

Special Prices to Marconi Employees Books on Wireless

A list of some of the best books pertaining to the wireless art. We have made arrangements whereby we can supply you with any book on wireless published in America at regular published price. We can also import on order any book published abroad. Send us your orders. They will receive prompt attention.

YEAR BOOK OF WIRELESS TELEGRAPHY (1916) no. 1000. Con-

YEAR BOOK OF WIRELESS TELEGRAPHY (1916) pp. 1000. Con-		
tains a yearly record of the progress of wireless telegraphy; complete list of ship and shore stations throughout the world, their call letters, wave-		
lengths, range and hours of service, and articles by the greatest author-	** **	
ities on vital questions\$1.50	\$1.00	
Questions Answered. 72 pp. E. E. Bucher. The greatest wireless book		
ever published for amateurs and prospective wireless operators50	.40	
HOW TO CONDUCT A RADIO CLUB, pp. 128, 116 illustrations, E. E.		
Bucher, Describing Parliamentary Procedure indoor and outduor experi-		
ments. Receiving Set and many other features	.40	
LIST OF RADIO STATIONS OF THE WORLD. 220 pp. Compiled		
by F. A. Hart, Chief Inspector of Marconi Wireless Telegraph Company of Am., and II. M. Short, Resident Inspector U. S. A. Marconi International		
Marine Com. Co. The only complete authoritative call list published 50	.40	
HAND BOOK OF TECHNICAL INSTRUCTIONS FOR WIRELESS		
TELEGRAPHISTS, pp. 295, Hawkhead, J. S. Covering principally the practice of the Marconi Co. abroad and elementary explanation of the		
underlying principles	1.00	
TEXT BOOK ON WIRELESS TELEGRAPHY, pp. 852. Stanley, R. A. text book covering the elements of electricity and magnetism, with details		
of the very latest practice in wireless telegraphy in European countries—recommended to all workers in the art of radio telegraphy	2,00	
	2.00	
PRACTICAL USES OF THE WAVEMETER IN WIRELESS TELE- GRAPHY. Mauborgne, J. O. Originally compiled for the Officers of the		
U. S. Signal Corps; comprises an explanation of the use of the waveineter,		
the most complete publication on the subject so far produced1.00	1.00	
THE WIRELESS TELEGRAPHISTS' POCKETBOOK OF NOTES, FORMULAE AND CALCULATIONS, pp. 347, Dr. J. A. Fleming. Bound		
in full flexible, rich blue leather, stamped in gold, with round corners and		
in full flexible, rich blue leather, stamped in gold, with round corners and gold edges. A book of practical working formulae and calculations for the student of radio telegraphy. Bound to be considered an indispensable		
part of the working equipment of every wireless student	1.00	
WIRELESS TELEGRAPHY, pp. 443, 461 illustrations, by Dr. J. Zenneck. Translated from the German. The work is the most scientific and thorough		
that has appeared on this subject. It covers all phases from physical principles to finished commercial apparatus	9.60	
PROCERNINGS OF THE INSTITUTE OF RADIO ENGINEERS	0.00	
PROCEEDINGS OF THE INSTITUTE OF RADIO ENGINEERS, edited by Dr. Alfred N. Goldsmith. Nos. 3 and 4—1918; Nos. 1, 2, 3, 4, —1914, and Nos. 2 and 4 for 1915 sold singly at \$1.00 each. Volumes II (1914) and (1915) Bound in Buckram, \$5.00 each. Subscription by year.		
-1914, and Nos. 2 and 4 for 1915 sold singly at \$1.00 each. Volumes II	* 00	
(1914) and (1915) Bound in Bucktam, \$5.00 each. Subscription by year.	6.00	
WIRELESS TELEGRAPHY AND TELEPHONY, pp. 416, 350 illustrations. Eccles, W. H. A Handbook of Formulae, Data and Information.		
Also gives brief accounts of the position of modern thought and speculation, includes a number of detached essays on subjects that seem to have been		
includes a number of detached essays on subjects that seem to have been		
neglected hitherto. Many formulae now published for the first time. A number of Abacs for facilitating the rapid application of formulae. A novel		
Ahac for the calculation of wave-lengths of circuits. The information is		
classified on a simple, definite system and the scheme of cross-references is complete, a copious Index and a Glossary of the Scientific and Technical		
Terms, Words and Phrases used in Radio-telegraphy	8.50	
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help to make it more interesting and more widely known by introducing it on every opportunity to new readers. Your special rate will apply on NEW subscriptions secured by you at full price \$2.00, you keeping the commission of 50 cents. Obviously EVERY Marconi employee should read the Wireless Age. Net to you	1.50	
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FRONTISPIECE

The front cover shows a view of the Japanese government high power station at Funahashi, near Tokio, with which the Marconi station at Kahuku, Oahu, is exchanging commercial traffic over a distance of 3,355 miles.

THE STORY OF TOMMY TIMMS

By Sum Schneider

Young Tommy Timms, a godel boy. His Mother's only pride and joy. Became a Wireless "Op" one day. And to see the world he sailed away.

His Mother sighted and shed a tear, And her poor heart was filled with fear, To think her Tommy might forget, And get his "Size Elevens" wet.

A dozen qualms assailed her heart, When from her darling son she part; For then she wondered if he'd miss, Her oft-repeated good-night kiss.

Many months passed and Tommy's Ma Thought lots of Tommy, now so far Away from her tender, loving care; Thoughts that were often hard to bear.

But Tommy's heart was stout and bold, As blithely up the "plank" he strode, Signed his name in the Company's pay, And to see the world he sailed away.

Then one day he came, all black with tan, And looking every inch a man: Full of tales of foreign lands And wonder sights of native strands.

He had worked "GV" from Barnegat, And with "RU" had "Chewed the Fat," He jammed "HA and SY" press, And got "Some —" from all the rest.

And when that 'eve he turned in tight,
His Mother blew him a soft good-night,
And breathed a prayer and sigh of relief,
That Tommy was safe in his bed asleep.

Page Three

SEAKAY MAKES A STIRRING ADDRESS

HE time has come," the Walrus said, "to talk of many things, of shoes, and ships and sealing wax, of cabbages and Kings." And that, Mr. Operator, is why we are gathered here this evening. I would like to say something pleasant, but the best interests of the Company require that I indulge in a little plain talk.

Mr. Operator—now get me on this, how much are you worth? Not how much are you worth in goods and chattels and coin of the realm, but just how much are you worth to this Company? How much do you

know about the business in which you are engaged?

Take yourself as a money-making unit, base your estimate on your prospective earning capacity. Say you are twenty-five, which is the maximum of value for such calculation. By taking a wide average of productiveness and figuring at 3½ per cent. interest, a healthy man of twenty-five is worth exactly \$5,488.03; at seventy the average man is worth but \$17.13. Think it over. Flattering isn't it.



Railroads pay out an average of \$3,333,33 each for innocent victims of accidents—and lawyer's fees are deducted from that.

Poinpey gave Denietrius his freedom, and reduced his own property holdings \$3,875.

In Calvinus Labinus's day, a slave, if learned, brought \$4,000—the price of a right decent motor car to-day. You wonder what I am driving at, you think—Ah! that's what I am driving at. I want you to THINK! Appraise yourself at your honest value; "For, what is worth in anything, but so much money as 'twill bring?" This applies to the AVERAGE man.

If you are an AVERAGE man you are not what nature intended you to be, and that you are not is because you have been too lazy, too superficial to put to test the half divine attributes and capacities which nature bestowed upon you.

Don't dodge, don't glance around to see the man I am talking to—it's you—YOU—Y O U—and you know it!

AVERAGE! Why, this old world is crowded to suffocation with

AVERAGE! Why, this old world is crowded to suffocation with average men. The very word is hateful. It speaks of dead ambition, of mediocrity—deliberately chosen. You have no right to be an average man.

Ben Franklin and Abe Lincoln were average boys, but bless you, they grew so fast they poked their heads clear through the law of average. Do you use your head for a hat rack? Or do you do a little "poking"?

I know what you are saying, but never mind how much I am worth, the burning question is—How much are YOU worth?

"The only difference between the rut and the grave is the dimensions."

Page Four

OLD BOREAS INVADES JUNEAU

Juneau was recently visited by a howling snow storm and several men were killed in dangerous snow slides One of these slides passed within a hundred yards of our operating house on the hill, but fortunately we suffered no serious damage. The entire city was thrown into darkness, power lines were torn away and power service was interrupted for a short When Operator Marthaler went on duty that morning, and threw in the starting switch for the rotary motor, the machine failed to start. Upon investigation it was found that the starting coils were burned out. evidently during the last running period the night before. Upon heing notified of the trouble Manager Manahan immediately made arrangements to send the machine to the electrical shops of the Allaska Gastineau Mining Company, at Thane. to be rewound. He rigged up a temporary straight spark of three pairs of key points in series. worked all right as a makeshift but after a few crinutes use it would are and get very hot. There was not an available blower or fan in town to put on it. Being Sunday, traffic was kept clear, without any serious delay.

Monday morning Mr. Manahan telephoned to Thane and also to Treadwell inquiring if they had a motor we could borrow, until ours had been rewound, but they had nothing we could use. He then went to the Union Iron Works and borrowed a ½ HP motor, and also a small buffing spindle. He procured two Edison disc phonograph records, had them drilled, mounted them on one end of the spindle, ran a belt from the spindle to pulley on the motor, and mounted all on one plank.

Page Fire

With this crude contrivance he succeeded in making a gap that would answer the purpose. Two disc records were used to make it doubly strong. We were not out of commission very long, and traffic was kept moving. Manager Manaban displayed clever resourcefulness in this emergency and is entitled to the highest praise.

NEW STATION AT CAPE MAY

The station is entirely new and sitnated about one mile from the old station on the grounds of the City The building is a Water Works. two-room frane structure of the bungalow type, constructed of first class material and of the best workmanship. It is very comfortable and attractive. One of the rooms contains the equipment which consists of a 3 k.w. panel set, type P-10 with a nonsynchronous gap and a type 101 tuner. It was installed by Mr. E. M. Murray of Philadelphia and shows great skill as far as the appearance and practicability are concerned. second room, which is slightly smaller is the manager's office. ial is of the "T" type and is suspended from a 150 foot galvanized steel tower on one end and the 150 foot city water tower on the other. The ground system consists of an elaborate copper wire netting connected to a number of galvanized iron pipes driven into the ground to a considerable depth.

Mr. E. M. Hartley, manager and his assistants contributed a great deal in assisting during the installation. Cape May is now one of the finest and most efficient of Marconi stations.



Wherein A Pusion of Human Elements is Effected by DAVID SARNOFF

TO CLIMBERS

A soperator of the Southern Division writes me: "I am very anxious to get into either the Construction or Engineering Departments and do not quite see my way clear to do so. I am taking a course in electrical engineering from the International Schools, and besides have had some experience in the electrical line. I was employed by a local street car company in its sub-stations and auxiliary power plants but left because of poor pay and long hours not to mention the desire to get back to Marconi. I want your personal advice as to how to step up another rung or two."

The above is one of a number of similar letters I frequently receive from operators in our employ. To this inquirer I would say:

That one having the electrical knowledge indicated above, and the experience gained as an operator in our service, possesses a combination useful and desirable in our Maintenance and Construction Departments. The time when we shall be able to utilize the services of such a man, or nien, will of course be governed by circumstances, but the first step is to keep in close touch with your superintendent, his construction men and inspectors, and let them know and see what you can do, both by the mainer in which you liandle the equipment at your own station and also your willingness to help out with construction work when you are in port. These opportunities always exist.

The Averican merchant marine is fast being increased, and the number of vessels carrying wireless is daily becoming larger. All this means additional help and additional opportunity for the man who is able to satisfactorily handle the job.

- If engineering be the profession of your choice, your successive steps should be as follows:
- 1: Continue in your present position and get the most out of your International course.
- 2: Keep in touch with the construction work in your division and watch your opportunity for a position which you will be able to obtain in the course of time.
- 3: When you have obtained it and definitely located yourself, pursue the study of electrical engineering, to the end that you may become a full-fledged radio engineer, which branch of engineering holds out many promises.

Page Six

BRASS TACKS, DRIVEN BY C. J. ROSS



THE LOVELIEST WOMEN IN THE WORLD

She may be either mother, a sister or a wife.

But there's precious little given her to brighten up her life.

He has not stopped to notice that her figure's gone nor seen. The creeping silver in her hair, or eye with lessened gleam; His love sees not the trifling signs, or it marks not crease or line, It scorns interpretation of the cold hallmarks of time. For the thing which drew him to her and made him first her friend, Is strong enough within her to hold him to the end.

Sweet memory takes him by the hand through long and patient years. Her faith and understanding constant through the trials and tears, While all her loving heart could give, was his without restraint. She has smiled through all privation, scrimped and saved without complaint He sees her pictured rainbow when at sullen skies he quaited. And in his immost heart he knows just why he never failed.

That's she (no. not the pretty doll who dances with such grace)
The scrawny, faded creature there, with thin and wrinkled face.
Whose eyes with proud and loving look are turned upon him now.
In wond'ring speculation as to what he wants, and how....
Yes, thin and old and scrawny, yet to him she'll always he
The Loveliest woman in the World. Thank God such things can be!

There always is a mother, a sister or a wife With precious little givon her to brighten up her life.

Page Seven

ATTENTION—SHIP OPERATORS

A ship operator recently suggested that ship traffic might be increased by means of enclosing a sending blank in each Ocean Wireless News sold the first day out, and the last day before reaching port. This has been tried on a number of ships with gratifying results. Suggestions of this kind, looking to increased business, are invited, and should be forwarded through division superintendents.

Another Operator on a freighter posted a notice in the mess rooms quoting our rates, and picked up Marconigrams amounting to \$35,90 on one voyage, and \$33,06 on the next. He found that many of the crew and some of the officers were under the impression that the radio equipment could be used only for ships business, and they were glad to have the opportunity of communicating with friends ashore and at sea.

SHOOTS FROM THE YOUNG

(From a New York public school composition (blackboard)

The Fountain Pen

The fountain pen is the most economical and practical writing impelment. It contains one large cylindrical tube with a sleight lengthwise This contains the ink. one end it has threads, which fasten it to a small tub, containing a round capp. The capp fits snuggly in the tith, grooved on the top to inable the ink to flow freely to the pen point, which is gould. Still another round part which covers the end and prevent dust from gathering on the point and from the point being bent or sticking the owner. The outer impelment is made of rubber hardened with a varying length, width perhaps four inches long, to three eighths of an inch wide. Thus we find that this pen is useful and sinfully constructed.—(N. Y. Tribune.)

THE TWO WORDS

One day a harsh word rashly said,
Upon an evil journey sped,
And like a sharp and cruel dart,
It pierced a fond and loving heart;
It turned a friend into a foe,
And everywhere brought pain and

woc.

A kind word followed it one day, Flew swiftly on its blessed way; It healed the wound, it soothed the pain;

And friends of old were friends again;

It made the hate and anger cease, And everywhere brought joy and peace.

But yet the harsh word left a trace

The kind word could not quite

efface;

And tho' the heart it's love regained, It bore a scar that long remained: Friends could forgive, but not forget, Or lose the sense of keen regret.

KEPT THEM GUESSING

The Lady Visitor (to friend just married)—So you are not getting tired of studio life, eh?

The Artist's Wife—Good gracious, nol It's most interesting. Jim paints and I cook. Then the game is to guess what the things are meant for.—London Opinion.

Page Eight



Operators are cordially invited to direct questions to this official department, which is designed to clear up all points pertaining to the making up of abstracts.

Questions on technical matters will not be answered.

The Operator's name and division must accompany each inquiry, but will not be printed.

--- was a state of the state of

In reply to the many queries regarding operating companies, this month, the following method is used to save space:

the following method is used to save space:
SHIP OPERATED BY
Manifewers Apparies Transcription Company

Manitowoc American Transatlantic Company George Washington Peter Olsen

Maraval Siemens Brothers

Cacique W. R. Grace and Company
Empress of Asia Canadian Marconi Company
Empress of Russia Canadian Marconi Company

Felix Taussig Crowell and Thurlow
Cuzco American Marconi hehalf Belgian Co
Zealandia National Electric Signaling Co.

Niagara Australian Marconi Company Shadwell Canadian Government

Prince Rupert Grand Trink Pacific S.S. Company
Mandalay Siemens Brothers

Please correct your records accordingly.

COAST STATION DEBIT AND CREDIT*

Hongkong Hongkong Government
Beaumont, Texas Magnolia Petroleum Company
Crookhaven, Eng. British Post Office

St. Lucia St. Lucia Government
Romana Guanica Centrale Suga

Romana Guanica Centrale Sugar Company Macoris Guanica Centrale Sugar Company Ensenada Guanica Centrale Sugar Company King Cove, Alaska Pacific American Fisheries Co.

Port Walter, Als.
San Domingo
Halifax

Pacific American Fisheries Co.
Alaska Herring and Sardine Co.
Dominican Government
Canadian Government

Cape Race Canadian Marconi Company
Kingston Jamaican Government
Curação Dutch West India Government

Bermuda Dutch West India Governmen
British Admiralty

Port Moller, Als. Pacific American Fisheries Co.

*The names of the accounts only, not necessarily the operating com-

Page Nine

pany or government.

C.S. writes: "Your 'note' in the March issue of the 'Marconi Service News' re, land line tax Accra radio to Accra cable office is rather amusing, to say the least.

When I tell you that the distance from Accra radio to the Accra cable office is not more than two-hundred yards, I think you will agree with me that a land line tax of four cents per word is rather an imposition.

Tis perhaps fortunate that very few, if any, American ships will ever need to make use of the station.

Looks like the result of a monopoly."

The Editor derived his information from the Wireless World.

T.L.-Should intercepted traffic such as ABMV, LL, LLWW, Etc., be abstracted by vessels this Company operates on behalf of Affiliated Companies?

Ans.--No.

F.C.G.—Should any record he kept of abbreviated signals such as QRT, QRU, Etc?

Ans.—The meaning of such abbreviations must be written on a service message form and filed with other message copies for reference.

Such traffic should not, however, be abstracted.

Also note that operators are not to use any abbreviation or signal that is not authorized for exchange of radio communication

NOTE.—If operators are to continue enjoying frank privileges, they must pay other line tolls on personal deadhead messages at the same time, they turn in their traffic reports,

This pertains to the live cent telephone charge as well as telegraph charges.

Bid,—Is it permissible to sign an individual's name to "Hotel reservation" messages?

Ans .-- No. Such traffic should in-

variably be signed Ocean Wireless News, and the notation, Charge Wireless Press, must appear in the "Remarks" column on abstracts. NOTE.—MESSAGES TO GREAT

BRITAIN AND IRELAND

The FORWARDING CHARGES on such messages accepted on ships at sea sent through Marconi Coast stations and to be forwarded via MARCONI TRANS - ATLANTIC Service are as follows:—

(The Wireless charges are to be added to the following).

Per Word	
Seagate\$0.17	
Boston, Mass,	
Siasconset, Mass	
Cape May, N. J	
Philadelphia, Pa	
Baltimore, Md	
Virginia Beach, Va	
Hatteras, N. C	
Savannah, Ga	
Jacksonville, Flo	
Miami, Flo	
Tampa, Flo	
Key West, Flo. (Naval)29	
Mobile, Ala	
New Orleans, La	
Galveston, Tex	
Port Arthur, Tex	
Cape Race, NF	
Foreign Messages via Sable Island	
and Cape Sable:	

On messages destined to Foreign countries and transmitted via Sable Island or Cape Sable there is in addition to the cable charges from Halifax. N.S., an Other-Line forwarding Wireless charge of 6 (six) cents per word, with a minimum charge for ten words between Sable Island or Cape Sable and Halifax, N.S. The MARCONI TRANS-ATLANTIC rate from Halifax, N.S. is 16 cents per word.

NOTE:-It has been brought to our notice that occasionally messages are

Page Ten

accepted from the public on shipboard containing code addresses registered with the land line companies prior to July 1, 1914, but which have not been registered at the office of the Director of the Naval Communication Service, Washington, D. C.; also messages having code addresses have been accepted without a signature, and messages containing code or cipher, but which are unsigned. All such messages are likely to be stopped by the censor.

To insure the delivery of messages with code addresses registered prior to July 1, 1914, by any station, such addresses should he registered at shore stations or at the office of the Director of Naval Communication Service; they will be published from time to time as additions in the Communication Chart supplements.

COAST STATION MANAGERS:

To ascertain the total of a column of figures, add each entry in the column, the whole sum of which is the total

To get a summary balance, rewrite the totals of each column one under the other on the last sheet. Add all of these totals and the sum of them is the grand total.

The grand total of the right hand side must agree with the grand total of the left hand side, indicating that the report balances.

When balancing a report add the MSG and PDH columns, but do not include them in balancing.

Reports are to be balanced on the last sheet only, but each sheet must be totalad.

NOTE.—Operators assigned to vessels which seldom touch ports in the United States should, when away a month or more forward their traffic returns monthly, by mail, to the Division Superintendent enclosing a money order to cover the cash.

Page Eleven

FRANK CHAPMAN Superintendent Southern Division



He spent 9 years in the Navy, specializing in wireless, and made the famous cruise around the world, enlisting under the Marconi banner in 1913 as manager at Virginia Beach. He later became manager at Miami, and his recent promotion is the result of his energetic and efficient work.

SOME SPEED

A marconigram was recently sent from Juneau, Alaska, to Seattle asking for fish quotations, to which a reply was received and delivered in 52 minutes. Manager Manahan keeps things moving in the Artic circle, probably to prevent freezing.

MEAOW!

She-"What do you suppose Harold meant by sending me those flowers?"

Also She—"He probably meant to imply that you were a dead one."—Jack o'Lantern.

Maintenance Matters

A Department for Technical Questions With Answers By P. B. Collison

All employees are invited to direct technical questions to this department

SPECIAL NOTICE

The New York Herald Station (WHB) is now equipped with a Five Kilowatt, five hundred cycle, quenched spark transmitter of latest Marconi design. Three wave lengths are available,—three hundred and six hundred meters for ordinary commercial service and a seventeen hundred meter wave for the press schedule.

The station was opened for regular service, February 26th at noon and the first press hulletin was sent the evening of March 3rd. Operators are requested to log any exceptional distances covered by this station both on the press wave of 1700 meters and the commercial wave of 600.

C.W.B. wishes to know how long the gap should be on a synchronous rotary gap.

Answer:-The instructions that the stationary electrode should be .005 of an inch from the rotating points. In spite of these instructions some of the operators seem to think that the more noise the discharge makes the greater the antenna current and the longer the range covered; and with this in mind they lengthon the gap until the spark becomes thunderous, This method is entirely wrong resulting in an excessive strain on the condensers and transformer secondary. To synchronize the gaps on the standard equipments proceed as follows: Adjust the stationary electrodes to a clearance of .005 of an inch making sure that the knife edges of the rotating and stationary electrodes are in line. Synchronize the gap first with a moderate amount of power and then increase antenna current as needed. A slight readjustment of frequency may be found necessary if the gap fails to synchronize when power is increased to full value.

A word regarding the nonsynchronous gaps may be of value. There seems to be a tendency to run the gaps too fast in order to get a high note. There is however a critical speed of the gap motor depending on the frequency of the generator. The best adjustment for antenna current is obtained by using a gap between rotary and stationary electrodes just great enough for clearance.

The speed adjustment is obtained by noticing the speed of the sparks that seem to travel around the sta-It will appear tionary electrodes. as though a stream of sparks travel in a clockwise direction from point By adjusting the speed to point. of the gap motor the sparks can be made to travel around very slowly. The best adjustment is when a large hall of fire seems to hang around each point slowly fading away and then appearing just as slowly at the next point. While this note may not sound as pleasant in the station it carries very well ontside.

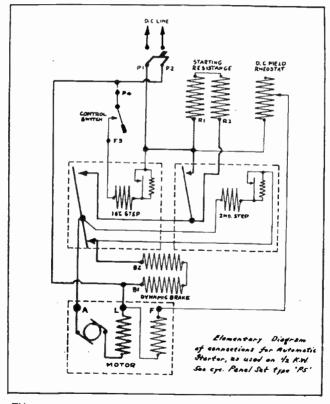
J.R.C. asks why he cannot keep the voltage of a set of accumulators up to standard even though he charges cells for hours.

Answer:—There are several reasons why the voltage of a cell drops off soon after a charge is finished. The most common are low specific gravity and sediment in the bottom

Page Twelve

of the containers. The first condition is discovered by taking readings with a hydrometer and the second by removing the plates from the container. The gravity is sometimes lowered by the addition of too much water to replace that lost by evaporation. With insufficient acid present the chemical action of discharge soon stops. Sediment will short-circuit the cell internally and thus discharge it slowly.

As there seems to be a lack of understanding regarding the operation of the automatic starters used on the standard half kilowatt panels a complete description with full diagram is given below.



Page Thirteen

When the starting switch (control switch) is closed the solenoid of the first step is connected in shunt to the DC line. The flux from this solenoid attracts the lever of the first step closing the circuit from the DC line to the armature of the motor through the starting resistances R1 and R2. Simultaneously the solenoid of the second step is connected in shunt to the DC line attracting its lever thus cutting the starting resistance out of the armature circuit, whereupon the motor is connected directly to the DC line. It will thus he understood that the lever of the first step is used to open and close the main power circuit while the lever of the second step cuts out the resistance in series with the motor armature. The solenoids have in series with their windings a protective resistance which is cut in when the starter is in running posi-These serve to prevent the windings from overheating.

The automatic starter also includes the elements of an electrodynamic brake. When the control switch is opened the lever of the first step falls back making contact at the lower end connecting the dynamic brake resistances in shunt to the motor armature and the series field winding. The motorgenerator thus temporarily becomes a generator and owing to the power expended in the generation of an electrical current through the resistances B₁ and B₂ a powerful braking action is set up against the armature, bringing it to a quick stop.

Some of the faults, their detection and remedies are given below. If the lever of the first step fails to rise when the control switch is closed it is quite certain that the winding of the solenoid magnet is open.

The only remedy for this is a new magnet coil. There are hundreds of feet of very fine wire in these coils and we do not advise operators to attempt repairs unless supplied with a lathe. In an emergency the lever can be held in place with a piece of cord. Another possible cause of this lever's failure to rise may be a loose contact at the series resistance contacts. This will not allow full current to flow through the solenoid windings and the magnetic flux will be much weakened. The lever will rise therefore very slowly, or not at all.

If the second step should fail to rise four or five seconds after the first step goes in, it may be that the lever is too far from the magnet. This is remedied by the adjusting screw at the base of the lever. If there does not seem to be any pull from the solenoid the winding is open, or there may be an external open circuit.

If the levers of either the first or second step rise and fall rapidly and "chatter" like a large buzzer the series resistance located on the back of the panel are open. These windings will be found one back of the other just to the rear of the solenoids. A 25-watt tungsten lamp may be substituted for either.

If the dynamic brake resistances are open the second step will fail to operate. If the starting resistances are open the armature will not start to rotate even though the lever of the first step comes up. These coils are located in the box under the transformer. Their terminals are labeled B₁ B₂ and R₁ R₂ respectively.

BRITISH FRIGHTFULNESS

The Host—"I thought of sending some of these cigars out to the Front."

The Victim—"Good Idea! But how can you make certain that the Germans will get them?"—Tit-Bits.

Page Fourteen

LOSS OF THE PORTLAND

The S.S. Brazil which arrived at Christiania reports picking up the crew of the American steamer Portland bound for France. The Portland, when 50 miles east of Nantucket ran into a heavy gale and sprung a leak. Water enter the fuel oil tanks, making it necessary to hurn all woodwork in order to make sufficient steam to keep the pumps going. She drifted for 16 days and was in a sinking condition with provisions and water exhausted, when the Brazil sighted her 280 miles E.S.E. of Bermuda and took off the crew, when she was abandoned. She was formerly equipped with wireless but it had been dismantled before starting on her disastrous voyage. There is little doubt that had her wireless been retained the valuable ship and cargo might have been saved.

A COLLISION AT SEA

On the 24th of Februray while under half speed 35 miles south of Cape Mendocino, S.S. Senator, from Seattle for San Pedro, was rammed by S.S. Northland, from San Francisco for Seattle, as a result of hazy weather during a heavy rain in the early morning hours. S.O.S. was promptly answered by the Asuncion, 65 miles away, but assistance was not required. The damage to the Seutor was above water line, and she put into San Francisco. The Northland was leaking badly and she returned to San Francisco.

WEDDING BELLS

MARRIED: At Jamestown, N. Y. Dec. 20, Mr. L. W. Hull, manager Manistique, Mich., to Miss Gertrude May Gardner, of Jamestown.

Page Fifteen

At San Francisco, Mr. Elmer E. Riddle, an engineer at Bolinas, to Miss Ruth E. Bryant, of San Francisco.

SILENT ACTIVITY

Caller-"That new girl of yours seems nice and quiet."

Hostess—"Oh, very quiet! She doesn't even disturb the dust when she's cleaning the room,"—Tit-Bits.

EXECUTIVE OFFICE NOTES

Harold H. Gallison, who has been in the traffic department of the Marconi Company for the past ten years has resigned to take a position with W. R. Grace & Co., at New York. We are sorry to see him go.

Miss Lawson has returned to duty after a week's illness, her place at the switchboard being acceptably filled by Miss Kennelly.

Mr. E. M. Thurston is absent on sick leave.

C. H. Taylor, Engineer Trausoceanic division returned from England recently on the "Carmania," after an absence of several months,

The General Manager has returned from Montreal where he attended the directors meeting of the Canadian Marconi Conspany.

Joseph P. Murphy of the auditing department has resigned. Wm. R. Eberle succeeds him.

Frank Seltzer has been transferred from the auditing department to 42 Broad Street and is succeeded by Miss Trans Senters.

Miss Mary M. Millea has been transferred from cashier's department to general manager's office. Robert C. Hock succeeds her.

H, M. Wick has joined the office force of the Purchasing Agent.

BROAD STREET

How-do-you-do?

We do not know why it has been thought best to omit the mention of us before—but nothing shall stop us from giving you our monthly call from now out.

This small but happy family is the nucleus of the trans-oceanic staff keeping everything in readiness for the 'G' signal which will signify the opening of the direct trans-atlantic service. This unfortunately, has been hampered by the war.

Here is conducted the trans-oceanic school for the training of our ship operators for the more important work of the trans-oceanic division.

Here may be seen the clite of the ship service ever busy with key sounder, typewriter and wheatstone puncher preparing for the 'day.' This cannot be very far distant.

The crown is placed upon the brow of Mr. A. J. Minner's as being the one to recognize real preparedness. He is closely followed up by Messrs. Beach, Bossen and Doberty. Is your name on the list? If not--why not?

Mr. F. Seltzer is with us again. We welcome him.

SPOKES FROM THE HUB

The Belfast is laid up for overhauling, operator N. W. Filson being transferred to the Calvin Austin. We feel sure Filson will be glad to get back to Portland.

The Camden has been placed in commission, operator A. E. Ridley at the key.

Operator Grinnell on the Gov. Cobb informs us that he has forwarded a box of choice Havana's by parcel post. They must have heen so strong that they walked away, but then it's a long walk from Key West to Boston.

- F. J. Flood has been assigned to the Mielero, a new ship just equipped at the Fore River shippards. We understand that Mr. Flood got married quite quietly some time ago at Lubec, Maine. Congratulations old man.
- A. B. Tyrrell is now on the North Star in place of Flood. We wonder what will happen to him after he gets acquainted at Lubee?
- H. A. Pendleton has recovered from his illness and is now back on the City of Augusta.

Operator H. F. Hill of the City of Atlanta has resigned to accept another position.

- A. E. Brown has been assigned as Scuior on the City of Atlanta, with A. A. Grant as junior.
- D. L. Eastman has returned to the Nacoochee with Captain John. We are all glad to see Mr. Eastman return to Boston, as we missed the fresh eggs from his farm.

We understand that operator Meldrum of the Boston station is contemplating matrimony. We may be on the wrong track but it looks suspicious.

Operator Elliott of the Boston station who is a Scoutmaster of the Boy Scouts organization, recently lost one of his rubber boots when he went through a thin place in the ice covering a pond which he attempted to cross. He came home with "one shoe off, and one shoe on,"

L. R. Barbeau, a new man, relieved operator Crosby on the Norman Bridge at Portland.

EASTERN DIVISION

H. E. Markoe is on the Hattie Luckenbach, bound for Australia.

H. T. Williams is on the El Rio. Williams has just returned from a trip across on the Avellaneda.

L. J. Larson has been engaged for the Orleans. This ship trades between New York and ports in France.

George Emberton has relieved Lester Ward as junior on the Korona.

Theodore Hahn is senior on the El Oriente. Eastinan has returned to Boston District.

John Churchill is on the new tug John Soully, which runs along the Atlantic coast.

U. K. Stagg is junior on the El Cid. J. J. Kaleta has returned to the Iroquois.

H. F. Koehler is senior on the Comal.

H. B. Whitcomb, an ex-navy op. is on the Sucrosa

Theodore Ostrewich, a graduate of the school, was placed on the yacht Cyprus of the Pacific Coast Division. George N. Robinson is in charge of the equipment.

L. G. Ainley is on the Princeton.

Frank Stelluti is making a trip to France on the Kinmount, which flies the French flag.

Tom Tierney is senior on the Sagua. This steamer was a Dutch ship but has been changed to American registry.

Adam Russell was appointed to the Sherman which has just been equip-

Ronald Marsano is on steam yacht Casiana, having relieved E. R. Crosby. The Casiana is stationed outside of Tampico.

William Kaiser has heen reengaged. He is on the Paulshoro.

Ed. Bernstein is on the City of Columbus.

John Nash is junior on the Esper-Page Seventeen

anza.

Alfred Cresse is on the Antilla. Frank Velten is junior on the Moro Castle.

H. E. Cohen has been transferred to the M. R. I. Department, N. Y.

B. L. Chapinan, a Great Lakes man, is on the Wico.

W. O. Smith is making a voyage on the Communipaw:

James Boa has been assigned to the Tanamo which was of Dutch registry until purchased by an American company.

Claude C. Levin was transferred to the Lampasas upon his return from a voyage to Europe on the Rawson.

Edward J. Smith is on the City of Peuhla, making a trip across, Smith has been in the Signal Corps of the United States army since he was last with us.

Conrad Russell, a tyro, has been placed on the El Dia as innior.

W. A. Brown is making a trip to South America on the Craster Hall.

R. F. Guy is making a trip to South America on the Santa Barbara. H. G. Hill is junior on the Guiana.

W. Dinga is junior on the Alamo. Russell Aldrich has relieved Arthur Jacoby on the Baton Rouge. Jacoby is now junior on the Sabine.

A. A. Marsh was engaged at Baltimore for the Holden Evans, newly equipped.

H. R. Davis was transferred to the John D. Rockefeller when the Kroonland laid up at New York.

L. F. Kendall is on the Margarcia. Matt Bergin is on the Comal.

C. L. Fagan is in charge of the Saratoga.

Dave Cawman has returned to the El Norte.

H. A. Carder is in charge of the Gargovie.

Pete Podell is senior on the Coinanche

W. J. Roche is temporarily on the Creole.

C. E. Heinline has been reengaged. He is on the new Standard Oil ship W. G. Warden.

E. J. Edmonds has returned to this division and been assigned to the Bradford.

Charles Stellmach is making a trip to Europe on the Silver Shell.

John Conway is senior on the Lenape. Willis Beltz is with him.

C. A. Biddinger is senior on the Jefferson.

A. F. Pendleton is senior on the Manchuria, running to London.

J. Woltal has been appointed to the Santa Rosa, a new Grace boat. She is bound for South American ports,

SOUTHERN DIVISION

E. August, a new man in the service, has been assigned to the Cretan as junior.

Dr. O. E. Curtis, who has been on sick leave, has returned to duty, and is now senior on the Gloucester.

Paul Fretz, who has been holding down the Norlena, in the Transatlantic service, is now senior on the Howard.

Operator Hovelsrud has been transferred from the Ontario to the Gloucester, as junior.

J. F. Sullivan, late of the Gloucester, is now holding forth on the Ontario.

H. E. Merritt, of the Juniata, is on sick leave, and C. R. Crosby, of the Eastern Division, is relieving him.

A. P. Smith, has left the service temporarily, his place being filled by V. Zite on the Merrimack.

F. W. Feiler has been assigned as senior on the Persian, and George Matthews as junior on the same vessel.

J. P. Gallan has returned to this Division, and is now junior on the

Quantico.

W. J. Ferris is now towing barges behind the Toledo to and from the Land of the Gringo haters.

J. H. Weikel, a new man in the service, is keeping in touch with Ferris, from the radio room of the Delaware Sun.

J. H. McCauley, who has been running to the War Zone for the last eight months, on the Carolinian, has received temporary assignment on the Comanchee of Clyde Line, whose operator recently deserted ship at Charleston.

Operator Johnny Flag has returned to the Southern Division, and been assigned to the Rockingham. Johnny will now dodge Undersea Boats in the War Zone.

A. F. Bowers, Manager of the Baltimore station, has been promoted to the managership at Miami, Fla. Good luck to you BF. There are many who envy you your home in the land of sunshine and flowers. Some weather here, Brrrr!

H. M. Rodebaugh, who was relief operator last summer, and who has been second trick operator at the Baltimore station since September last, has been appointed manager of that station. Rody is one of the oldest wireless men in the business, having had sixteen years constant service.

Loyal W. McKee has been appointed second trick operator of the Baltimore station. Loyal is always so-LOYAL.

Constructing Engineer E. M. Murray, has just equipped the Santa Rosa of the Grace Line, with a 2 km 500 cycle panel set, also Santa Maria 1 k.w. 60 cycle non-synchronous set.

Constructing Engineer Wyble has recently equipped the motor ship Holden Evans, with ½ kw 500 cycle panel set and the S.S. Sherman with a 2 k.w. 500 panel set.

Constructor Gerson has installed a 2 kw 500 panel set on the W G Warden, also on British S.S. Natica. and on the Limeleas a 10-inch coil auxiliary set.

Mr. Frank Chapman, who has been manager of the Miami station for nearly three years, has been made superintendent of the Southern Division, relieving Mr. M. C. Morris, who has been granted indefinite leave of absence on account of ill health. Mr. Morris has the sympathy of us all. Mr. Chapman has our hearty congratulations, on his being chosen for this position, and we all feel that he will be the right man in the right place.

E. P. Hough has returned to the service and been assigned to the Orlina in the transatlantic trade.

We have averaged two ships week, in new equipment, during the past month, in the Southern Division.

GULF DIVISION

George E. Henderson has re-entered the service in the capacity of Division Inspector, relieving M. L. Grubman who has resigned to engage in husiness for himself,

G. P. Reynolds has been promoted from the Marine Service to the post of Assistant Inspector and Construc-

tion-man at New Orleans,

J. B. Swift is now enroute to Italy on the Italian tanker Bayonne; C. E. Sadlier, a new man in the service, takes his place on the Brunswick.

- J. E. Broussard, Division Traveling Inspector, is now on the Brunswick, relieving J. A. Dillon who is taking a trip to Havana on the Ex-
- J. P. Huckaby, a new-comer, is on the tug Buccaneer.
- A. Krog, another recruit, is on the Catania. This vessel is now operated by the Gulf Division.

Page Nincteen

F. Reb is now in the "Tanker Di-

vision" on the Charles E. Harwood. S. J. Weiss has relieved J. L. Bennett on the Coahuila. R. V. Replogle, a new man, is junior, Replogle takes the place of E. C. Sanders transferred to the Northwestern.

The Francis Hanify has been renamed Freeport Sulphur No. 1 and is in the service of this division.

H. Wheeler is in charge.

E. F. Hymel and Win, Varetoni are now on the Mianii.

- L. R. Barbeau, a new recruit, is now on the Norman Bridge, R. W. S. Marsano has been transferred to the yacht Casiana of the Eastern Divis-
- P. J. Barkeley has been assigned to the Olivette. P. S. Killam, late of the Gov. Cobb, is junior.
- W. C. Evans, late of the Lakes Division, is now on the Panuco.
- The erotor ship Pennant, with H. H. Tilley in charge, is on a trip to the War Zone.
- M. L. Sazer, a new man, has been assigned to the Ponce.
- E. C. Gardell has been assigned to the San Juan as junior. Gardell is a new man, he relieves D. R. Doughty who has resigned.
- H. A. Sauleen is now on the Senator Bailey, having relieved "Col." L. H. Graves who is now with the Eastern Division.
- Wni. Macke has been assigned to the Tegucigalpa as junior. Haverkamp is in charge.
- O. Treadway, late of the Pacific Division is now in charge of the Torinchtor.
- O. H. Wolter has been assigned to the Viking as junior; G. S. Rowe is in charge.
- L. L. MvCabe, the "Old Reliable" has returned to the "Static" division and is now on the yacht Wild Duck,

GREAT LAKES DIVISION

From all indications navigation will open between April 1st and 15th. We miss the daily visits of the operators, who are waiting patiently for the ice to break up and navigation to start. Practically all were assigned to ships in the Eastern and

Gulf Divisions during the winter We have been receiving months. communications from them all, and they are, as usual, anxious to get back to the Lakes.

A. F. Jackson, Superintendent of Construction, seems to be the one most interested in the starting of the season, as he has fifteen installations to make before things break loose. It looks like a busy year for the Construction Department,

E. I. Deighan, Purser and Operator on the Ashtabula, is in Cleveland spending a two weeks' vacation preparatory to starting out of his ship, the Ashtabula being the first ship to start out of the lower lakes in

the spring.

We have had letters from A. J. Main and Geo. P. Aldridge, who have been down on the border since last July, advising us that they will be on hand at the opening of navigation.

Operator E. M. Tellefson has been assigned to the Missouri.

E. Baldwin, a new man in the service, has been placed on the Illinois. Operator Frank Weide has relieved

operator R. Eling on the Georgia.

The new Chicago station and office, in the Transportation Building, with its standard panel set installed, is making a big hit with visitors who marvel at the wonderful achievement in the wireless development which marks our modern installation.

The average daughter of Eve doesn't believe in the survival of the fattesti

PACIFIC COAST NOTES

E. O. Mohl, formerly of the Marine and high power department has been assigned senior on the Steamer City of Seattle with F. Camenisch as junior.

Reginald Baer is now on Steamer Geo. W. Elder, a one-man vessel, doing the Mexican West ser-

M. H. Mears and R. Whisman are senior and junior on the Steamer Humboldt, bound for the Alaskan service.

F. C. Wirth assigned to the Steamer Santa Alicia at Gulf Port several months ago has been replaced by W. E. Downey. Worth is joining the Steamer Hilonian which will leave San Francisco shortly for the East.

B. C. Springer of the Minnesotan was transferred at San Francisco to senior operator of the Steamer Queen. Commodore Pattison left San Francisco in charge of the Minnesotan.

O. Mock resumed service on the Steamer Yosemite after enjoying a

two week's leave of absence. W. E. Price, formerly

Steamer Ravalli has been assigned to the Steamer Umatilia. The Ravalli laid up at Seattle.

The Steamer City of Topeka has been placed in commission with E. Diamond as senior and K. Peterson

as junior.

The Steamer Curacao, which placed the City of Topeka on the San Francisco Eureka run during the lavup period is expected to sail for Seattle shortly with operator H. Jensen in charge. The Curacao will then go on the Seattle-Alaskan service.

J. E. Johnson of the Juneau semihi station was relieved by L. A. Lovejoy during the latter part of this The transfer was effected month. via the Steamer City of Seattle route.

Page Taventy



KAHUKU

The first dance of the season was recently held at the Kahuku Hotel and was a great success. The road between the hotel and the main highway was under several inches of water and we were surprised to find some sixty friends gather from far and near to help us make our entertainment one long to be remembered.

During the week previous to the dance all the boys, in their spare time, were extremely busy and worked like demons filling in the holes and making the roadway fairly presentable, but heavy and continuous rains ruined most of their good work

ruined most of their good work.

Mrs. and Mr. Rau worked very hard and much of the success of the affair was entirely due to their genous efforts.

The motorcycle craze still continues and we learn that one of the recent arrivals, young Lynch, from Marshalls, has decided to purchase Gompf's double cylinder seven horse power Excelsior and we have suspicion that Gompf is going in for a two-seated runabout. Young Harvey, one of our shift engineers, has recently added a rear seat to his trusty Indian and now and then we notice a girl hanging on for dear life.

Eklund and Smith occasionally are seen down the road on their motorcycles, but Stepp's new automobile and Anderson's raceabout are very much more popular with the neighboring school teachers.

The station is now under military guard with fifty-five soldiers and all their mounts, also a couple of officers and their families. This tends to make the time more enjoyable and many interesting games of tennis are played during the day and swimming competitions are of frequent occurrence. The station employees are now furnished with passes and it is a usual thing to be hauled before the sentry before being allowed to return to the station grounds after a trip to the city.

Our famous dog Static is still alive but for a week or so we feared for his life, as Stepp ran over him with his high powered car some time ago.

MARSHALL NOTES

"Hats off to Klock"

"Crazy Kat" Klock who handles the night Morse trick, was recently the hero of an episode which, but for his promptitude and persevering efforts would have resulted in a tragedy.

Returning from Marshall a few days ago, Klock heard cries for help proceeding from the hay and running in the direction from which they seemed to come, he discerned an upturned boat some twenty yards from shore, to the bottom of which was

Page Twenty-one

clinging an exhausted man. Floating nearby were the hodies of a man and child, apparently unconscious, while on the beach a woman strove frantically but ineffectually to launch a boat to go to their rescue.

In a few moments Klock had the boat launched and the three unfortunates safely aboard and ashore, but the hardest work was yet to come.

The man who had been clinging to the boat, although thoroughly exhausted seemed in no real danger. but the other two victims showed no With an hysterical signs of life. woman-the mother of the child and wife of one of the rescued men-as his only help, Klock proceeded to render first aid and to apply artificial respiration. Hastily instructing the woman and delegating the unconscious child to her efforts, he applied himself to the inert form of the second man, and with a perseverance that reflects the highest credit on him, stuck to his task for threequarters of an hour before he had the satisfaction of noting signs of returning animation. Meanwhile the child was rapidly gaining consciousness under the ministrations of its mother and father-the latter having recovered from his exhaustion sufficiently to render assistance-and a hurry call was sent for a doctor. By the time he arrived. Klock's efforts had proved successful in reviving his subject who was ther removed to a neighboring shack.

Later inquiries elicited the information that beyond suffering from shock all three had fully recovered and were little the worse for their unfortunate experience.

It is certain that two of them at least owe their lives to the unremitting efforts of Klock who is deserving of all praise and commendation.

EULOGIUM

New York, March 10, 1917 Mr. W. A. Winterbottom, Division Superintendent, San Francisco, Cal Dear Sir:—

I have read with much satisfaction an account of the brave and efficient work of Raymond P. Klock, a member of our staff at Mershall, in rescuing three persons from drowning when their boat upset in the bay near our station, and in restoring two of them by skilful application of methods of artificial respiration. I amproud of his enrollment in our service and of his prompt and honorable upholding of the Marconi traditions in meeting emergencies.

I suggest that you place the facts in this case before the proper authorities and recommend that suitable recognition be awarded him.

Yours very truly, E. J. NALLY, Vice-President & General Manager.

THE RULE OF THE AIR AT SEA
With Apologies to Gray's "Rule of the
Road."

By N. J. Kearney.

When a steamer's lights you see—
Don't call QRA and QRD.

For QRA+QRD=QRM and QRT.

If in your fones SOS you hear,
It is your duty to keep clear:
To act as judgment says is proper;
To listen—call—log—don't jam her.

But when in your fones you hear,
That fumous "CQ" from far and near.
There's not so much for you to do.

Just log the fellow and then you're thru.

Both in safety and in doubt Always keep a good lookout; When with jamming the air does hurn,

Patience-Silence-Wait your turn.

Page Twenty-two

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