

WORLD WIDE WIRELESS

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OF AMERICA

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AT
233 BROADWAY, N. Y.

BY AND FOR
EMPLOYEES



UNDERWOOD & UNDERWOOD
STUDIOS, N. Y.

ELMER E. BUCHER

RADIO CORPORATION OF AMERICA

233 BROADWAY

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FRONTISPIECE

ELMER E. Bucher was born in Akron, Ohio, November 11, 1885 and was educated at the Oberlin Academy. He joined the DeForest Wireless Telegraph Company as Experimental Engineer in 1903. Later he constructed several high power stations in the middle west and on the Gulf coast for that company. In 1907 he joined the United Wireless Telegraph Company as Installation and Experimental Engineer. He installed the first ship stations for that company in 1909 and served as its Instructing and Experimental Engineer and Chief Inspector for more than two years. He became associated with the Y. M. C. A., New York, in the initiation of wireless schools in 1910, and joined the Marconi Wireless Telegraph Company of America as Instructing Engineer in 1912. He organized the Marconi Institute in 1917 acting as Director. In 1920 he entered the Commercial Department of the Radio Corporation of America as Commercial Engineer, and was made Manager of its Sales Department February 1, 1922.

Mr. Bucher has devoted many years to experimental long-distance wireless work and holds a large number of United States wireless patents. He served as Technical Editor of "Wireless Age" from 1913 to 1918. He has written numerous books, among them being "Practical Wireless Telegraphy," "Vacuum Tubes in Wireless Communication" and "Wireless Experimenters' Manual." He is a member of The Institute of Radio Engineers.

Mr. Bucher is widely known and his genial temperament makes him extremely popular with his associates. He is an ardent devotee of the automobile.

A NEW ANTENNA

A VERY remarkable aerial has been devised which has greatly increased the efficiency of trans-Atlantic wireless telegraphy. It is known as the Beverage antenna, and its use has materially reduced static interference, in fact so much so that engineers are experimenting with it for use in the reception of broadcast radiophone entertainment.

The most notable achievement of the Beverage antenna was in December of last year, when Paul Godley, the famous American amateur, used it in Scotland on the occasion of the amateur trans-Atlantic radio tests. With this type of aerial Godley succeeded in receiving no fewer than twenty-seven different American amateur stations, every one of which was using less than one kilowatt of power in their transmitters. In his report of the test Godley wrote:

"On Wednesday the 7th the 1,300 foot stretch of line was completed, the wire being supported by 2 x 4 inch posts twelve feet high and laid out to point directly toward Chicago. The wire was grounded at the distant end through a non-inductive resistance (250 to 400 ohms) and at the home end through a variable inductance of the order of 0.1 microhenry in value. This constitutes the Beverage antenna.

"For any given wave length the wire should be one or two even wave lengths long. Arrangements were made to change the length of the wire, it being necessary in each case to shift the non-inductive resistance and ground connection from one supporting pole to another.

The system is highly directional, and eliminates a great portion of the atmospherics and interference coming from directions other than those from which one wishes to receive.

"That this condition did exist was proved by comparison with a small vertical wire supported by a nearby tree. Static to signal ratio in all cases was decidedly better on the Beverage wire."

Of course, it will be seen at the outset that such an aerial cannot be used by every radio fan, because of its great length, and the fact that only a few persons, comparatively speaking can erect such a long wire.

Perhaps the best way to explain the operation of this type of antenna will be by describing its use in connection with the gigantic station at Radio Central, Riverhead, L. I. This station receives from the long distance European stations which are using wave lengths ranging around 15,000 meters in length, or, in other words, each electro-magnetic wave sent out from these stations is approximately nine miles in length.

Now in order to fulfill all of the requirements of the theory covering the operation of the Beverage antenna, it is necessary to have a receiving aerial one full wave length long, or, in other words, a receiving aerial nine miles in length. This is exactly what has been installed at Riverhead. The aerial is nine miles long, and is supported on poles thirty feet above the ground, one end being grounded through a non-inductive resistance, and the other through a variable inductance. With this wire the Riverhead station is daily receiving five different European stations simultaneously without interference.

In designing this aerial advantage was taken of the fact that static is to a certain extent greatly localized, and also of the fact that certain types of aerial are very directional in effect. The non-inductive resistance at one of the

antenna soaks up the interference and passes it to ground.

For instance, static is lightning in the making, and a congested center such as New York, with its heated air rising from the big buildings, produces a great quantity of local static. This would be a very serious situation for Riverhead, but for the location of New York, which makes a Beverage antenna very effective in eliminating this local static, as the signals are coming from the opposite direction to the static.

In order to illustrate the operation of the Beverage antenna, G. H. Clark, an engineer of the Radio Corporation, has drawn the following analogy for our readers:

"If we look upon the Beverage antenna as a large lake," he says, "and the wind as the static, we can get an idea how it works. Now, suppose the wind is blowing across the lake from east to west. At the eastern end there will be little or no ripples, but as we get to the western end the ripples will gradually increase in size to full waves. If the shore at the western end is a gentle slope of sandy gravel the waves will be dissipated and will not be reflected.

"If, on the other hand, the shore of the lake is precipitous and rocky the waves will be reflected and will disturb the eastern end of the lake. Now the Beverage antenna, having a non-inductive resistance at its non-receiving end, corresponds to a sandy shore, because it absorbs the static and interfering waves and does not reflect them.

"Carrying the analogy further, if we place a stationary paddle wheel at the western end of the lake, which is revolving uniformly and producing waves of a uniform character, these waves will travel steadily forward toward the eastern end and will not be interrupted by or stopped by the wind. This paddle wheel corresponds with the transmitting station and the wave it sends out are equivalent to the waves from the European station.

"The tests that have been conducted at Riverhead completely confirm this theory. When we place our receiving apparatus at the end which is grounded through the non-inductive resistance it is impossible to hear anything but a terrific roar of continuous static discharge. Using the wire properly as a Beverage antenna, we are able to conduct trans-Atlantic wireless communication without any difficulty whatsoever, despite the static.

"These facts are so significant that we are carrying out a series of experiments with short waves. These so far are very promising, but as yet are not complete, and until they are we do not intend making any announcement concerning them.

"Of course, we realize that people dwelling in cities cannot erect Beverage antenna, and consequently we are seeking some other means to overcome the static situation so far as they are concerned. The Beverage antenna suggests several promising methods, which we hope will solve the problem."

THE EDITOR GIVES IT UP

RADIO EDITOR—My receiving set, after working well for several months, is now getting worse. I can only hear signals, and even they are weak. My friends tell me that my wave lengths are worn out. Where can I get new wave lengths, and what kind should I get? How much do they cost?"

VACATION DAYS

Being a letter from our chief office boy to his chum
Windsea, Long Island.

Dear Jimmie,

We were at supper when I told father that I got two weeks vacation. He looked at me and said, "What for" and when I said "to rest up" he laid his knife and fork on the plate and yelled "What!" Mother glanced at me dizzylike as if she anticipated trouble, so I just hung my head and said nothing, for father had the floor. Well he gave me five hundred words on "foolishness," "what the boys are coming to etc," said he had been working since he was 14 years of age, and the only vacation he had was when he was in the hospital with carbuncles. Even then he lost his time, some one stole his watch, and the shoes they handed him as he left the hospital were two sizes too small. He said "Once you start to work, work! its the only way to keep out of trouble." Anyway Mother fixed it so I could go down to Long Island for a week and stop with a cousin of her's. Say Jim did you ever board with a country cousin? I mean one that loves the cows and chickens and thinks New York is next door to the bad place, a fella that has spent all his life on a farm, a fella who wears his pants in his boots and has a "Falls of Niagara" beard? One of those guys yer know that after he shakes hands with you, you think you left your mitt in his palm. Well thats the kind of a guy I am assigned to for safekeeping for a long long week. Well so long beau, will let you know later how I get along.

P. S. How's the Giants making out?

Your friend

Hen

**RADIO CORPORATION
OF AMERICA**

1001-03 Canal-Commercial Bldg
New Orleans, La.

May 8, 1922.

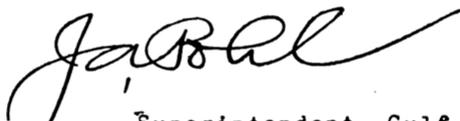
Mr. Vincent Fertitta, Chief Radio Operator,
SS CHARLES E. HARWOOD
c/q Pan American Transport Co.,
Whitney Bldg. Annex,
New Orleans, La.

Dear Sir:

I take great pleasure in handing you herewith copy of a letter received by our Mr. Duffy, New York, from the radio operator of the SS STEEL MARINER, wherein you are commended for services which you rendered on the occasion of a serious attack of illness suffered by the Captain of the SS STEEL MARINER.

A suitable record of this incident is being entered on your Service Record Card and a copy of this letter is being forwarded to our Mr. Pillsbury for the "Service News".

Yours very truly,



Superintendent, Gulf Division



S. S. STEEL MARINER
Hampton Roads
4/25/22

Mr. Duffy,
Radio Corp. of America,
326 Broadway,
New York.

Dear Sir:

I am taking this means of notifying you of an incident which occurred a few days ago, in which the operator of the S. S. CHARLES E. HARWOOD (WID) rendered us a very valuable service. Our Captain was taken sick with appendicitis while off St. Augustine. (Fla.) and it was necessary for me to secure medical advice from that station (WAF). The static and commercial traffic interference on this particular night (April 21) was unusually heavy, making it almost impossible to receive the information which was so important to us at that time.

The operator on the ship named above, who is one of the RCA men, immediately offered his assistance and it was through him that I was able to obtain all of the instructions correctly. I would appreciate it if you would thank him for his assistance, as we are about to leave on the remainder of our voyage to Genoa and India, making it impossible for me to thank him personally.

Having followed the instructions, the Captain was greatly relieved from the pain and we headed for Hampton Roads, where we are now anchored waiting for orders from New York. It is a pleasure to know that the RCA men can be relied on to help you all they can in a situation like this, and I hope that this will receive your attention.

Respectfully yours,

(signed) Edw. J. Stockheimer,

Operator KUVK



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2 WHISTLES IN SECONDS EACH
BLOWN AT INTERVALS OR
B. C. BY MORSE CODE WILL
CALL OUR ATTENTION AND
LAUNCHES

DELAWARE BREAKWATER

LEWES, DELAWARE, U. S. A. May 8th, 1922.

Radio Corporation of America,
(Attention Mr. T. M. Stevens, Assistant Traffic Mgr.,
(Marine),
235 Broadway,
New York, N. Y.

Gentlemen:-

We duly received your letter of January 11th, 1922, and beg to inform you that we have in the last few months requested by letter more than 67 Captains of our steamers for which we were agents to use your Cape May Station (radio call N.C.Y.), which they have been doing and will doubtless continue to do so as you have very efficient officers who are constantly on the job and working hard for the success of your Company and its patrons.

We wish to say that in our many years experience we have never had more pleasant and thorough business relations with any telegraph, cable or telephone company than we have had with the boys at N. C. Y.

We are constantly writing the Masters of the many steamers for which we are agents to send their messages via your Cape May Station and to always call N.C.Y. in order to avoid many hours delay.

We desire to thank your officers at N. C. Y. through your office for the very prompt and efficient manner in which they handle our business and assuring you that we are always pleased to do anything we can for the success of your Corporation, we are

Yours very truly,

D. W. BURBAGE & CO.

B/E.

By *David W. Burbage*
Agents.

There are eight days in a week: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday and To-morrow. Some people work on the first six and rest on the seventh. Some rest on the first seven and do all their work on the eighth.

HE DOESN'T WANT MUCH

I wish I were a snowball
 A-rolling down a hill,
 I wish I were a man of snow
 And simply standing still;
 I wish I were most anything
 That wasn't hot and sticky—
 But best I'd be a piece of ice
 A-floating in a rickey!

Maybe I want an orchard,
 Maybe I want a tree,
 Maybe I simply want a fan,
 To keep the heat from me.

Maybe I want a highball,
 Maybe I want a fizz,
 Maybe I simply want a glass
 Of water as it is.

Maybe I'm very happy
 Because the sun is hot—
 You heard me, didn't you?—"Maybe!"
 Maybe again I'm not!

Oh, for a cake of ice
 And a breath of cool fresh air,
 And a glass with frost upon it,
 And a wicker rocking chair;
 And a tub of clear cold water,
 And something more to drink,
 And some one there to fan for me,
 And some one else to think!

DOING YOUR BEST

LESLIE M. SHAW, the former Secretary of the Treasury, talked to an audience of young men in San Francisco the other evening. There was no politics to his discourse. It was made up of plain statements of fact. In a few words he laid down certain rules which every young man must observe. To ignore them means to build an impassable barricade in the road over which he expects to travel to success. The rules are simple. First, the young man must have some respectable ambition; second,

he must make the quality of his work distinguish him from his fellows. As to the outcome of the competition between a man who strives and one who just works for a living, let Secretary Shaw give a homely illustration:

"I know of a chief cook in a big hotel receiving a salary of \$10,000 a year, and I know of another who gets \$25 a month. I have sampled the product of both, and I think the \$25 man is overpaid."

It is the same in all lines of human activity. He who puts enthusiasm into his work reaps the reward that his effort deserves. He who stops short the moment his work passes muster is lucky to find employment at the common wage. Many workingmen have a habit of figuring out how much work they should do for the amount of pay they are receiving. At the close of each day they are prone to remark that the "boss" made three times more than he paid them for their day's work. All that they do is done grudgingly. They have only the wage in sight, and, no doubt, give as little return as they can safely give and still hold their positions. Such men never get anywhere, yet they wonder how it was that some busy fellow who used to work beside them managed to make a name and a big salary for himself. It was the result of industry.

The key to success is within reach of all. Secretary Shaw points straight to where it hangs when he says: "Young man, work for your employer. Render two dollars' worth of work for every dollar you get, and, my word for it, someone will discover you."

LIMERICK

A tutor who tuted the flute
 Tried to tutor the tuters to toot,
 They said to the tutor
 Is it harder to toot or to tutor two tooters to toot?

RADIO AIDS THE DISTRESSED

W. B. Midgett, a coast guard at Maneto, S. C., gives thanks for his life to the wireless, aided by the airplane.

Midgett was overcome by gasoline fumes at Maneto. The one physician in the vicinity was away and a wireless message for medical assistance was broadcasted. The call was picked up by the Hampton Roads naval operating base, and Lieut. C. L. Haynes, naval surgeon, responded in an airplane.

Haynes covered the 150 miles in less than two hours. Midgett will recover.

Quick work on the part of a wireless operator saved the life of Carl Peterson, a seaman of the Steamer *Sherman*, anchored off the Statue of Liberty, N. Y. Harbor. The operator picked up the

Sherman's call for a doctor and relayed it to police headquarters, and Inspector Halleck went out to the *Sherman* on the police boat *John F. Hylan* after calling an ambulance from the Broad Street Hospital.

Peterson, a mechanic on the *Sherman*, was hoisting a heavy casting on board ship when it fell and crushed his left leg, severing an artery. Inspector Halleck and others made a tourniquet, with which they stopped the flow of blood and hastened to Pier A with the injured man. There he was taken to Broad Street Hospital, where it was stated it would not be necessary to amputate Peterson's leg. The injured man's home is at 327 Forty-third Street, Brooklyn.

Captain G. T. Pickford, of the British Steamship *Kenbane Head*, died of peritonitis, at the Riverside Hospital recently.

Captain Pickford was a distinguished service man of the British Navy and was taken seriously ill while the vessel was enroute to Newport News from New Orleans. He remained in delirium and was kept alive until the vessel docked through wireless communication with two other vessels that had doctors on board them. Through the doctors' advice medical attention was rendered the captain by the members of the crew.

THE BLUES

By Walt Mason

Presentments of ill sometimes oppress a gent; his heart receives a chill, he's full of discontent. All things, he grimly feels, are going to the dogs, and in his head the wheels are badly slipping cogs. To perish in the ditch his plans predestined are; it is no use to hitch his wagon to a star. Vague fears depress his soul, and naught can comfort lend; the poorhouse is his goal, and Potter's Field his end. The good old sun may shine and lighten up the globe, but still he will repine and fret and tear his robe. The birds may sing their songs—he hears not the refrain; he's brooding o'er his wrongs, his sorrow and his pain. He sulks around his home until his wife could wish to bat him on the dome with some old chafing dish. A widespread gloom he breeds, he makes his fellows sick, and all this mortal needs is one swift well-placed kick.

RESCUED BY RADIO

THE SEATTLE TIMES of October 31st, published a thrilling account, received by radio, of the rescue of all hands from a sinking ship in mid-Pacific, with heavy weather and a blinding snowstorm. The story is so remarkable that we reprint it in full:

In the longest range newspaper interview, approximately 2,600 miles, ever handled by wireless on the Pacific Ocean. Captain Fred H. Pearson, heroic master of the Waterhouse

steamship *West Ivan*, today gives to the TIMES readers the full details of the disaster that overcame the Japanese steamship *Fukui Maru* 1,200 miles off Cape Flattery. The handling of the interview by the United States Radio Communication Service is regarded by experts as a triumph in the use of wireless for modern newspaper purposes.

The TIMES Saturday drew up a series of questions to Captain Pearson. The message containing the questions was sent by the radio station of the Naval Station, Puget Sound, to the naval radio station at Cordova, Alaska, a distance of more than 1,200 miles as the bird flies. The Cordova station wirelessly the questions to the naval radio station on St. Paul Island, Pribilofs, Bering Sea, a distance of nearly 900 miles. The naval radio on St. Paul Island wirelessly the questions to the *West Ivan's* radio operator, the vessel being 1,500 miles off Cape Flattery, or about 500 miles distant from St. Paul.

CAPTAIN PEARSON ANSWERS

On receiving the questions, Captain Pearson not only sat down and wrote his own interview on the *West Ivan's* part in the disaster, but also interviewed Captain S. Harata, master of the *Fukui Maru*, on the causes of the disaster. He then wirelessly the two interviews to the TIMES, the message following the same round-about but certain route back to Seattle, and arriving here early this morning.

Wallowing in savage seas which swept her fore and aft: her forward end gone, her collision bulkhead smashed, her hull listing heavily to port, her holds filling with water, her wheat shipments swelling as a result of becoming wet, and bursting the hull's sides, while fierce winds and a blinding snowstorm lashed the ocean—this was the wild spectacle of tragedy presented by the *Fukui Maru* when she was sighted by the *West Ivan* last Thursday. Then followed nearly five hours of heartbreaking stress before the Japanese ship's officers and crew, numbering 45 men, stood safely aboard the *Ivan's* decks.

One of the Japanese seamen fell into the raging waves while helping to launch a lifeboat but was rescued.

JAPANESE CAPTAIN INTERVIEWED

Captain Harata's interview, as dictated to Captain Pearson, follows:

"The first trouble occurred October 24 when we experienced a very bad storm. Strong head winds and seas carried away the forward part of the ship and also the starboard bridge. The ship began taking water very fast. We made ineffective repairs out of canvas, blankets and lumber. The morning of October 27 the collision bulkhead gave way

and the water poured into No. 1 hold. We started discharging the deckload. We were unable to use the No. 1 bilge pumps. They were stopped up with wheat. The engine room began leaking on the starboard side. The ship was taking a heavy port list. The generator room became flooded, but the wireless was able to continue operating by means of the storage batteries. We tried to run for Dutch Harbor, but it was too far away."

In his own interview, Captain Pearson gives a modest account of his part in the daring rescue of the *Fukui* survivors, passing lightly over the fact that the greatest skill and nerve were required in maneuvering his own vessel.

RECEIVES DISTRESS CALL

"We received the *Fukui Maru's* distress call at 9:50 o'clock the morning of October 27," he says in the message, "and turned our ship around and headed for them—approximately 25 miles away—forcing our engines to the maximum, but we were handicapped on account of head winds and seas, with a blinding snowstorm.

"At 11:14 o'clock, the crow's nest sighted the *Fukui*. At 12:10 we went alongside, our crew at the lifeboat stations, ready to launch the boats.

"The *Fukui Maru* was in a very bad condition. She had a heavy list to port. The starboard bridge was gone. A ragged hole showed in the bow. She was shipping seas fore and aft and her forward deckload was partly gone.

"They used flag signals, saying their ship was sinking and they must abandon her at once. They attempted to launch two boats on the lee side, but were unsuccessful. Then they succeeded in launching one boat on the weather side. One man fell overboard but was hauled back with a rope. Then they got two more boats into the water. Their lifeboats were in bad shape and the crew was much excited. They took one hour and 28 minutes to launch the boats.

"Heavy seas were running and the wind kept increasing. We had difficulty in maneuvering our ship to stay alongside on account of the wind and seas.

SURVIVORS TAKEN ABOARD

"At 3:56 o'clock their boats were alongside the *West Ivan* and we took the men aboard. All on board the *Fukui* are accounted for. The *Fukui* was afloat when we left, but it seemed that she must sink soon because of the storm. A hatch was open and her wheat shipments in the lower holds had expanded and burst the ship when the grain got wet. All the officers and crew are in good health. We are carrying them to Yokohama."

The *Fukui*, however, had not sunk by Saturday afternoon, being sighted at that time some distance from the scene of the rescue by the Canadian Pacific liner *Empress of Russia*, bound from Japan to Vancouver, B. C. The *Fukui's* lumber shipments probably kept her afloat. She has become a menace to navigation unless she has foundered since Saturday.

The *Fukui* was one of the vessels operated between the Sound and the Orient by the Yamashita Steamship Company of Japan, represented in the Northwest by A. M. Gillespie, Inc., of Seattle. She sailed from Tacoma, October 14, with 2,000,000 feet of lumber and 1,500 tons of wheat from that port and Seattle.

The *West Ivan*, one of the Shipping Board carriers operated by Frank Waterhouse & Company in the Seattle-Oriental routes, sailed from this port October 19 with a full cargo. Her wireless equipment is operated by the Radio Corporation of America.

64 BROAD STREET

THE WORLD'S RADIO CENTER

THE radio center of the world is the United States. Nine of every ten persons who have heard the voice of WJZ or seen a spark jump a gap know that; but probably not more than one of the knowing nine could tell just where the radio center of the United States is.

The reason why the amateurs and broadcast listeners would go wrong in picking the spot where the radio activity of the world is centered is that almost all would name the huge Radio Corporation station out at Rocky Point, near Port Jefferson, L. I., which on November 5 last went into service by flashing a greeting from President Harding so far that the radio waves from east and west met on the other side of the globe.

As a matter of fact, this station is the most powerful on earth, but it is merely a part of the real center of the radio world. This center is located on the second floor of an unpretentious building at 64 Broad Street, N. Y. Here, in a single room, are the operators controlling the Rocky Point station, the two sending stations at Tuckerton, N. J.; the New Brunswick (N. J.) and Marion (Mass.) sending stations, and handling the messages picked up from all over Europe at the receiving station at Riverhead, L. I. Here is where radio reaches the zenith of its many achievements in timeless communication.

The picture most people form in their minds of a great wireless station engaged in international communication work has vividly in the foreground a big group of frantic operators literally whipping messages into the ether under the very shadow of the towering antenna, with high frequency waves throbbing through its wires.

Nothing could be more picturesque—or less true. There are no operators at Rocky Point, Tuckerton, New Brunswick, Marion or Riverhead. They are all at 64 Broad street, and the instruments that control the tremendous power of the stations and the 11,500 to 17,000 meter wave lengths they emit are simply modified typewriters. And, most astonishing of all, the great roads of ethereal communication dwindle at each end to bits of paper tape not half an inch wide.

So far has automatism been carried that a bit of perforated tape in Broad street sends a message to Europe without the aid of human hands. And at the other end another bit of tape, likewise without prompting by men, takes the message out of the air and visualizes it for the operator in a wavering line of blue ink.

The story of the development and simplification of international radio communication to this stage is the story of the Radio Corporation itself. The company was formed two years ago at the suggestion of the United States Government to establish a radio network which would place this country abreast of Great Britain and France, with their many cables and telegraph lines, in matters of international communication.

There are, of course, other departments, but the big feature of 64 Broad street is the operating room on the second floor. Here are nine big tables that are the heart of the communication service. At each table are places for five men, three on one side, two on the other. Sometimes during the rush hours all these places are occupied; at other times one operator on each side is sufficient.

In front of the men on one side of the table are placed the messages just written by business houses or individuals in New York directed to people in European countries to which the table is operating. The sending operator types the message on an ordinary typewriter keyboard, but instead of type bars imprinting their characters on paper a series of dots is punched in a narrow tape. The dots actually are the continental code; two dots, one above the other on the tape indicating a dot; and two, one above and the other below and to the right, a dash. There is a slight space on the tape between each letter.

The tape, moving always at uniform speed across the perforating machine, passes on to a small Wheatstone transmitter. This machine consists of apparatus by which two steel fingers, "reading" the perforations on the paper, convert them into dots and dashes on a telegraph wire and transmit them to the radio stations at Rocky Point, Tuckerton, Marion or New Brunswick, where automatically they actuate the great Alexanderson alternators.

These alternators and vacuum tubes are two of the most important contributions of the United States to radio invention. They are dynamos of a novel design. Instead of turning out electricity at sixty cycles, they produce alternating currents of 15,000 to 26,000 cycles. Such alternating currents make possible long wave lengths and great sending radius. One of these alternators is already in use in Carnarvon, Wales, a big English Marconi sending station, and two are to go to Poland.

Once the message is in the ether, the mission of this perforated tape ceases. In order to keep a check on the wire circuit over which the message is flashing to the sending station there is on the roof of 64 Broad street an antenna which brings down into the operating room the wireless message which is being sent to Europe and reproduces the signals into a loud speaker in front of the operator. Thus he hears the message which he is sending from a station fifty or sixty miles away to a station several thousand miles distant as easily as if he were just under the big antenna.

While messages are flitting to Great Britain, for example, on one side of a table at rate which can be from five to 100 words a minute, the operators on the other side of the table are at another task. From the single receiving station at Riverhead, where messages from all the big stations of Europe are coming in, those from Great Britain are taken out of the ether and automatically placed on the wire of the British circuit. This brings it to the receiving side of the British duplex operating table at Broad street.

Here the impulses on the wire terminate in a graphic or ink recorder. This is a large electro-magnet, in the field of which is a light coil. Under the magnetism generated by the current the coil responds by tiny movements up and down. These movements are passed on to a little pen pressing against a moving paper tape. Every motion of the coil is thus recorded on paper. The record is of a straight line in which a narrow conelike deviation like an inverted "V" is a dot, and a deviation three times as broad on top is a dash.

According to the speed with which the radio on the other side of the ocean is sending, one, two or three operators type the messages from the moving tape. One man can handle thirty words, two men sixty, and three up to a hundred words a minute. One of the Radio Corporation operators at work daily in the 64 Broad street office is Jose Seron, a young Chilean, who at the recent Radio show won the world's championship by receiving forty-nine and a half words a minute. The most expert operators in the world handle the tremendous flow of messages.

To demonstrate forcibly the meaning of duplex operation in the matter of speed, *The New York Herald* representative's name was written on a slip of paper and handed to the sending operator with the request that it be sent to Europe and repeated back to New York. The operator perforated it on his machine; the Wheatstone transmitter seized it and whirled it to the alternators out at New Brunswick; the ether waves at 186,000 miles a second carried it to Towyn, Wales, the receiving station for Carnarvon; it passed thence over fifty miles of land wire to Carnarvon, where it was flung into the ether again and whirled back to Riverhead, whence it shot along a land wire to 64 Broad street again and ran through the graphic recorder. How long it took, the visitor cannot say. By the time he had decided to take out his watch to see how many seconds the 6,000 mile trip consumed, the ink recorder had quite finished.

An interesting point in the business of the operating room is the fact that the big sending stations at Nauen and Eilvese, Germany, and the receiving station at Berlin are doing much business with this country via radio. Great Britain has her cables, and therefore does not take to the ether so readily as Germany.

The lesser cost of messages by wireless, about a third less than by cable, is probably another reason why the merchants of the war-impoverished country use radio. The stations continuously busy are Bordeaux, sending on a 23,000 meter wave length, Carnarvon, Wales, 14,100 meters; Stavanger, Norway, 12,000 meters, Nauen and Eilvese, Germany, 12,600 and 14,700 meters, respectively.

In the two years in which the Radio Corporation has been engaged in the task of putting the United States on the international communication map it has been competing against seventeen Atlantic cables, owned for a large part by British and French companies, although the majority are now under lease to American cable companies. At the present time the Radio Corporation handles more than 20 per cent of the total trans-Atlantic traffic.

RADIO CENTRAL

THE land of Promise is sure one busy place. Take it from us. Of course, we can't give out any definite information, but from the way things look around here anyone wanting vegetables in carload lots may apply to us in August.

By crackie, the gang has taken to raising high frequency vegetables. You should see them. Sauerkraut bushes and succotash trees are planted all over the place.

We have a new dynamo tender in our midst, one Fred Bourret, formerly the chief electrician for the Ward Baking Company, Brooklyn. I don't know for sure, but I think he is the guy that put the currents (currants) in Ward's Bread.

Well, Tuckerton, Jack Mott has left us. I think he is getting ready to whistle somewhere around Trenton. Harry Kohl has just come in with his usual bale of Union Leader. Harry sure enjoys good tobacco. Radio Central is soon to molt. In other words we are going to lose our Feathers. They are going to Honolulu. Spot Sallamons has something funny on his upper lip. It looks like he swallowed a sink brush and it broke out. Schou is sporting a pair of boxing glove shoes since he is an engineer. Instead of going to his head I think it effected his feet.

Rumor has it that W. A. R. Brown is contemplating buying the majority of stock in the Glover Mange Cure Company, so he can have an unlimited supply on hand. From the appearance of his polished spot I think he has taken to drink, for there are no signs of life up there and what else could one do with hair tonic?

O yes, I almost forgot, as soon as the Rocky Point Infantry gets over spring fever we will continue work on our receiving station. The antenna will be a magnificent affair—the last word in such. It will even make the Eiffel Tower sit back and take notice. Then there will be no excuse for the gang running in to Port Jefferson to Athena Hall, where they spend as much as twenty-eight cents for amusement.

The Town Board has erected a new sign since Doc. Usselman got his new car. The sign reads "Slow down to 100 miles an hour within town limits."

Order four dozen pancakes, here comes Riley.

Mr. and Mrs. Oberwetter and Mrs. Pierz, our new cooks, are sure there. You don't have to eat anything to find it out, just look how pleasingly plump we are all getting.

A visitor asked Ritz what Corona was and he said, "It's the most wonderful place there is." I guess he thinks so, for he sure gets a powerful bunch of mail from Corona, Long Island.

At last we have solved a great mystery. We have wondered what Schaefer was going to do when he grew old. Well, it's out. Judging from the number of school teachers Ole Schaefer knows he should have little trouble in getting enough votes to be on the Skule Board for the remainder of his days.

RIVERHEAD RAVINGS!

WELL, gang, here we are again! About time, after those heavy remarks from Chat(tering)ham outfit. Never mind, old CM, you were pretty good in your day, you know.

Lots of scandal in RD these balmy spring days. Excuse any poetic propensity I may seem inclined to show, because it is spring you know, and "In the spring, a young man's fancy lightly turns to thoughts of love." Ask Leuteritz, he knows. That honorable gent walked in on us the other day, and nonchalantly announces that he marries next month. Hop to it, old boy, for you will do some hopping afterwards. If you don't believe me, "Ask the man who owns one."

The Dodge Bros. have located in Riverhead now. Ty wasn't to be outdone by Barney, our noble gardner, so he took unto himself—a Dodge car. Fooled you that time! The roads down this way were bad enough, but now they are worse, since this chariot has been speeding around. It sure is terrible on hair nets.

Gosh! Nothing like having a wonder man around. Everybody in town is always wondering what Bourne is going to do next. After Ty gets his benzine buggy, Bourne motahs up in another Dodge. Each has to put his initials on, so they won't get 'em mixed. And you outa see the females in this one-cop burg look when Bo breezes down the main boulevard. Of course, he either runs out of gas or has three blowouts when he is out riding with his girl's aunts, or some aunt's niece; but what does romance care for such earthly trifles. The other day, he walked in almost undressed! His moustache was gone. Now the girls are taking back what they said about "he oil-cans," since they have seen his face for the first time. Will some dynamo tender kindly tell us what an "oil-can" is? Here's another secret—Bourne is an accomplished bugler. Ex-navy men, please note.

And then comes the Receiving Engineer Extraordinary, Mr. Carl Dreher. That Bolshevistic person of the delicious logic who calmly but firmly insists that "the world is wrong, I'm right." We never saw a man who loves his relations the way Carl does, for he is always making a radio set for some sister, brother, or someone in the family. And write! You ought to see that boy swing his wicked Waterman. Yes, sir—

look in a recent issue of the Smart Set for a story about something like The Tenth Decade; we don't know the exact title, for he modestly refused to divulge it, but it is there, anyway. We never knew we had such versatile talent in our midst. Carl is pretty foxy, but we are on to him now, after seeing him so often with a wolf.

And now we have interlopers in our midst. Moulton and his trusty Essex have parked themselves near the town pump. But the less I tell you about him, the more you will imagine, and you will never go wrong. How about that, Brownlie? If Miss Staff could only see the Miss Takes A. B. M. is out with here in Riverhead, wouldn't his upper lip appendage be ruffled up some? Even Callahan seems to forget Long Branch when he inhales the Long Island ozone. Why do you fall for the deaf ones, tho', Callahan—do they like to hear your "sweet nothings" as you so ardently whisper them in the moonlight?

Society Notes—Mr. MacDonald has returned from Nassau after a very pleasant sojourn, and seems to be well browned. The land of rum must have agreed with Mac.

We sure do miss Mike, now that Fred Johnston has gone a-Polin gen famille. The last heard from Fred was a radiogram well out past the three-mile limit, and he had his foot on the rail when he sent it, for he said, "Everything fine, and getting better." Here's hoping Volstead doesn't see this paragraph. We all wish you the best of luck, Fred, OM.

Well, I guess that about completes the Riverhead obituary. Oh no! I almost forgot Wee Willie Williams, our sober-minded, female despising knob-twirler. At last, he has condescended to look twice at some of the Riverhead damsels, but that's all. Wish we knew how he does it (altho' we wouldn't do it if we could) while the rest of us are enmeshed in the talons of the local (un)fair sex. We are terribly anxious to see what CM has gotten off his chest (besides that porous plaster) so we, RD, the nemesis of hard working Broad Street, will bid you "cul."

MARION

VACATIONS have started at last. Walt Wagner was the first off. He reports from his old home town, Dunellen, N. J., that since he left there has been a great many changes taken place. They have two engines at the round-house now, and one more tree planted.

If you are looking for something, just mention the word "fire" around here. A forest fire on the Cape swept right under our control line to CM, leaving a mass of charred poles

minus cross arms and insulators. What a sweet time our congenial lineman, Wicked Wixon, is having these days. Nothing to do but eat cake and live a life of luxury!

The other day the boys at this station were talking about prohibition. Bill Beltz informed us it is so dry out in Kansas they have frogs that haven't swam a stroke in eight years.

The tennis court here has been fixed up and once more has the reputation of being the best court for miles around, and Marion can certainly boast of some wonderful courts. By the time this goes to press Mr. Clifton will be serving them up a la Tilden.

We have a new arrival here in the presence of Mark Strausburger as shift engineer to take the vacancy created by Bill Beltz taking over Doc Cumming's position temporarily. Strausburger was formerly at New Brunswick. We all feel that New Brunswick's loss was our gain.

Plans are being formulated for a dance and party to be given at the hotel by the bunch. Egg throwing will be one of the features. It is hoped that something will go wrong with the Marine set so that F. H. Kroger of New York will be present to take part in the game.

One night Mrs. Higgins and Mrs. Cumming were being taught the finer points of the game of tennis. Someone kept calling "deuce". Mrs. Higgins kindly informed them she was there for one purpose only and that was to "reduce".

Sam Sadler offers a defi to any member of the RCA's staff in the whole country in a "grub consuming" contest, either for endurance or speed. Sam sits next to one end of the table and Bill Beltz, who throws it down, sits on the other end. Before Bill has finished the eighth round, Sam is back again with his platter for the second load.

The members of the staff here have heard glowing tales of big eaters that have gone but are not forgotten. One Bill Dunn, now of New Brunswick, had the reputation of never finishing second to anyone in this respect. Now what would be more novel than an eating contest by radio? Surely it would set a precedent and to the winner we would present a suitable prize such as a cut-glass pool stick. Samuel, however, suggests starting off with a light lunch as a preliminary, first, consisting of two bushels of beans and a half dozen pies. How about it, Bill Dunn?

Everyone here is as crazy over tennis as the public is over radio sets. In fact, nearly every one owns a racket, and those that don't. have requisitioned shovels, pitch forks and barrel staves with a pie plate nailed on the end. In fact, so many want the court at times, it is necessary to "roll the bones" to see who'll get it. And only last night, the two

original "Knutt" twins, "Wall Knutt" Beltz and "Pea Knutt" Kennedy, slept out all night on the court so as to be there first in the morning. "And they shot men like Lincoln."

BOLINAS

WE will commence the evening's program with a pathetic little ballad entitled, "She's Only a Bootlegger's Daughter, But We All Love Her Still," by Slattery, accompanied by McGah.

We missed out on last month's bulletin due to the fact that one of our shiftless engineers failed to blow out this mill which was clogged with eraser fillings. However, we will try to make up for lost time.

In the March issue we welcomed Mr. and Mrs. S. W. Dean to our midst; in addition thereto we are pleased to announce the arrival of an eight pound daughter, Frances Elizabeth Dean. Mother and daughter are doing nicely, thank you.

Reduction in the outside force lost us the congenial company of Messrs. Lauff and Albright; we wish them bon voyage and speedy re-employment. We were about to announce the arrival of Mr. J. M. Flottman, when the gentleman in question left for the big city, post haste. Must have been the call of the wild *waves*? versus the tune of the alternator! Why leave so soon, J. F.? Don't you know that giant nuts from oily acorns grow?

We have two new arrivals since the last issue, E. C. Hersam and A. E. Larsen, who are chuck full of mathematics and ambition (a rare combination), with which they should progress rapidly.

Tom, the station feline, is no more. After having eight of his nine lives snuffed out recently by getting across the 11,000 volt feeder, he developed some boils or cancer and had a failing of calling on us when we were not in, so Mr. Lufkin volunteered to relieve him of his sufferings, and left the hotel and Tom with a 32, returned with the 32 thinking Tom safely disposed of, but had his dream rudely interrupted by the announcement that Tom was on the boiler downstairs, where he was finally disposed of.

Mr. Lufkin celebrated his promotion to shift engineer by buying a Chevrolet; yeah, a runabout (ten minutes, then stop).

Willow Camp opens in the near future so will not expect to see much of Ray Pepper after the ladies arrive.

The fishing season opened the first of May and if Lufkin and Pepper have left any, we might enjoy a fry of rainbow trout. We have noticed a peculiar odor about the power house around the midnight hours. (Sort of fishy.)

The population got together the other night and reorganized the Hermits' Club, with Mr. Baker as president and Mr. Hersam as secretary-treasurer. The purpose of the club is to furnish good looking girls for those that are either too slow or homely to get them. Outside gang take note. We have some real live doings coming up in the near future, including a social dance and card party. We thank Messrs. Philbrick and Dean for their helpful co-operation and advice in forming the same.

T. S. Baker is nursing a bad burn on his thumb on account of the fact that he disputed the accuracy of the G. E. high frequency ammeter and tested the radiation of the antenna by the digit method. He still thinks the meters read about 100% short.

We went over to Marshall to borrow a detector bulb for our monitor set (radio concerts) but upon arriving here found the same burnt out. No fooling, Burns; some of these deceiving engineers would give a shiftless engineer the D. T.'s.

GOOD WORK

Mr. Ole M. Hovgaard, Chief Operator,
S. S. Camden, United Fruit Co.,
Cristobal, Canal Zone.

Dear Sir: We were very pleased to receive your letter dated April 11th, from Seatia, Cuba, informing us of the communication established by your vessel with our K. P. H. Station, when 750 miles north of Colon, on March 5th, 1922. Also a communication, established on March 5th, on 450 meters with $1\frac{1}{4}$ KW. Our superintendent in charge of the K. P. H. Station informs us that your vessel is heard quite often, indicating the good carrying quality of your set. We are glad to have this matter called to our attention, and wish to express our appreciation and thanks for your co-operation.

Yours very truly,

RADIO CORPORATION OF AMERICA,

Per A. A. Isbell,

General Superintendent, Pacific Division.

THE CLICKS

THE May meeting took the form of a theater party and those who attended will not soon forget The French Doll.

A real June party is on for the Seventeenth when the girls will go off on a good comfortable boat for the afternoon and evening. There will be music on board and no limit placed on the good time to be had. Now wouldn't you like to go?

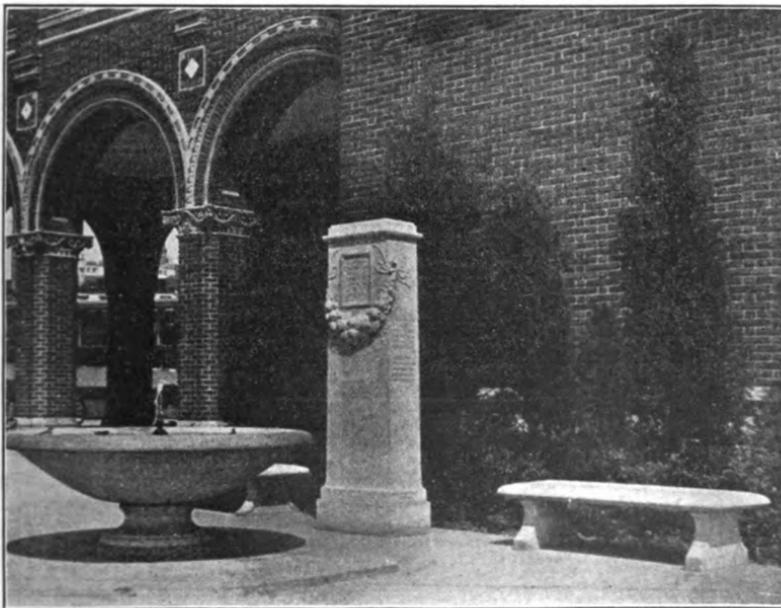
Some special work has been done in connection with interesting the new employees in The Clicks, but to date there has been little response.

As there was no regular business meeting in May it is hoped that all members will be present on June 16 at the usual hour to help with the furthering of plans for the coming season.

OUR HONORED DEAD

The Wireless Memorial Fountain in Battery Park, N. Y., was tastefully decorated on Decoration day by the Radio Corporation following its annual custom, under the supervision of Superintendent Duffy. A number of officials and operators participated in the ceremony. Brief remarks were made by Major J. A. White and G. Horace Porter.

The fountain has been renovated and additional names cut on it under direction of General Superintendent Pillsbury and Mr. Duffy, who are respectively president and treasurer of the Association. The shaft now carries the names of twenty-two of our associates who have sacrificed their lives in performance of duty.



MEMORIAL FOUNTAIN, NEW YORK

HEAD OFFICE NOTES

Mr. E. J. Nally, President, and Mrs. Nally, returned from Europe on the *Homeric*, May 4.

Mr. Owen D. Young, Chairman of the Board, returned on the *Baltic*.

Mr. R. A. Weagant, Consulting Engineer, has returned from Nassau, B. W. I., after a protracted absence on research work.

Messrs. L. Lemon, Director of Production, William Brown, Attorney, J. M. Sawyer of the Sales Department, C. J. Ross, Comptroller, and G. S. De Sousa, Treasurer, have returned from a business trip to Chicago.

Mr. David Sarnoff, General Manager, attended a meeting of the Westinghouse Field and Headquarters Sales managers at Lakewood, N. J. by invitation of Vice-President Shute of the Westinghouse Company and delivered an address on the subject of radio.

A FAR-FLUNG CONCERT

Concerts from the Fairmont Hotel KDN station were heard by E. M. Bain, wireless operator of the steamship *Tahiti*, MYN, while the ship was in Papeete Harbor, Tahiti, 3,600 miles from San Francisco. While en route from Australia to San Francisco, 1,500 miles from San Francisco, Bain was able to hear messages being sent from San Francisco better than at a distance of 200 miles.

Bain says that he keeps up a regular communication with KPH, a station at Bolinas, while the ship is within a radius of 4,000 miles of that place and can quite often hear them from a distance of 5,000 miles.

AN APPRECIATION

The staff of Siasconset (WSC) wishes to congratulate operators on S. S. *Steel Engineer* (KDCX), especially for their efficient handling of traffic through a heavy jam April 26th. Siasconset's log states: "Operator on KDCX should be commended for his interest and assistance."

STATIC CLUB

THE spring dinner of the Static Club at Hotel Astor, N. Y., May 4, was largely attended and greatly enjoyed.

The principal speaker was Mr. Ira J. Adams, Patent attorney, who gave an interesting and highly amusing talk on patents. A committee consisting of Messrs. Kaminsky, MacCormack and Crocker was appointed to form a glee club, with Mr. Henry as accompanist. There are many fine voices in the club.

BORN

At Bolinas, California, March 19, to Mr. and Mrs. S. W. Dean, a daughter, Francis Elizabeth, eight and one-half pounds. Mr. Dean is Assistant Engineer-in-charge at Bolinas station.

EASTERN DIVISION

OWING to a change in our telephone number it is necessary that this subject be again taken up and explained so that operators having occasion to communicate with this office after hours, on holidays or Sundays, may do so.

The number to call is Franklin 1141. During the business day no difficulty is experienced but some difficulty may be met at other than business hours as there are five trunks, 1140 to 1144, and any of them, the telephone company's representative admits, may be connected by the operator disregarding the request of the caller for a particular number. Therefore when calling 1141 you are just as likely to be connected with 1143, which is allotted to the Wireless Press after hours, and the telephone may be ringing in the closed office upstairs without being heard. The operator will then report that 1141 does not answer while we are sitting beside that particular telephone probably awaiting your call.

You must insist, therefore, that the operator connect you with 1141 if you are calling this office, or 1140 if the M. R. I. office is wanted. The Radio Institute's number is Franklin 1144. The Head Office numbers are Barclay 4780 to 4795. The Marine Information Bureau of this company, open 24 hours every day, is Broad 5100. That office may be of service to operators in emergency when all other offices are closed. Home telephone numbers of officials are on file there.

From correspondence and a lengthy newspaper clipping received from Lister D. Payne we learn that he had the misfortune of losing a suit of clothes he had just purchased, all his money and other personal effects, when the pier at which the *Santa Barbara* was docked in Baltimore caught fire and the flames were communicated to the vessel. The fire spread rapidly and it required quick action on the part of the crew to get the ship away from the burning pier. The superstructure was partly destroyed but the fire did no damage to the hull. A commendable bit of work on the part of Operator Payne was that in the excitement while he might have been saving his effects from the sleeping room he went instead to the radio room where he busied himself protecting the apparatus and closing the ports. As a result of his work the apparatus was not damaged while all adjoining rooms were gutted.

Announcement has been made of the engagement of Miss Natalie M. Bailey to A. E. Kierstead, one of our popular operators, who has been in our service since 1918, when he returned from France after having received several severe wounds in battle. The date of the marriage has not yet been set. Mr. Kierstead is at present running between New York and Houston, on the *Franklin*.

The *Franklin* is one of the few vessels on which the old rate of \$105 is still maintained and no clerical or other duties are required. She is one of the largest vessels in coastwise trade and has very comfortable radio and sleeping quarters for the operator. (Following this announcement we predict no less than 892 requests for assignment to the *Franklin*.)

S. Wiederman recently had an unpleasant experience when the *Concord* ran aground in Long Island sound and remained lying on her side for almost two days before she was finally floated. It was during a cold snap and the position of the vessel made walking and working difficult. As for sleep, Wiederman had none until after the vessel was safely docked in New York.

Mr. James' yacht *Aloha* is due in New York within the next few weeks and we predict that as the day of her arrival here grows nearer our telephone service may be disrupted.

Merritt E. Arbuckle, whose meritorious poem on "Home" appeared in last month's issue, sailed May 15 on the *Robert E. Hopkins*.

Rufus C. Thomas is now operator on the *Lake Arthur* on the New York-Richmond run. A. H. Perreault, whom Thomas relieved, is taking charge of the radio on the laid-up Shipping Board fleet No. 4. Paul G. Bergin, who spent the winter on the fleet, is now awaiting a ship to Europe.

Clement J. Shields, of Brooklyn, entered our service May 13 and sailed on the *Dixie Arrow*.

Oscar Foy was compelled to leave the *Maracaibo* on account of illness. His place was taken by E. I. Hoffman. Joseph Lombardi remains as junior.

Israel Diamond is now on the *Castletown* running for the Munson Line to the West Indies and South America.

Robert B. Henry was transferred from the *Munaires* to the Grace liner *Mineola*. P. J. Donohue, who was on the *Mineola*, sailed on the *Garfield*.

E. J. Marschall arrived from a long voyage on the *Archer* and is now awaiting another assignment.

George M. Shelgell was taken into our ranks during the month and is serving as junior on the *City of St. Louis* with George Kavanagh. Fred L. Cummings, former junior, left for the Pacific on *Montgomery City* of the Isthmian Line.

Now that the weather is so fine, how many men are there in our various offices who wouldn't like to exchange places with the operators and take a run over to, say, Germany? Chalk up one in the affirmative!

BOSTON DISTRICT

NORMAN FILSON has again left the service and his job now is to push radio apparatus over the counter to the increasing number of new radio enthusiasts in exchange for their shining clankers.

G. E. Travis is junior on the *North Land*.

Ralph Rice missed the first trip of the *Ransom B. Fuller*, but was right on deck for the second trip.

Enos Rova has resigned. His plans for the future were not definite, but he has our best wishes for success.

The following men are on the C. T. C. ships: E. L. Bra-
cey, *Hampden*; E. P. Barth, *Transportation*; C. E. Willett,
Norfolk; R. C. Aleckna, *Bristol*; G. W. Robinson, *Suffolk*;
W. H. Bestgen, *Middlesex*; and G. W. Trudeau, *Coastwise*.

Willie Westinghouse Edison Smith has nothing on Ruth-
ven Bogardus of the *Munabro*, when it comes to finding out
what makes the wheels go 'round.

BALTIMORE DISTRICT

THE new Ore Steamship Corporation's combination ore
and oil carrier *Marore* is being fitted with a standard
2 KW. P8A set at Sparrow's Point by Constructor
Grantlin.

The *Hamilton* of the Old Dominion Transportation Com-
pany will also receive the same type of equipment this month.

Vacuum tube installations were effected on the steamers
Freeport Sulphur No. 5, *Jefferson*, *Clement Smith*, *Standard*,
Nortina, *Charles Braley* and *Santa Rosa* last month.

John T. Hovan was assigned to the *Clement Smith* re-
cently. A trip as Third Officer on one of the Shipping Board
vessels convinced Hovan that he preferred to be an operator.

After being on the *Carenco* for over two years, Joseph
P. Hunter deserted his home for the *Glen Ridge*.

District Manager Gilpin of Norfolk was in Baltimore
recently on a one-day visit.

Raymond D. Thelberg was transferred to the *City of
Flint*, ex-Operator Louis Kanter.

G. R. Anderson is relieving Arbuckle on the *Standard*
for one trip.

The *Winding Gulf* was recently re-commissioned with
T. W. Bean in charge.

GULF DIVISION

HARRY GOLDSTEIN has been transferred from the *Liberty Bell* to the *Dillwyn*; he was relieved on the *Liberty Bell* by Raymond C. Johnson, a new man in the service.

V. M. Thomas, a recent entrant into the service, has been assigned to the *Jomar*.

John C. Hancock has been transferred from the *Sucrosa* to the *Levant Arrow*, relieving Leslie Veader, transferred to the *Sucrosa*.

Robert B. Parmenter has relieved B. G. Tempest, who has returned to New York for re-assignment.

George H. Reachard has re-entered the service on the *Effna*, where he relieved E. C. Grant, resigned.

Emanuel Lemelson, late of the good ship *Orleans*, is now flipping nickels on a New Orleans street car.

Frank G. Hull has been transferred from the *Lake Gera* to the *W. L. Connelly*, relieving Henry Bodin, who has been granted on extended leave of absence. Hull has been succeeded on the *Lake Gera* by A. J. Hoff.

John E. McMillan has come back to the fold, and is now in charge on the *Cerro Azul*.

William S. Marks has re-entered the service with assignment to the Shipping Board tanker *Dannedaike*.

With the laying up of the *Harry Farnum*, David L. Stokely has been transferred to the *E. R. Kemp*, relieving Dewey S. Scherrer; Scherrer has subsequently been assigned to the *Freeport Sulphur No. 1*.

Miss Emma L. Collins has relieved Miss Edyth L. Bradley as stenographer at the Division office. There's reason for that pesky Traffic Clerk buying so much candy, gum, etc., lately.

GREAT LAKES DIVISION

CLEVELAND

MR. NICHOLAS is negotiating with a Wheeling, West Virginia, concern for the installation of four sets on tow boats, running up and down the Allegheny River. In addition to these ship board installations, the Wheeling people have in mind four coastal stations to be stretched out over a distance of 450 miles along the river. These ship board jobs are quite a departure from either lake or ocean-going vessel installations, as low bridges which do not swing or raise must be considered when erecting the masts. It brings back the olden days when we contemplated equipping the inland river fleet of the Inco design.

Arrangements have been completed in Chicago by Mr. Nicholas and Mr. Thomas, Jr., for the Great Lakes division,

and Mr. Sawyer, Production Manager of the Sales division, whereby the Sales division and the Lake Michigan district, Chicago offices, will be combined. Mr. Sawyer has spent considerable time in and around Chicago during the last month and on account of his activities, we look forward to heavy distribution of broadcast receiving apparatus parts.

Mr. G. Harold Porter was a recent visitor in the Great Lakes division, having attended the Annual Lake Carriers' Association Convention in Detroit. He also spent a day at our Cleveland office looking over the prospects of the 1922 season and congratulating Mr. Nicholas and his force on the successful and efficient equipment of the entire Hutchinson fleet, which consisted of seventeen new rental contracts.

Two 200-watt combination telegraph and telephone sets are being installed in the Great Lakes division, one of them being placed on the *Carl D. Bradley*, a self-unloader, and the other on the *Seeandbee*, the largest side wheeler in the world. These installations coming as they do so early after the inception of the various broadcasting stations, will, without doubt, revolutionize Great Lakes radio activities. It is very possible that the near future will see many new installations in this region. What was but a few years ago a dream is today an actuality.

We consider this an opportune time to congratulate the Eastern division staff on their new re-location and look forward, as they do, to the day when all RCA activities in and around New York will be housed in one mammoth exclusive radio building.

The coal strike is holding up the initial departure of a dozen or more of our radio-equipped bulk carriers but we hope that the existing differences will soon be adjusted, so that the entire fleet can get under way.

Five years on one ship as conveyor engineer and operator is the record made by Mr. Kunner, who has again returned to the *Carl D. Bradley*. A year ago this time we hoped that he would return for the 1922 season, but he thought differently. However, he is back on the job and is now fussing up the circuit with his 200-watt combination set.

Not to be outdone by Kunner, George M. Commerford has returned for the third consecutive year to the *Maitland No. 1* in the capacity of Purser-Operator. It is a hard matter to divorce a good man from a good job.

Fred P. Sehlin, a new man in the service, has been holding down the job on the *City of Buffalo*.

Ralph C. Folkman, who has been trying for the past two years to secure an assignment in this region, recently sailed on the *City of Erie*, a one-man passenger ship.

Joseph Angsten, after putting in two years on the *A. M. Byers*, is now attached to the *J. L. Reiss*.

Norman B. Watson has thrown over the *J. L.* for an amateur radio supply store.

Joseph E. Carroll has again returned to the *City of Cleveland III* as senior, and has with him for junior, Harold M. DeGowin. This is a good combination as both of them are wire, as well as expert radio operators.

G. Lyle Stevenson is now on the *Conneaut*, a self-unloading stone boat. Stevenson put in two years on an ore carrier and writes in, saying that the difference between the two positions is scandalously advantageous to him.

Arthur H. Freitag, who writes such wonderful stories and poems on both radio and love, is now sporting his white duck trousers, blue coat combination uniform, as senior on the *City of Detroit III*.

Norman S. Walker, the old "clear-em-up-quick" bulk carrier man, is temporarily holding down the job as junior on the *Detroit III*. Walker was built for freight vessel work and is patiently waiting for the day to come when he will rejoin the *Fayette Brown*.

Van Dornick, a new man in the service, has sailed on the bulk carrier *Chas. L. Hutchinson*.

More new men have been given early assignments than any time heretofore: Lampe, having taken out the *John P. Reiss*; George P. Honold, the *Clemens Reiss*; Albert T. Miller, the *Frank Billings*; Edgar W. Steinike, the *J. T. Hutchinson*; Benjamin G. Roller, the *Martin Mullen*; Carl A. Sturdy, the *Price McKinney*; Herbert Matzinger, the *J. J. Sullivan*; Bernell Bidne, the *A. A. Augustus*; Norton C. Hass, the *Wm. Amazon*; Robert H. Frey, the *Harold B. Nye*; Earl Beach, the *Westland*; Howard H. Giles, the *W. H. McGean*; and Wm. T. Joyce, the *Chas. O. Jenkins*.

Charles J. Monde is again creating a disturbance in the air from the set of the *Richard J. Reiss*.

Frank E. Golder, who was with us a year ago, claims the *Jos. G. Butler, Jr.*, is the best job he had this year.

Earl H. Boldt has returned to this division, after an absence of two years and can now be found any day on the *Polynesia*.

Floyd E. Gray shoots TR's out daily on the *G. A. Tomlinson*.

John H. Mitchell has once again returned as Purser-Operator of the *Lakeland*.

Garrold E. Flower wants everybody to know that the *Samuel Mitchell* is a better position than any short run passenger ship.

Clair E. Mowry and LeRoy F. Bremmer are now holding down Purser-Operator berths on terries of the Pere Marquette Railroad Company.

Norman F. Durant liked his 1921 *Sir Thos. Shaughnessy* connection so well that his return this spring was taken as a matter of course.

Clarence H. Hiester, good old reliable Clarence, is now attached to the *W. F. White* as conveyor engineer-operator.

Herbert Schmitt decided the *F. B. Squire* was no place for him and by request was re-assigned to the *John Stanton*.

Edwin Glause, who is standing by for the *Seeandbee*, is temporarily holding down the *Squire* berth.

Our Stenographic Department was added to and strengthened by the addition of Gertrude E. Peterman.

PACIFIC DIVISION SAN FRANCISCO

ONE more Robert Dollar vessel was added this month to our steadily growing list of RCA ships. The *Oriental*, built in China and recently purchased by the Robert Dollar Company from the U. S. Shipping Board, was equipped with a P8A panel and vacuum tube detector and one step amplifier. Operator Charles B. Lee is in charge of the *Oriental's* apparatus.

We have just received a supply of V. T. detector and amplifier units, and will start installing as soon as possible. This will be good news to many who have been anxious to try the new receiving equipment.

At the present writing we can say little about the combination telegraph-telephone equipment but it would be advisable for all operators to study up the subject of C. W. in their spare moments.

During the month we had a pleasant visit from District Manager McAuliffe of the Seattle office. We are glad the California sun was shining all during his visit and although he brought along his umbrella he did not get a chance to use it, excepting maybe for a sun shade.

Mario Silvestri relieved Charles Lowell as junior on the *Colusa* bound for South America. Silvestri can parley in eight languages and will get a chance to use a few of them down south.

Percy Vettel has again returned to the service and is aboard the tanker *Richmond*.

Junior Operator Martin Principe of the *Matsonia* gave us all a surprise by being married during his stay in port last trip. Congratulations are in order.

Rudolph M. Jenson cannot forsake the briny deep and after an absence of seven years has sailed on the Motorship *H. T. Harper* until the regular operator, Karl Soderstrom, recovers from a minor illness.

Lee Fassett is again with us, as director of the Radio Institute. During the war Fassett sailed many times across the Atlantic as Junior Lieutenant, holding the office of Radio Officer and Engineer Officer aboard the U. S. S. *Cuyama* engaged in the transportation of troops and supplies.

SEATTLE

The *Mazatlan* has been chartered by Hibbard-Swenson Company for the season. Joe Hutchinson is making the trip on her to Siberia and the Bering Sea.

Ernest Wolcott is temporarily Purser-Operator on the *Curacao*, relieving Roy Woods. The *Curacao*, on her return from the South, will go North for the summer, having been chartered by the Carlisle Packing Company.

Two Shipping Board boats tied up during the month—the *Las Vegas* and *West Nilus*. Operator Currie, from the former vessel, is still on the beach in Seattle, while Van Carroll from the *West Nilus* wasted no time getting back to San Francisco.

Charles Laird and Arthur Dahms are now first and second, respectively, on the *Mandarin*. This is one of the recent Pacific Coast contracts, signed at San Francisco.

It took us a long time to do it, but we have finally completed the job of telling everybody in the State of Washington, over the 'phone, that we have no vacuum tubes, nor receiving equipment, for sale by this office. At least we think we have—nobody has called for the last half hour.

SAN PEDRO, CAL.

Those of us who are fortunate enough to be citizens of the Sunny Southland often hear of things gigantic from our nearby neighbor located to the north, but it rather stretches our imagination and causes us to soar into unfathomable mathematical calculations to believe all we hear and read. As an instance, the latest may be interesting reading, which we have been handed by the editor of the Daily Shipping Guide, published by Mr. Bertram Holmes, of Los Angeles.

Mr. Holmes says that the tow line of the tug *Sea Lion* is 626 miles long, as has been demonstrated by recent reports when the *Sea Lion* towed the *Willpole* to San Pedro harbor.

Any inquiries as to how or why, should be addressed to Mr. Bertram Holmes, editor Daily Shipping Guide, Los Angeles, Cal., and he will gladly furnish the solution to this seemingly amazing story.