



The Pacific Electric MAGAZINE



ISSUED MONTHLY BY THE EMPLOYES OF THE PACIFIC ELECTRIC RAILWAY

Vol. 2

LOS ANGELES, CAL., AUGUST 10, 1917

No. 3

Safety First for the Automobile

By G. H. Grace

Secretary, Central Safety Committee

In looking over the monthly reports covering accidents in which cars and trains are involved, our attention was particularly attracted to the apparent high percentage of casualties classed as "interferences with vehicles" and a subsequent analysis of the figures covering the years 1915 and 1916, and for the six months ending June 30th, 1917, developed some interesting facts.

We naturally assumed that the number of accidents was in proportion to the number of vehicles or the number of cars or trains or both and data was collected from various sources to determine the number of vehicles, and since the number of horse drawn vehicles involved was so very small we have based our study on the number of automobiles and motor trucks entirely.

It is estimated that the number of these was 45,000 in January, 1915 and 110,000 in June, 1917, operating in Southern California in the territory served by our lines, the increase being very heavy from June, 1916, when the number is estimated at approximately 65,000.

The monthly average is estimated at 55,000 for the year 1915, and 67,000 for 1916; the average for the six months ending June, 1917, being estimated at about 95,000.

Our accident statistics show an increase from 102 accidents in January, 1915 to 161 in June, 1917, the monthly averages being 121 in 1915, 134 in 1916, and 164 for the first six months of 1917.

Notwithstanding this apparently unfavorable showing, a comparison of the total number of accidents with the total number of automobiles shows that the number of accidents during 1915 was 2.20 per 1000 automobiles as against 2.00 per 1000 in 1916, and 1.69 per 1000 for the six months ending June 30th, 1917.

When it is realized that each automobile crosses our tracks many times each day and that we operate over 7000 separate train and car movements daily along and across hundreds of streets and highways, it is readily seen that the percentage of accidents in the aggregate is exceedingly small.

All of these casualties were avoidable and most, if not all, due entirely to the reckless disregard of consequences on the part of drivers.

As a comparison, our records show that 138 persons were struck by cars in 1915 and 119 in 1916, the monthly

average being 11.5 and 9.9 respectively, and for the first six months of 1917 the average is 6.3.

However, the population has increased from approximately 600,000 in 1915 to 750,000 in 1917, the accident ratio being .02 persons per 1000 population in 1915, .015 per 1000 in 1916 and .01 per 1000 for the first six months of 1917.

In other words, the number of accidents per 1000 automobiles, in 1915, was 110 times greater than persons struck by cars per 1000; 133 times greater in 1916 and 169 times greater in 1917.

At the same time, proportionately with the increase in the number of automobiles and population, police records will doubtless show a steady increase in the number of accidents involving pedestrians and automobiles.

It would seem quite evident, therefore, that the responsibility for the majority of accidents involving automobiles must be placed with the drivers. The railway car travels in a fixed path and cannot cut corners nor dodge in and out to prevent an accident; the very celerity of movement or "get up and get" possibility of the automobile invites the driver to take a chance, which is all the greater reason for extra watchfulness and care on the part of motormen in looking out for the other fellow.

From now on we want to carry on a special campaign for the reduction of automobile accidents. It would be a cause for congratulations all around if the ratio for the next six months can be reduced to 1.0 per 1000, or less. This can only be done by co-operation between the motorists and the railway employees. We are ready to do our part.

PE

SLOW UP

An editorial from The Los Angeles Times July 26, 1917:

No recent tragedy has touched more deeply the hearts of the people of Southern California than the automobile wreck in the harbor district Tuesday evening, wherein the lives of four people were taken in the twinkling of an eye and a fourth occupant of the car was so seriously injured that death will probably result.

* * * *

Four dead and one maimed for life! A motor ride on a beautiful summer's night, a railroad crossing, an instant's carelessness on the part of the

driver, perhaps, or failure to "Stop, Look and Listen," a crash as a switch engine struck the car, and five mangled bodies by the roadside.

On scores of occasions one, two, three or more persons have been killed in or near Los Angeles in a similar manner. Thousands of persons out for a motor ride have met death in much the same way, in various parts of the world. Warning signs have been put up. Newspapers and magazines have combined in an effort to preach the gospel of safe and sane driving. Commissions have been formed with "Safety First" as their slogan. Everything, it would seem, has been done to awaken motorists to their ever-present danger, but still the tragedies pile up.

In this case, as in many other, there is no evidence to prove that the car was being driven at a rapid speed, but the fact that the car was driven onto the track, directly in front of the engine, is proof that at the moment it was going too rapidly.

Thirty miles an hour on a country boulevard, with a clear road ahead and no tracks to cross, may be considered a safe speed, but thirty miles an hour inside of the city limits is altogether too fast.

Likewise, twenty miles an hour on a city street, between crossings, might be considered a reasonable and safe speed, but twenty miles over a street crossing in the down-town district is so dangerous that ordinances have been passed to prevent such recklessness. There, according to traffic officers, a speed of eight miles an hour is none too slow.

Safe speed, then, is a matter of location largely, and even eight miles an hour is too fast when crossing a railroad track, unless the driver knows the way is clear.

It takes an instant to slow up. It may take a moment to "Stop, Look and Listen." It might require a loss of two minutes to set the brakes, walk ahead and see if the road is clear, return to the car and drive "safely on." Two minutes' time, at the most, and one or more lives saved! Isn't it worth it? Does the occasion ever arise, unless it be when the driver is on a life-and-death mission, that circumstances justify crossing a partly or wholly-obscured track, without stopping to ascertain whether a train is in sight or the way is clear?

Slow up! Don't speed, even in the open country. Don't speed in crossing city streets. Don't speed in the business district. And, above all, don't speed or even drive slowly across a railroad track unless you KNOW the way is clear.

Slow up! Slow up on all crossings, railroad or street crossings! Slow up!

ELECTRICAL DEPARTMENT

QUESTIONS AND ANSWERS

All employees are invited to submit questions pertaining to any electrical matters. Question of a general nature will be answered in these columns. Special questions will be answered direct if accompanied by address.

Question: What is meant by **Power Factor?**

Answer: The power factor of an alternating current system indicates the ratio of real power in watts or kilowatts to apparent power expressed in volt amperes or kilovolt-amperes which may be delivered. The apparent power is equal to the product of the volts and amperes, but owing to possible phase displacement the real power delivered may be actually less than the apparent power. For example: with a power factor of 0.8 (or 80%) if 50 amperes are delivered at 15,000 volts, the apparent power is 750 kilovolt-amperes while the actual power is (0.8) (750) or 600 K. W.

With a non-inductive load, such as incandescent lamps, the kilovolt-ampere output may be the same as the kilowatt output, when the power factor becomes unity or 100 per cent. With an inductive load, such as induction motors, the kilovolt-ampere output is greater than the kilowatt output and the power factor becomes less than unity. In other words, it is the load which determines the power factor. As the power factor decreases, the demand upon the generator increases.

— PE —

HIGH VOLTAGE A. C. TRANSMISSION

The part that Southern California has played in the development of high voltage transmission of electrical energy is not generally known, but here a great deal of the pioneering was done that ultimately placed this part of the country into first rank in the art of electrical development.

In September, 1893, the first poly-phase transmission system in the world was put into operation near Redlands with a transmission voltage of 2500. Prior to this date the first commercial hydro-electric plant ever built was put into operation in San Antonio Creek and served the districts of Pomona and San Bernardino with electrical energy. The plant generated its energy at 1000 volts, which was then stepped down to 500 volts and then by means of twenty-one of the secondaries of these transformers connected in series, a transmission voltage of approximately 10,500 volts was obtained. This was a single phase installation, but as three phase transmission is recognized as standard, the three phase installation near Redlands is considered the starting point of all long distance and high voltage transmission.

Since the first three phase transmission installation it has been realized that this system was the most suitable for the purpose, and the de-

velopment since that time has been along the line of constantly increasing voltage, which has been rapid, and now we have transmission voltages of 150,000 volts.

The increase in the transmission voltage has made possible long distance transmission. For economic reasons the transmission of electrical energy hundreds of miles from the hydro-electric plants in the mountains would be prohibitive if high voltage were not possible.

The power delivered to the line is equal to the product of the voltage, current and power factor, the power factor depending upon the nature of the load. A given amount of power can therefore be delivered to the line either at low voltage and a correspondingly higher current, or at a high voltage and a small current, the product of the current and voltage (volt-amperes) being the same in either case. Neglecting inductance, capacity and skin effect, line losses vary as the square of the current; therefore it is evident that the employment of as high a voltage as is practicable is desirable, as only a small current need be carried by the transmission line, and then small line wires may be employed, involving only a relatively small investment in copper and aluminum, the two principal conductors used.

Following is a table showing the decreasing cost of copper with increasing line voltage for a 20-mile single-phase transmission system delivering 50 K. W., considering a 10 per cent line loss and copper at 32 cents per pound.

Voltage	Current	Copper	
		Weight	Cost
220	250 amp.	13,534 tons	\$8,666,600
1,100	50 "	541 "	346,600
2,200	25 "	135 "	86,600
4,400	12.5 "	34 "	21,700
11,000	5 "	5.4 "	3,460

Generally speaking, the higher the transmission voltage, the lower the cost of the transmission line, with given line loss. The question naturally arises as to what is the limit in voltage. It is impossible to state just what limits will be reached ultimately, as there are numerous operating conditions to be considered as well as the auxiliary line apparatus and the question of insulating the transformers becomes difficult. There is no doubt, however, if the question of economy and good practice demands higher voltage, that the various difficulties will be met and solved.

— PE —

NEWS NOTE

It is contemplated installing sphere gaps in conjunction with the present horn gaps on a number of the aluminum electrolytic lightning arresters in the substations.

The use of sphere gaps with aluminum arresters is the most recent and one of the most important advances in electrolytic arrester designs.

KEEPING TIME

To go back to that period when human society was without accurate methods of keeping time; when the daylight or natural day was recognized interval of time, and to trace step by step from that period of the natural interval, and then the introduction of the early artificial timekeeper; in other words, the evolution of the modern timepiece methods, would require volumes.

The early artificial timekeepers were crude affairs, but ingenious. We have all seen the Clepsydra or water clock, and the hour-glass, also the sundial is common. It may be interesting to know that the earliest sundial of which we have any record is mentioned in a Chinese manuscript of about 1100 B. C.

Modern calculations of time are based on the sun; however, not the real sun, but a fictitious sun, one that would be indicated by the real sun would not be accurate because the day from noon to noon marked by the real sun is longer certain times of the year than others; therefore a fictitious sun has been devised that gives days of uniform length, and the time that it makes off is called Mean Solar Time.

In later years the stars have also been used for the measurement of solar time, as the interval between the two successive passages of a star across our meridian (the north-south line down through our place of observation) is always the same. Due to the fact that the sun reaches the meridian successively later as it progresses westward, each locality really has its own local mean time, or local time as it is commonly called. However, if each place has its own local time the utmost confusion would result, particularly to the roads connecting towns. The traveler would need to alter his watch with every change in longitude, and such was the situation before the introduction of Standard Time.

To avoid this confusion, the world was divided into longitudinal zones averaging 15° in width, their artificial boundaries being modified in the United States to suit the convenience of the railways, and in Europe to political frontiers. Within each zone the time is uniform, being just one hour faster than in the next zone to the west and just an hour slower in the next zone to the east.

The starting point of the Standard Time system is the mean solar time of the Royal Observatory at Greenwich, the meridian of which is taken as the center of the first time zone. These are four time belts within the boundaries of the United States: Eastern, Central, Mountain and Western. When it is noon at Greenwich it is 7:00 A. M. standard time at New York, 6:00 A. M. at Chicago, 5:00 A. M. at Denver and 4:00 A. M. at Los Angeles.

The standard time system was adopted by the General Time Convention in April, 1883 and put into effect at Noon, November 8, 1883.

—L. H. APPERSON

THE MARCH OF PROGRESS

Extension of oil loading spur on the Sherman Cut-off has been completed. This was necessary on account of increase in oil business at this point.

— PE —

Inside guard rails have been authorized on bridge over the Los Angeles River at Ivanhoe, on the Glendale Line, and on Los Cerritos bridge, on the Long Beach Line, to minimize hazard of accidents from possible derailments.

— PE —

An automatic flagman is to be put in at road crossing at Elftman, on the San Pedro Line. Also an extension is being made to the beet dump spur at that point.

— PE —

A freight platform is to be built at Chemawa Park, on the Corona Line.

— PE —

Two additional car storage tracks are to be put in at Butte Street Transfer to facilitate switching.

— PE —

Authority has been granted for the abandonment of one track over the San Gabriel River at Palo Verde, on the Santa Ana Line, and to replace a portion of the pile trestle on the other track with steel spans, the single track to be protected by block signals.

— PE —

A spur track has just been completed near the Olinda-Richfield Road on the La Habra Line, to serve the oil loading racks of the Quintuple Oil Company.

— PE —

An automatic flagman has been put in at Foothill Boulevard, where it crosses the Mt. Lowe Line in Altadena.

— PE —

A second automatic flagman has been put in on the west side of the four-track line at Slauson Avenue, to afford additional warning to automobile traffic on that street.

— PE —

The west end of spur at Oleo Station, on the La Habra Line, has been just connected up with main line, making this a siding, to expedite switching movements at this point.

— PE —

Authority has been granted to re-construct, strengthen and lengthen six bridges on the Venice Short Line.

— PE —

Three tracks have just been completed at the Craig Ship Building State Company's plant at Long Beach, and authority has been given for the construction of a connecting track to the California Ship Building Company's plant at this place.

— PE —

The City of Santa Ana is paving Maple Avenue, between Ninth and Chestnut Streets, and Santa Ana-Huntington Beach Line track on this street is to be reconstructed and paved.

A large increase in the amount of freight coming to us from the Pacific Steamship Co. has made an enlargement of the inbound freight house at 8th and Hemlock necessary. This is now being completed.

— PE —

Electrification of spur track serving the Santa Ana Cannery is under way and will result in increasing the freight business at that point.

— PE —

Two old box cars have been set out at Clifton at the end of the Redondo Beach Line, to be used for packing vegetable shipments.

— PE —

Authority has been given for the relocation of the curve from the four-track line to the Air Line at Amoco to permit the operation of freight trains over this track.

— PE —

The Santa Monica Air Line between Vermont Ave. and Figueroa St. on Exposition Blvd. is to be reconstructed and paved.

— PE —

A spur track at Sunset for the Pacific Glass Casket Co. has been authorized.

— PE —

Spring switches on the San Bernardino Line and on the Redondo via Del Rey Line are to be replaced with rigid switches.

— PE —

A team track 640 feet in length with driveway is being constructed at Zaferia.

— PE —

At Santa Ana 6000 feet of double track on West Fourth St. between Ross and Artesia Sts. is being reconstructed with 75 lb. C. S. Revised rail and repaved.

— PE —

A new shelter station has been erected at Masonic Home on the San Bernardino Line.

— PE —

The Harbor Commission of the City of Los Angeles has completed track connections into the new ship-building plant on the West Basin at San Pedro and we are handling much material for the plant over it.

— PE —

The old section houses at Culver City are abandoned and new ones erected in their place at a cost of \$4250.00.

— PE —

Material is being assembled for the construction of two 15,000 volt transmission lines for furnishing electrical energy to the shops and proposed substation at Torrance.

— PE —

The interlocking plant at Arcadia on the Glendora Line is beginning to show up. The tower is almost completed and the machinery will soon be installed. This plant will control movements on Southern Pacific and Santa Fe tracks as well as Pacific Electric.

SERVICE CHANGES

A new timetable for the San Bernardino Line is on the press which makes slight changes in running time of through trains and adds a train out of San Bernardino at 9:15 a. m. for Los Angeles. This change requires new timetables for R. R. & P. Division, Euclid Ave. Line, Ontario Line and San Dimas Line.

— PE —

Timetable No. 31, Long Beach Line, was effective August 8th. This is the first change in timetable on that line since September, 1913.

— PE —

Commencing July 12th an auto bus line was established between San Bernardino and Highland and Patton, the busses running hourly. A rearrangement of this service, combining it with the electric train service and making tickets interchangeable, is planned.

— PE —

Summer schedule was put on Seal Beach Line on June 30th. Travel to Seal Beach promises to be heavy this season.

— PE —

APPOINTMENTS

General Storekeeper Thorburn announces the appointment of Mr. Chas. W. Stock as Storekeeper at Torrance and Mr. George W. Scriven as Storekeeper at Sherman, succeeding Mr. Stock, effective August 1st, 1917.

— PE —

Effective August 1st separate agency has been established at Inglewood, and Mr. Verne Simmons appointed agent. Heretofore Santa Fe Agent has acted as our agent at this point.

— PE —

HOSPITAL NOTES

Homer Johnson of the Southern Division reports from the sanitarium in the foothills, where he has been recuperating for several months, that he has regained so much of his strength that he is thinking of returning to work soon.

Brakeman J. L. McAnally, who has been in New Mexico for more than a year seeking health, returned last month, and is now in the foothills where he can sleep in the open and still receive the best care. He expects soon to be on his feet again. These boys cannot say enough for the Hospital Department and the treatment they have received.

At the Crocker Street Hospital this month are A. B. Combs, B. W. Yocum, M. Naba and M. Gonzales, who will be glad to have you call.

The Hospital Department has placed a first aid outfit in the stationmaster's office at Hill Street Station.

— PE —

WOULDN'T YOU

I would rather be a could be,
If I could not be an are,
For a could be is a may be,
With a chance of touching par.

I would rather be a has been
Than a might have been, by far,
For a might have been has never
been,
But a "has" was once an "are."
—Exchange.



THE PACIFIC ELECTRIC MAGAZINE

Los Angeles, California

August 10, 1917

The Magazine is published on the 10th of each month. It aims to print matters of interest and information to employes. Items of general interest are solicited and should be addressed to THE PACIFIC ELECTRIC MAGAZINE, Pacific Electric Building, Los Angeles. Contributions should reach this office not later than first of each month.

In The Federalist of Nov. 3, 1787, John Jay wrote—

“Among the many objects to which a wise and free people find it necessary to direct their attention, that of providing for their safety seems to be the first.”

That sentiment of 130 years ago holds true today as we think of the principles of liberty and public safety our nation must defend, but even amid the war-time responsibilities which Americans gladly assume and the dangers which will come to so many of us, let us not fail to give heed to and take the necessary precautions to reduce the preventable accidents and dangers of the streets.

What have you done to assist the Safety Movement lately? Have you seen any place where a change in operating methods or in equipment would make our operations safer? Why not send the suggestion in for the benefit of the service, your fellow-employes and the public? Such suggestions are gladly received and if it is practical to adopt them they are used. A number of new men have come into the Pacific Electric family recently. Some have had experience elsewhere and may know of methods and devices used by other Companies which are valuable. We have been in the railroad business some time but we do not claim to know all about it and welcome ideas from any source and will adopt them if they will fit our conditions—and you will be thanked for the suggestion.

— PE —

Loyalty is a virtue which may well be put at the head of the list of good qualities which lift men above their fellows. Just now we are seeing it shown in large measure in the response of our boys to the call of their Country. Undoubtedly each one of us has been stirred profoundly by our present national situation. Many of us who are too old would gladly shake off a few years and offer our services to Uncle Sam if it were possible. We can be just as loyal, though we have to stay at home, as if we went. Everything we do to keep the regular routine of business going as usual here while the battles are being waged in Europe is a loyal service to our Country. On the contrary, everything that is done to cause disturbance of peace or efficiency at home hinders in some measure the great cause to which we should all bend every energy—the successful prosecution of the war. The recent outbursts of the I. W. W. agitators in the mining districts are examples and excite a reasonable suspicion that they are being fomented by German sympathizers or backed by German sentiment. Let us in this time of stress show our loyalty to our Country by performing each day the duties assigned to us, to the best of our ability and thus do our “bit.”

— PE —

On account of the large number of men who have left to enlist in the army and navy at their country's call a good many new men are being employed in train service just now. It seems probable that this condition may continue when the result of the draft is known and that more new men may be needed to take the places of those who go to the front. If you know some one whom you think is the right sort of man for this service and who measures up to the high standard the conductors and motormen of the Pacific Electric Ry. have set, who wants to become one of us, send him to the Superintendent of Employment and if your judgment is confirmed he will be given an opportunity in our ranks.

To the new men we can say that we understand the difficulties of your new work because most of us have been just where you are today. Just as long as you are making an honest effort to master the work and do it properly you will find a helpful hand extended to you. We want you to succeed and we want you to help us to maintain the pleasant relations with the public we have already established or to improve them. To do this requires a uniform courtesy and attention to the comfort of our passengers as well as a careful observance of the operating rules. Your attention is directed to the Standard Courtesy Code which is appearing from month to month in the Magazine. Read it and observe the form and wording of the phrases. Then use them—and watch the results.



Trainmaster Ora Taylor of Western Division, whose familiar appears above, entered service with the Pacific Electric as Instructor Conductors on the Western Division August 9th, 1912. He was promoted to his present position as Trainmaster August 1st, 1913. Previous to that time he came with us he had spent five years with the Southern Pacific in telegraph service and sixteen years with the Rock Island as telegraph operator, agent and train dispatcher. Many of the Western Division employes can testify that their success in this measure is due to the careful instruction of Mr. Taylor in instruction and supervision.

— PE —

NEW MACY TRAINMEN'S QUARTERS

Foremen W. E. Booth and A. Logue of the Northern Division, W. H. Cason and R. E. Payton of Southern Division, with Secretary T. Bennett are busy these days preparing to move into the new Trainmen's house at Macy. Part of the furniture has been installed and in a few days the building will be ready for occupancy. The office recreation room on the second floor are models of convenience and comfort and with windows on all sides are exceptionally light and airy. The recreation room are pool and liard tables, card tables and writing desks, with comfortable chairs, late magazines and papers. The office has much closet and cupboard space for supplies and tickets.

Downstairs are the lavatories including shower baths, a large locker room with steel lockers of the latest type, and an instruction room which is being fitted with necessary equipment for instruction work and which more will be said later. Chief Train Service Instructor B. Dixon and Assistant Instructor Miles and Spafford have completed their work of placing the equipment. On the first floor is also located a heating plant which will make the whole building comfortable during the winter. The boys who are fortunate enough to work out of Macy can be congratulated on this beautiful and commodious building.

ACCIDENTS JULY

The accident report for July shows a decrease in all classes of accidents except automobile collisions and interferences, which continue to increase. However the total number of accidents for the month shows a decrease in spite of this increase. A good deal is said in other columns of this number of the magazine regarding safety. After you have read your copy pass it along to some friend who drives an automobile, with a word of caution and a request that he read the warnings to auto drivers on the first page.

	Northern Division		Southern Division		Western Division		Eastern Division	
	1917	1916	1917	1916	1917	1916	1917	1916
Interferences with vehicles...	72	71	40	24	56	37	6	7
Collisions and interferences with cars	4	4	3	8	3	6	0	0
Persons struck by cars	2	2	1	4	1	4	0	0
Derailments	3	8	13	7	3	9	0	0
On and off moving cars.....	11	20	15	14	26	32	1	0
Miscellaneous	25	27	13	33	26	22	5	3
	117	138	85	90	115	110	12	10
Interferences with vehicles			174		145		20.0%	Increase
Collisions and interferences with cars			10		18		44.0%	Decrease
Persons struck by cars			4		10		60.0%	Decrease
Derailments			19		24		20.8%	Decrease
On and off moving cars			53		66		19.7%	Decrease
Miscellaneous			69		85		18.8%	Decrease
			329		348		5.4%	Decrease

The continued warm weather has made business to the beaches good this summer and Sunday travel as well as that on "Rate Days" is very heavy. Military and naval encampments at Arcadia and San Pedro have boosted travel and the steamship business of the Pacific Steamship Company as well as Catalina travel is heavy. The successful operation of the new terminal at 6th and Main Sts. adds much to the comfort of our patrons.

COASTING PERCENTAGES

The Coasting Record Bureau has moved from the seventh floor into Room 202 in order to be more accessible to all concerned, and everyone interested is hereby invited to call at any time in regard to the coasting work.

It has been recently called to our notice that the accuracy of the weekly coasting bulletins has been questioned, particularly as to line and division averages, and from information at hand it would seem that motormen have been adding together the individual percentages of men on a Line and dividing the total obtained by the number of men, in order to ascertain the line average.

Name.	Running Time.	Coasting Time.	Per Cent.
1. John Doe	100 min.	50 min.	50%
2. Jas. Smith	500 "	100 "	20%
3. Richard Roe	400 "	100 "	25%
Total	1000 "	250 "	95%
True average	250 divided by 1000.....		25%
Numerical average	95 " " 3.....		31.6%

The same holds true in the Division and System averages, the total running time and coasting time being used in computing the respective percentages.

The explanation is intended to set at rest any doubts as to the correctness of the figures shown in the weekly bulletins, particularly as to the average percentages.

Other errors will creep in from time to time, however, as is always

Give me a friend that is loyal in adversity and willing to make a sacrifice. Any fool will be loyal when he thinks he will profit thereby.

—Exchange.

In the majority of cases, the average thus obtained did not agree with the average shown on the bulletin, causing some doubt as to the accuracy of our figures, and in a measure, doubt as to the reliability of the individual percentages.

We want to explain that the averages shown on reports are what is known as "true averages"; that is, the average obtained by taking the total running time of all runs and dividing into the total coasting time.

The following illustration will show plainly that the true average does not necessarily agree with the numerical average:

the case where large volumes of figures are compiled daily, and in all cases, we will appreciate having the discrepancy called to our attention promptly so that proper investigation and adjustment may be made.

We again renew our invitation to come in and discuss your coasting troubles with us. The latch system is always out.

G. H. GRACE,
Chief of Efficiency Bureau.

"Who are all those people standing in the rear of those trolley cars?"

"Oh, they've been to a preparedness meeting."

"Well, they don't seem very anxious to go to the front, do they?"

Specifications for a Sanitary Drinking Cup

A sanitary drinking cup may be made from an ordinary sheet of paper in a few seconds as follows:

To begin with, the paper should be square; 8½ in. x 8½ in. is suggested, as having proven a satisfactory size. As shown in Fig. 1, fold into a triangle with edges even. Having once folded, do not unfold at any stage.

Referring to Fig. 2, lay over each of the points at the acute angles of

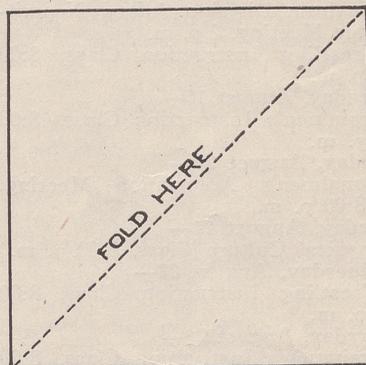


Fig. 1

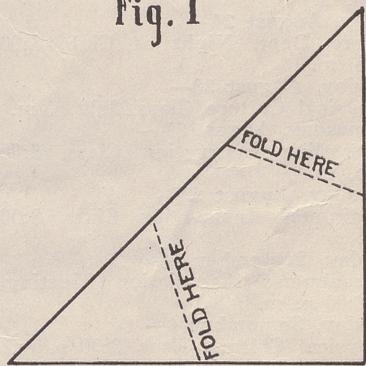


Fig. 2

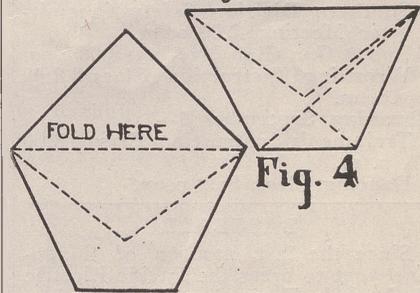


Fig. 4

Fig. 3

the triangle until it rests near the middle of the opposite edge. The result of this folding is outlined in Fig. 3. Fold down the flaps at the top, over on either side as in Fig. 4, and the cup is completed.

BASKET BALL TEAM

Basket Ball Team of the Pacific Electric Ry. is to be organized under the direction of H. H. Nixon. Those who would like to become members of this team should leave word at Club or write H. H. Nixon, care of P. E. Club. Team will practice in P. E. Club court.

NOTES FROM THE CLUB

CLUB CALENDAR

- August 10 to September 10, 1917
- Saturday, August 11—**
Agents' Association Meeting, 8:00 p. m.
- Tuesday, August 14—**
Physical Culture Class, 8:30 p. m.
- Wednesday, August 15—**
Maintenance of Way Dept. Meeting, 7:30 p. m.
Northern Division Safety Committee Meeting, 2 p. m.
Wrestling Instruction Class, 8:00 p. m.
- Thursday, August 16—**
Trainmen's Instruction Class, 8:00 p. m.
- Monday, August 20—**
Signalmen's Association Meeting, 8:00 p. m.
- Tuesday, August 21—**
Physical Culture Class, 8:30 p. m.
- Wednesday, August 22—**
Wrestling Instruction Class, 8:00 p. m.
- Thursday, August 23—**
Trainmen's Instruction Class, 8:00 p. m.
- Friday, August 24—**
Store Dept. Night at Club, 8:00 p. m.
- Tuesday, August 28—**
Physical Culture Class, 8:30 p. m.
- Wednesday, August 29—**
Wrestling Instruction Class, 8:00 p. m.
- Thursday, August 30—**
Trainmen's Instruction Class, 8:00 p. m.
- Monday, September 3—**
Signalmen's Association Meeting, 8:00 p. m.
- Tuesday, September 4—**
Physical Culture Class, 8:30 p. m.
Western Division Safety Committee Meeting, 2:00 p. m.
- Wednesday, September 5—**
Southern Division Safety Committee Meeting, 2:00 p. m.
Rod & Gun Club Meeting, 8:00 p. m.
Wrestling Instruction Class, 8:00 p. m.
- Thursday, September 6—**
Trainmen's Instruction Class, 8:00 p. m.
Dancing Class, 8:30 p. m.

BASEBALL

Since the last number of Magazine went to press the Pacific Electric Trainmen's Team has played four games, winning three of them and losing one by the close score of 2 to 1. On July 8th the Frumento Bros. team was trounced 14 to 0; July 22nd the strong Norwalk team was defeated 4 to 1, Priddy for the P. E. pitching an exceptionally fine game. After losing several hard luck games to the Patton team, the Trainmen came back at them on the 29th and defeated them 15 to 3. Tustin won from the P. E. lads on July 15th in a fast game, score 2 to 1.

The Pacific Electric Freight House Team played two games at Bishop on July 4th and 5th and won both of them. Since that time the team has been taking a vacation.

CLUB NOTES

Notwithstanding the warm weather, the daily attendance at the Club holds up in a remarkable manner, especially in the evening. During the heated term curtailment of some of the entertainments has been made in line with the usual practice of other clubs of the city, but the cool rooms of the organization attract a number of the boys to games of pool and to card and checker games. They have found that about the coolest place in the downtown district is the Club. The library is coming in for its share of the patronage and interest in the current periodicals has not flagged.

— PE —

The Club dances continue in popularity, notwithstanding the heat. The last one was attended far in excess of expectations, and the attendants were agreeably surprised to find a number of electric fans installed and in operation and they added materially to the enjoyment of the evening. The dances will be continued at two week intervals throughout the summer, with a more frequent indulgence upon the arrival of fall and winter. See the calendar for the next dance date.

— PE —

Because of army and navy enlistments recently, the membership of the Club has diminished slightly, not enough to be called a marked decrease in membership, but enough to be noticeable. The draft of soldiers for the United States will undoubtedly cause further decrease in the membership roll and this should call forth renewed effort on the part of all the membership to increase enrollment. Those who have been in attendance at the club during the past year know of a certainty whether or not the work that has been done has been in vain, and have personal knowledge that the accomplishments of the club have not been all of a social nature. Those of us who have carried on the work for the big family feel that every employe of the Pacific Electric should be active in Club membership and that those who are not are really missing something. If you, reader, as a member, have found enjoyment in this feature, you owe it as a duty to interest yourself in the organization's perpetuation by doing your individual part in the solicitation of new members. Ask your Executive Committeeman what this Club has accomplished during the past year that has been worth while. He knows and can give a good account of himself and the organization in which he is your representative and which represents you.

— PE —

Mr. and Mrs. Dean W. Chowning wish to thank the substation operators for the beautiful floral remembrance sent in sympathy at the death of their baby boy.

ROD & GUN CLUB NOTES

At the last meeting of the Club made up the list of prizes for fishermen for the 1917 season, there are certainly some attractive ones in the list, which appears as follows:

\$5.00 Merchandise Order on sporting goods house for the largest fish of any kind caught with equipment, donated by the Club.
300 yards of 9-strand Original Cut hunk Line for the largest yellow tail caught on a 9-strand line, donated by Ashaway Line & Twine Co.

One set of Knowles Automatic Striper Spoons each for the largest bass and the largest albicore caught on a 9-strand line, donated by Mr. E. Knowles, Mfr.

100 lbs. clams each for the largest corbina and the largest yellow perch caught on a 9-strand line, donated by Haniman Fish Co. and Young Market Co.

\$5.00 Merchandise Order on sporting goods house for the largest croaker caught on a 9-strand line, donated by the Club.

Bristol Steel Trout Rod for the largest trout caught in a lake, donated by Horton Mfg. Co.

Danz Fishing Bag for the largest trout caught in running water, donated by B. H. Dyas Co.

Now get out, you fishing sports and show what you can do with small line. Someone is going to get these prizes, and it might as well be you. Cut this list out and put it in your pocket for future reference.

Prizes for the hunters will be announced in the next issue of the Magazine, and while the list probably be shorter, the prizes will be well worth working for.

Whatever you do, don't fail to come to the monthly meetings at the Club Rooms on Hill Street, the next one of which will be held Wednesday, September 5th, at 8:00 p. m.

L. M. Kohler, Secretary.

— PE —

FOR THE CLUB

Miss C. B. Templeton has sent the Library the following books, for which she has our thanks:

The Four Feathers, The Light of the World, The Prince of India, The Red Keggers, The Captain of the Grey Horse Troop, The Adventures of Gerard, Black Rock, Habibi A Literary Courtship, Romola, The Bishop's Carriage, A Spinner in the Sun, A Rose of a Hundred Leaves, The Simple Life, The Princess Aline, The City of Refuge, A White Umbrella in Mexico, Phross, People of the Pass, Fugitive Blacksmith, Isidro.

Mr. F. G. Volkhart contributes two double Victor Records for the Club Victrola:

Napoli, Tarantella, mandolin solo by Roger Casini-Florenz; An Operatic Rag, accordion solo, by F. Frost; Peek-a-boo, Mister Moon, Peek-a-boo, woman's quartet, by "That Girl" Quartet; Night Time's the Right Time, woman's quartet, by "That Girl" Quartet.

Home

The road to laughter beckons me,
The road to all that's best;
The home road where I nightly see
The castle of my rest,
The path where all is fine and fair,
And little children run,
For love and joy are waiting there
As soon as day is done.

There is no rich reward to fame,
That can compare with this;
At home I wear an honest name,
My lips are fit to kiss.
At home I'm always brave and strong,
And with the setting sun
They find no trace of shame or
wrong
In anything I've done.

There shine the eyes that only see
The good I've tried to do;
They think me what I'd like to be;
They know that I am true.
And whether I have lost my fight
Or whether I have won,
I find a faith that I've been right
As soon as day is done.

EDGAR A. GUEST,
In Detroit Free Press.

NOTES FROM THE VACATION CAMP

There was a big time at the Camp on Saturday evening, July 14th, when a party was given by the campers to the sojourners on the Mountains, invitation having been extended to all the other resorts and to the individual camps to participate in an evening of festivities at the Pacific Electric playground. About 250 visitors came by auto stage and in private machines, there being 49 automobiles in the camp during the evening. Dancing began about eight o'clock and continued until eleven with an intermission during which the party was entertained by Mr. Stuart and Miss Orth with vocal selections, and by Miss Jung who rendered some beautiful whistling numbers. The dance music for the evening was provided by some of the members of the Pacific Electric Orchestra. Refreshments were served the guests during the evening, all members of the P. E. family in camp assisting with the honors. It was a most delightful evening.

— PE —

Camp Reservations

At the time of the Magazine going to press every reservation in camp has been taken for the weeks beginning Aug. 5 and Aug. 12 and the reservation list is filling rapidly for the remaining weeks in August and September. Employees intending to spend their vacation in the Camp should make arrangements as early as possible, but reservations for accommodations at the Camp should not be made until the employe knows that he will be able to get leave of absence for the time desired. Please have harmony in your arrangements. Do not ask for quarters until you know you will be able to use them. When you call on your superior to arrange for the vacation, call the club at that time also and see if you can be accommodated at the camp.

The week of July 29th was really "baby" week at the camp. During that period no less than half a dozen young hopefuls below the age of 3 were residents of the Camp and had a very happy time of it. No, it was not a "howling success." They were not that kind of babies.

— PE —

DON'T bring your "glad rags" to the Camp. You will be miserable yourself and have other people losing time pitying you, besides they will get all rumpled up in your suit case. Our Camp is a place of cool comfortable consideration.

— PE —

Arrange your vacations so that they begin with Sunday, leaving the Main St. Station at 9 a. m. To do otherwise results in the periods being split and would make one of the cottages idle for a week, thereby depriving some one who would wish to use it. We cannot arrange vacations for all who desire unless this is done. The journey to Camp should also be made on Sunday because of transportation facilities. The business of the Los Angeles City Playground is handled on Mondays, is very heavy and requires all the equipment of the Auto Line. When the journey is made on Monday, our people must expect to wait the convenience of the Auto Line, as the playground has first call out of San Bernardino on that day and this may result in several hours' delay at that point. Also, see that your bedding is securely wrapped and plainly marked with your name and the address "P. E. Vacation Home." Suit cases should also be similarly tagged, so that in case of baggage going astray it can be more readily located and follow the passenger to Camp.

— PE —

Showers were the fashion two weeks ago and added materially to brightening things in the mountains. They were not heavy enough to cause any inconvenience to the residents of the Camp, but laid the dust of the roads, stimulated the growth and beauty of the ferns and made all nature smile even more kindly than before.

— PE —

Estimates made before the opening of the Camp as to the probable cost of living there have proven very nearly correct. The check made so far shows a cost to a family of four, ranging from \$10.45 per week for all living expenses in camp to \$11.50; and for a family of six has varied from \$15.61 to \$16.10. These figures were obtained by averaging the expenditures of ten families.

— PE —

Numerous inquiries have been made as to how to address mail for the Camp. All mail should be addressed to Pacific Electric Vacation Home, care of S. B. M. Auto Line, San Bernardino, California. Our camp is supplied with a mail pouch that leaves San Bernardino every morning at 11:15 for the camp, and the returning mail leaves the camp at 3:15 p. m. daily.

A collection of 18 photographs of the new Camp was sent to the Club last week and is now displayed in the big lobby. The pictures tell a large part of the story of happiness in more convincing language than words could. Drop around there and have a look at them. As one visitor remarked, it is "roughing it de luxe."

— PE —

You do not leave patriotism behind when you go to the mountains. That beautiful flag floating over our camp aroused the envy of our neighbors to such an extent that the road through Little Bear Valley now resembles the color line of a regiment. Last week there were three flag raisings in the valley including one at a nearby camp to which we were all invited and attended en masse.

— PE —

Forest Ranger Switzer is authority for the statement that our camp is the best ordered, best kept Camp in his jurisdiction. Let's keep it that way, and even make it better. Cheerfulness in doing our little "bit" of work each morning, such as has prevailed, and continued cheerfulness throughout the succeeding days cannot help but make it the best and most pleasant place in the wide world.

— PE —

By far the most popular excursion for the "hikers" of the camp is the one to the crest of the mountain in the early evening. The walk can be made in about forty minutes and the effort is well repaid. As dusk comes on the lights in the cities of the valley begin to come into view, singly and in clusters, city by city until as dark falls the beauty grows more and more, and as shimmering diamonds spread upon a cloth of black velvet, San Bernardino, Cofton, Highgrove, Riverside, Redlands, Highland, Mentone, Corona, and numerous little hamlets dazzle in brilliancy. Far to the south when the haze is not dense can be seen the twinkling light of Perris and Hemet, and to the west the glow shows the location of Pomona. The daylight view of the great, fertile valley is wonderful, but that of the night positively entrancing.

— PE —

ELECTRICAL DEPARTMENT ENTERTAINMENT

For the past two months some of the Electrical Department members have been actively at work on an electrical act that will afford a very interesting evening entertainment for the entire membership, and will probably be produced on an afternoon or two in order that all the membership may have an opportunity to see it. The apparatus they are building is very elaborate and has required a great amount of labor and quite a little expense. It will be an elaborate exposition of high frequency currents and replete with thrills. Because of the recent injury of one of the builders, its presentation has been somewhat delayed, but it will be put on in the near future and special posters of the event issued through all departments.

THE STANDARD CODE OF COURTESY

Since January of the present year the Brooklyn Rapid Transit Co. has been publishing a small folder, the title of which is "The B. R. T. Standard Courtesy Code." The little publication is copyrighted by that company, but their contents are of such great worth application was made for permission to reproduce them in the Magazine. One of these little lessons in courtesy efficiency will be published each month. The text is the same as that used by the B. R. T. except that the initials P. E. have been substituted to bring the lesson home more forcibly.

SUBJECT NO. 3—PROTECTING PASSENGERS WHEN BOARDING AND ALIGHTING

Most passengers do not realize and some do not know the danger of the things they do every day in boarding and in alighting from our cars. There are only about two ways in which they can learn. One is by having an accident, and the other is by understanding and responding to the cautions that are given to them by our conductors and motormen.

It is easier to understand a simple explanation or request made in the fewest words possible, than an explanation or request that is longer and more involved. And if the words in which the explanation or request is made become very familiar, it is understood almost instantly.

So we find it very important not only that the requests, explanations and directions given to our passengers shall be clear and simple, but that the phrases so far as possible shall be uniform all over the System.

One of the most important undertakings in the whole Safety movement has been the creation of a standard emblem signifying Danger. It had to be uniform so as to be everywhere understood. It had to be clear, so as to convey its meaning forcibly, and it had to be simple, so as to be easily recognized.

Those are just the objects we are trying to accomplish in giving conductors and motormen the Standard Courtesy Code phrases to use in protecting passengers in boarding and alighting, where a passenger's life may depend upon his ability to understand a warning about getting on and off properly, or upon his observance of that warning.

Here are the phrases of the Standard Courtesy Code on the subject of protecting passengers when boarding and alighting:

SUBJECT NO. 3—PROTECTING PASSENGERS WHEN BOARDING AND ALIGHTING

A. WHEN PASSENGERS ARE BOARDING

Situation	What To Say
1. When cars are coming to a stop and passengers start to get on.	1. Wait until the car stops PLEASE.
2. Whenever passengers are boarding car.	2. Watch your step PLEASE.
3. Whenever passengers attempt to get on a moving car at the far side.	3. Do not board PLEASE, it is dangerous. Car stops at near side only.
4. On center entrance cars.	4. STEP inside PLEASE, look out for the doors.

B. WHEN PASSENGERS ARE ALIGHTING

1. When passengers start to get off a moving car.	1. Wait until the car stops PLEASE.
2. Whenever passengers are alighting.	2. Watch your step PLEASE.
3. When a passenger having gotten off walks around rear of car.	3. Look out for car on other track PLEASE.
4. When passengers try to board, preventing passengers from alighting.	4. Passengers off first PLEASE.

C. WHEN CONDUCTOR IS AWAY FROM REGULAR POSITION

1. When obliged to give starting signal inside.	1. All right back there, PLEASE.
2. When passenger on platform attempts to give starting signal.	2. Do not give starting signal PLEASE, it is dangerous.

"You can't make an actor out of a conductor," said a conductor when asked what he thought of the Standard Courtesy Code.

The statement referred to a suggestion in a Courtesy Code bulletin, that if it was worth while for a minister or actor to consider the pitch of his voice so as to be pleasantly understood, it was doubly worth while for a street railroad man to do so, who had to speak to more people in a day than a minister or actor talks to in a week.

So one might also say that it wasn't possible to make a trapeze performer out of a structural iron worker; but that wouldn't change the truth of the proposition that freedom from dizziness and a good balance, which are necessary for the trapeze performer working only twenty or thirty feet from the ground, are far more necessary for the iron worker who has to work hundreds of feet in the air.

In the same way it is even more necessary for a street railway conductor to make himself easily understood in speaking to several thousand people every day on matters involving their safety as well as their convenience, than it is for the actor who speaks to a few hundred every night, or the minister who speaks to a thousand or two once a week.

Besides, the conductor's duties are many and complicated, and he has to perform them under difficult circumstances. Every bit of efficiency that he can attain in so simple a way as by using the Standard Courtesy Code, is just so much clear gain to him.

The willingness of passengers to comply with a conductor's requests and directions depends a good deal on how they feel toward him. This is the importance of the courtesy ele-

ment in the Standard Courtesy Code. It makes the passengers friendly to the conductors they ride on the cars.

It cannot be otherwise, for you will find a passenger who will be displeased by the idea that the conductor on his car will be clear and courteous in whatever he has to say by way of requests, directions or explanations?

How thoroughly we shall accomplish this important object will depend upon how well we learn the Standard Courtesy Code and how faithfully we use it.

Mr. John W. Haughton, of the Mechanical Department, left the service on 13th inst., having been called to the U. S. Navy Department to act in the U. S. Navy Yards, as Lieutenant, "Engineer's Duty."

Mr. Haughton was born in Leamington, England, in 1873 and arrived in this country in infancy. He served his apprenticeship as Machinist and Draftsman at the Union Iron Works, San Francisco and was usually detailed on official trials of U. S. Naval Vessels, among which were the famous old "Oregon" and Admiral Dewey's Flagship, the "Olympia," at Manila Bay. In 1894 he started sea service as Junior Engineer on the White Star Steamship "Belgic," running from San Francisco to China, and continued that and other Pacific Coast Vessels including U. S. Army Transport the Spanish-American War and Philippine Insurrection, until 1905, when he received the highest U. S. License for Marine Engineers, known as "limited Tonnage Certificate."

He entered the employ of the Pacific Electric Ry. in 1905, as Chief Engineer of the Old Central Avenue Power Plant, and was transferred to the Pacific Light and Power Corporation when that Corporation took over the operation of that plant in August, 1908. Soon after that he was assigned as Chief Engineer to the Redwood Steam Power Plant of that Corporation, and held that position until November, 1910. In May, 1911, he entered the service of the Mechanical Department, as Chief Engineer of Steam Power Plants, which position he held up to the time he was relieved by Uncle Sam.

He has the good will and wishes of all his associates, who value his sunny and congenial disposition.

Scriptural Pass Bureau Rules

Some Bible student sends the following list of passages of Scripture, perhaps for the guidance of the Pass Bureau:

"Thou shalt not pass."—Numbers XX, 18.

"Suffer not a man to pass."—O. Judges III, 28.

"The wicked shall no more pass."—Nahum I, 28.

"This generation shall not pass."—Mark XIII, 30.

"By a perpetual decree it cannot pass."—Jeremiah V, 22.

"None shall pass."—Isaiah XXXI, 10.

"So he paid the fare thereof."—Jonah I, 2.