records impatience with anything less than the best known way of doing a job. It records a steady and continuous search to find an even better way. In every department of telephone activity improvement has been the goal—new methods of construction and operation, refinements in

equipment, discoveries in science that might aid in advancing the telephone art. Always the road has been kept open for an unhampered and economic development of the telephone.

Increased capacity for service has been the result. Instead of rudimentary telephones connecting two rooms in 1876, to-day finds 15,000,000 telephones serving a whole people. Instead of speech through a partition, there is speech across a continent. Instead of a few subscribers who regarded the telephone as an uncertain toy, a nation recognizes it as a vital force in the business of living.

Thus has the Bell System set its own high standards of service. By to-day's striving it is still seeking to make possible the greater service of to-morrow.



**AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES**

BELL SYSTEM

One Policy, One System, Universal Service