Electric Railway Journal

Consolidation of Street Railway Journal and Electric Railway Review

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"Traction Grab Bills" Defeated at Albany

THIS is the way that several of the New York daily papers announced the disgraceful failure of the New York State Assembly to pass the bills introduced by Mr. Jenks to remedy the defects in the existing public service commission law and bring New York State back in step with practically every other State in the Union so far as the government of traction companies is concerned.

What were the "grab bills"? Did they raise the fares on the railways in New York? No. They simply authorized an investigation of the traction situation by an impartial State tribunal, the Public Service Commission, with power to correct inequalities of fares if any are found. The railways in New York State are admittedly in a deplorable condition. Whether their claims for relief are warranted or not, the companies should at least have the right to present their case for consideration before a disinterested court.

As relief has been granted in similar cases in other states, there is at least a presumption that it is warranted in New York. For this reason the action at Albany in denying the right of a hearing is discreditable to the State as well as injurious to the communities served by the electric railways.

Electric Railways—An Important Factor in Increased Production

THE address of Mr. Pardee at the meeting of the United States Chamber of Commerce in Atlantic City last Wednesday emphasized two important points. The first was the vital service which the electric railway supplies to the economic life of a large part of this country and that no other agency can furnish this service half so well, if at all. The other point made by Mr. Pardee was that, this being admitted, the various systems of transportation should be allowed so to develop that each will perform the functions for which it is best fitted. The logical place of the electric street and interurban railway is midway between the trunk line railroad and motor transport. If the trunk line, for instance, with its large terminal charges, attempts to engage to too large an extent in short-haul traffic of freight and passengers there is an economic loss. In the same way, motor trucks and buses may easily be encouraged, because they do not have to pay for the highways which they wear out, to undertake transport which could more cheaply be done by the electric cars. Mr. Pardee then makes a strong plea for fair treatment of the electric roads so that they can raise the capital necessary for their development, estimated by him to be normally $200,000,000 a year.

The topic of the Atlantic City convention was "increased production," and probably every delegate there realized the necessity, in any plan of increased production, of co-ordinating all agencies of production so as to secure the most economic result. Yet it is quite probable that many of them had not fully understood the connection of this principle with the place in the community occupied by the electric railway. Mr. Pardee's talk on this subject was clear and convincing and we believe that it did a great deal of good.

Efficacy of Connecticut Decision Doubtful

IT SEEMS, after studying the recent zone fare decision of the Connecticut Public Utilities Commission, that an injustice has been placed on both the trolley company and the populace served. The former's rate structure, developed with considerable forethought, has been destroyed after a theoretical study and the latter is subjected to a rate which discriminates in favor of the long-haul passenger.

The commission some time ago was directed by the State Legislature to evaluate the property of the Connecticut Company for the determination of a rate base and for the information of the Legislature in formulating state policy toward the company. Before there is a chance to complete this valuation and even before it has been proved conclusively that the earning power of the scheme of zone fares instituted by the company on Nov. 9 was more or less than needed to meet the cost of service the fare scheme is torn apart. Why? Was it because the commission wanted to placate the howl of the suburban rider that the 2-cent zone fares were discriminatory, or that the fares of the short-haul city rider had not been increased in the same proportion as those of the suburban rider? Under the new rate structure which it has established the commission predicts that the passenger revenue will be increased, whereas it claims that the company's plan of last November failed to earn anything over and above that which the flat 6-cent zone fare normally would have earned had it been in effect.

However, if the commission considered the company's scheme discriminatory because it took into account the density of traffic, we feel that the commission itself has made an even greater mistake when it establishes zone tickets and commutation tickets for specific classes of riders. It is class legislation and more discriminatory in every respect than the previous plan of operation, and the company is entirely justified in its appeal from the decision.

We further question the policy of the commission in the method it has chosen for providing financial stability to the company. If the Commissioners but realize the magnitude of the educational campaign which must be waged before it is possible to secure any remedial legislation or repeal existing legislation, and if they

would but see that it is their duty to lead in such a campaign, rather than to alter a rate structure before the company is on its feet financially, they would pursue a more constructive policy. Moreover, such indirect financial assistance would help the company with a much smaller degree of disturbance than changing fares for the advantage of less than 30 per cent of the company's patrons.

Every time fares or fare limits are changed throughout a system of any magnitude it is necessary for the company to conduct an educational campaign, to familiarize not only its own employees but its patrons with the workings of the plan in advance of the date of installation. There necessarily is much confusion in the first few days and the riding public and employees, unless working together, are prone to criticise—not constructively but destructively—and thus create considerable unwarranted hard feeling toward the company, all of which is soon reflected in the service rendered and the spirit with which it is accepted.

Differentiate Between Supervisory Regulation and Management

BUT there is a question involved in the interpretation of this decision which is more important and more fundamental than any mistake the commission may have made in zone lengths or commutation rates. This, we believe, is its failure to distinguish clearly between regulatory or supervisory acts and managerial acts. Or, perhaps, it does not appreciate or agree that the real function of a commission lies in regulation and supervision as differentiated from management. In either case, we believe the commission errs.

We have no quarrel with, but rather commendation for, the broad purpose of the Connecticut commission as we understand it, not only in this case but in its general program. We believe in the commission theory of supervisory regulation and wish by anything we say to offer constructive criticism. But in this instance we see a danger, not infrequently present, of a commission's defeating its own chief purpose by a mistaken move.

To make our point clear, much of the foregoing editorial might have been written in criticism of a company's action in producing such a rate structure as well in criticism of a commission's action. This would indicate that the commission has assumed managerial functions, which properly belong to a company. The fact that the commission says it is willing to take the blame if the rate structure is wrong helps but little, if any. This statement by the commission is in itself an admission of our point. It is the company, though, which must meet the public and suffer the actual consequence, both financially and in public opinion, if the new plan doesn't work.

Commissions very properly are interested in and concerned with the provision of satisfactory service at a just and fair price and they realize that one of the features tending toward such a provision is good public relations. We conceive that commissions will advance their program most rapidly and will place themselves in a much stronger and more useful position when they refrain from trying to substitute themselves for the managements of the various utilities and when they confine themselves to questions of policy and principles. We are not unmindful of the fact that a certain "twilight" or "neutral" zone of action may exist, nor are we unmindful of the fact that commissions are frequently limited and controlled by laws and by court decisions, and some change of attitude may be necessary in those places. But a clearer realization of the situation by the commissions themselves will be a substantial forward step.

Faithful Service Recognized in Kind

FAITHFUL service of its employees is recognized and emphasized by the Public Service Railway Company in granting a voluntary 10 per cent increase in wages to platform men, shopmen, linemen and trainmen. We commend this, not because faithful service is so unusual or because it is not expected, but rather because we believe this move indicates a healthy managerial attitude which recognizes the company's duty to its men to be on a par with the service it expects from its employees.

The obligations of employees have in most cases been assumed, but recognition of corresponding obligations have not always been so readily admitted by managements. But this act is a forward step, and we think the present move means more than this recognition of duty by a modern management. It indicates that every one on the system is pulling together to get a job well done. The present increase is not a bonus reward for faithful service but a recognition of the increased cost of living, granted, we take it, in fairness to the men even before an existing wage agreement terminates, and in appreciation of the faithful service which the men have performed during some past difficult months.

A confidence is thus generated between those who perform the tasks in connection with the operation of the system and those who are chosen to manage the system as a whole. And this serves directly to produce better service, which is the ultimate purpose of the whole organization.

And what more? A management which recognizes its duties and opportunities in one line gains public confidence that it will recognize its duties and opportunities in all lines. And every employee is a booster in building this public confidence. This is what is wanted, a public, an operating force and a management with mutual confidence and sense of obligation. Enlightened management can do a great deal to realize this condition.

Wisconsin Commission Backs Get-Together Plan for Electrolysis Mitigation

ELUSIVE stray currents from electric railway track circuits have a way of keeping everybody upset. Getting together is the only solution of the difficulty. On a nation-wide scale the American committee on electrolysis is doing this in a way that promises much for the future. Its recently formed research sub-committee will be the means of doing continuous and constructive investigational work. The permanent Milwaukee committee on electrolysis, which has been recommended by the Railroad Commission of Wisconsin, is another application of the same principle. It should be able to harmonize conflicting interests and apply locally the results of the work of the national committee.

The studies which have been made in Milwaukee have been referred to from time to time in these columns as illustrations of a serious attempt to get at the facts. Much of the misunderstanding which has prevailed in

the past has been due more to lack of data than to natural "cussedness." Acceptable all-around data on this rather complicated subject are difficult to secure, and their acceptability is the more doubtful if they are obtained by one party in a controversy. In this case the railway company took the initiative in petitioning for an investigation for the purpose of silencing criticism if this should prove to be unfounded. The commission also exercised initiative in bringing in the United States Bureau of Standards as investigator. A volunteer committee of representatives of affected interests was formed for the purpose of the investigation and now the commission wants this made a permanent institution. Such a committee will keep up its interest in the continuous investigation, and this can be done if the importance of the subject is kept clearly before the members; it will aid the commission in connection with future orders and will insure justice to all concerned.

The Enticing Ad Which Says: "Ride a Bicycle to Work"

MOST magazines are in the habit of paying for the fiction they print. In this rapidly changing age, however, it appears that some magazines are being paid to print fiction. Thus the most interesting fiction we have seen recently in the general magazines was printed as an advertisement. It was headed "Ride a Bicycle to Work." We are told that to do this would save us money, avoid us the miserable jam of the crowded street car and—get us to work on time. Moreover, the bicycle, according to the ad, "is the most economical form of transportation." "It is convenient—always ready to go—costs practically nothing to operate." Introducing all this was the picture of an executive, in horn-rimmed glasses, leading a bicycle parade of the proletariat.

We confess we are materialists. We are a little different from the writer of the ad, however. Our first desire is to get to work on time. Our second most compelling motive is to save money. This is the orderly sequence. If we succeed in the first, we shall probably succeed in the second ambition. And if we succeed sufficiently well in the second, after a time we won't have to bother about the first. Our time will be our own to go fishing, raise chickens or play golf.

The more we thought about the ad, however, the more it grew upon us. It was like the vice which the poet Pope wrote about. We first endured and then embraced. Years ago we rode a bicycle. Among other mementos of those days that we carry around is the scar on our index finger where we almost lost the digit by getting it caught between the chain and the sprocket. Of course the bicycle is always ready to go. We remember how we used to get ours ready in the old days. After the family had all gone to bed we silently stole into the kitchen and took the whole thing apart. At 3 a.m., when we went to bed, some of the ball bearings were under the sink and the never-leak was all over the kitchen floor. Mother told these facts the next morning. We thought we had put both in the right places, but it usually turned out that we hadn't. They were great days.

As we meditated over the ad the clock struck 11 p.m. We laid our horn-rimmed glasses on the library table and stole into the cellar, where reposed our old Cleveland. Such is the power of suggestion. After looking the old wheel over we decided to go for a ride. Then we thought of our $100 suit. Suppose we should ruin it with machine oil. A happy thought. There was our brother's army uniform. We found the old tires somewhat porous, but after an hour of pumping, we started out as a night rider, garbed in the uniform of a lieutenant of the aviation service. A half hour later we dismounted voluntarily. We went upstairs and took a bath. We needed it. Moreover, we hope our brother will never want to show his uniform to loving friends. They will think he was a member of the sanitary squad, not an aviator.

We knew all along that the ad was fiction. But it gave us a beautiful excuse for trying the old bike again. If the ad does nothing more than this for others it will not have been paid for in vain by the Cycle Trades of America. No! Broadway, La Salle Street and Woodward Avenue will never again be filled with men and women riding to work on bicycles. The Morris Plan Banks have no need to worry about the workers seeking loans to buy bikes. As a means of transportation for the great majority the bike is as dead as the dodo. Advertising—particularly the advertising fiction we have quoted—can never breathe the breath of life into the bike again.

Electrification Demands New Railroading Conceptions

WE VENTURE to assert that the almost universal conception of the significance of railroad electrification is merely the substitution of an electric locomotive for a steam locomotive. True, the possible increase of train loads, the greater ease of conquering grades, the benefits as applied to tunnels and some of the points of increased terminal capacity are appreciated, but there will be much more than this. Wholesale electrification allows entirely new conceptions of railroading, and not only allows but will require them.

Turn to manufacturing for an instant. Do we now hold any appreciable part of our former ideas of mechanical production? Yet the first use of the electric motor was merely to replace the steam engine or waterwheel, still retaining the inefficiency and frequent ineffectiveness of the transmission and application of power. But by a process of evolution and development the application of electricity to industry has today revolutionized our ideas and methods of production. Things heretofore dreamed of as doubtful possibilities are now accomplishments. It has been a development, not an overnight change, though at times some large steps seem to be so, but a comparison of present and former methods show the completely different conceptions due to the application of electricity.

And so in railroading. No statement of the present conditions and necessary steps in transportation improvement is needed. How we are to accomplish the improvement is unknown. When limitations in one direction are reached we need new conceptions and methods, and electrification makes these possible. The ultimate realization must be through development. But we should lose no time in examining from both engineering and economic standpoints the new possibilities. New train weights, new speeds, new divisioning, new methods we have no words or descriptions for must come. It will cost money to start; it will take time to do, but the result will be as revolutionary as has been the result in other places of the application of electricity. We must think along new lines.

This Is Number Two of a Series of Articles on Salient Phases of the Electric Railway Situation

Philip J. Kealy of Kansas City —and His Job

By Edward Hungerford

AS THE SUBJECT for the second of his series of studies on the electric traction situation in the United States Mr. Hungerford has selected Kansas City. He has found that in this city a number of special problems were to be met, and Colonel Kealy has met them. "A two-fisted fellow" is what Mr. Hungerford calls the president of the Kansas City Railways, but constructive fighters were needed in Kansas City as well as elsewhere, and Colonel Kealy is winning out.

He's a regular two-fisted, fighting fellow—this Colonel Philip J. Kealy, who pushes the trolley cars up the great hills of Kansas City. And he has good need of all of his two-fistedness, has Kealy. Seemingly there have been few times since first he came to the presidency of the Kansas City Railways, four years ago, when there has failed to be a premium on the necessity for a fighting man in the president's chair. And no time when it has not needed a regular fellow. For in "K. C.," like ninety-nine out of every hundred American cities, the traction problem for more than a decade has been a constant struggle. Only in the big, overgrown town at the bend of the Missouri the fight has been accentuated by the fact that the local street railway has had as its constant and untiring antagonist one of the best-organized and most capable newspapers in the country—the Kansas City *Star*. In fact Kansans and Missourians long ago began to recognize the very patent fact that to have the *Star* steadily fight an institution was a sort of compliment to the power of that institution.

There is no use going back into history to tell when or how the feud between the *Star* and the street railway began. It is mixed with shadowy hours in earlier Kansas City politics, with memories of Corrigan and the elder Pendergast and Col. William R. Nelson, the builder of the *Star*—himself something of a two-fisted man—and of the Metropolitan Railways, whose dark green trolley cars were the predecessors of the yellow cars of the present system. Out of all the ramifications of that mess and stew the present feud was born. There was nothing that Nelson liked better than a good and healthy and extended feud. Have I not already told you that he too was enlisted in the clan of the two-fisted? The street railway row was close to his heart. He was big and personally very popular. He had vision, too—the neat rows of exquisite little houses in the Rockhill section of Kansas City are proof enough of this. Incidentally those houses were made usable by the extension of the trolley system to their doors. All of which occasionally got by Colonel Nelson.

Colonel Kealy's energy is not confined to Kansas City, but he is helping the industry as an officer and most active worker of the American Electric Railway Association.

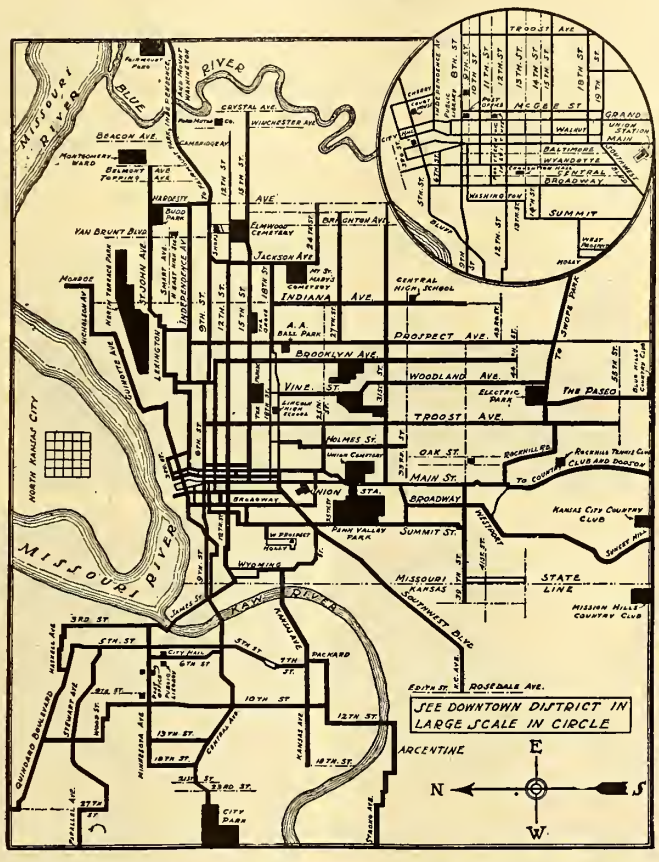
Not many things, however, have gone by the other colonel. The reason why is so simple as to be obvious. Kealy can't afford to let them get by. For more than a year now he has been up against four big things, almost any one of them terrific enough to scare an ordinary street railway and an ordinary street railway president into bankruptcy and ruin. Influenza epidemics, long-continued epidemics of labor troubles, the severest sort of automobile and jitney competition and the steadily growing prices of fuel, raw material and labor. Not that these things have not counted—and counted big. From a healthy little operating surplus, in something over two years the road came to a point where in the year ended June 30, last, it had achieved an actual operating deficit of $325,000, to say nothing of turning a chilly back upon some interest coupons due and amounting to about $2,000,000. As recently as 1917 the conservative financial advice department of the *Saturday Evening Post* had recommended the 5 per cent bonds of the company—then selling at 98—as the best utility investment then in the market. Last December a block of 160,000 of these same securities changed hands at 36½, a represented shrinkage of some $18,000,000.

City Now Appoints Five of the Eleven Directors

In the blackest days of the old Metropolitan company — in those days when it was already in the hands of a receiver, and the vigorous Colonel Nelson, still alive, was pummeling it morning, noon and night, it never defaulted its interest. As the old saying goes, it kept its face. With a marvelous degree of intactness it held its organization together. so that after the federal courts reorganized it into the present Kansas City Railways (in 1914) and it had been given a franchise by popular

vote of the citizens of the Missouri community it seemed to have every possible opportunity for future and continued success. A plan, based very roughly upon the Tayler grant of Cleveland, was used for this franchise. The property was written into the document at an agreed valuation of $30,000,000—about $6,000,000 has since been added—under the supervision and approval of the city authorities. For remember that this approval and supervision, like that in Cleveland, is both constant and close. The franchise says definitely that outstanding stocks and bonds may never exceed capital account value. In addition to this, the sharp-eyed railway commissions of the two sovereign states who share the ownership of the two closely adjoining Kansas Cities reserve—and use—the right of "O.K." upon every dollar of scrip that the railway company may issue. This same franchise puts the supreme operating control of the property into the hands of a board of two men, one chosen from the city (whose salary, nevertheless, is paid by the railway company) and one from, and for, the company. Robert P. Woods represents the city and Colonel Kealy the company. It was suggested at first that a third man be appointed to settle disputes that might arise between the city's representative and the company's. This was opposed as unnecessary and a far less expensive course was adopted, that disputed questions go to the federal courts for arbitration. This was done. And in the six years that Mr. Woods and Colonel Kealy have worked together there has arisen but one question that required court decision, and that was a comparatively minor one.

As in Cleveland, the city, through its representatives, actually supervises the operation of the cars, making and revising the schedules and car-routings, as well as helping make and approve plans and specifications for new work and auditing and approving requisitions and accounts. Its interests, moreover, are further protected by the appointment by the Mayor of Kansas City, Mo. (85 per cent of the population served by the system is upon the Missouri side of the state line), of five of the eleven members of the company's board of directors. These men, each of whom must become the owner of one share of the company's stock, are appointed in rotation, for terms of five years. So far they have been chosen with great wisdom and discretion. They are five most representative citizens, and so well have they filled their posts that as four of the terms have expired they have been filled again by the renomination of their former holders.



The Kansas City Railways serves the cities of that name in Missouri and Kansas.

From its net earnings and by the terms of its franchise the Kansas City Railways is entitled to 6 per cent upon its capital value. This is not a guarantee. The company must earn the money. And, as we have already seen, it has not earned it—not, at least, for nearly three years, while there is apparently little prospect of its reaching a dividend basis again for some time to come. Apparently the company is solving its labor problem, of which more in a moment. The jitney and automobile competition, however, is not apt to end so quickly or so easily. There are today some 30,000 automobiles in Kansas City, as compared with 7,000 six years ago. Kealy and his fellows estimate that each of these means on the average two fares a day lost to the company, or, at the present rates, some $4,500 in gross revenues. The fact that the business existence of the average jitney operator is less than three months wots nothing whatsoever. There is always some one to take the place of the expiring transport operator. What was that the late P. T. Barnum said was born one to a minute?

But the largest problem that Kansas City's street railway faces, and must continue to face, is that of the huge physical bulk of the city itself, as well as of its Kansas namesake across the Kaw.

"We rank among the first three or five electric railways of the land in mileage," says Colonel Kealy, "and strive particularly for first place in this standing with Los Angeles and with Portland, Ore. We also have practically the same mileage as both Detroit and Cleveland and with a total population of only about half of either of those cities. Moreover, the aggregate of the corporation limits of the two Kansas Cities is nearly double that of Cleveland—some 81 square miles here as against 47 square miles there."

I asked Colonel Kealy if it had been possible under the stress of war emergency or the increasing use of the automobile as a competitor of the trolley car to abandon any of the excessive street mileage of his system. He gave a decided negative and called my attention to the fact that since its reorganization back in 1914 the company had actually laid down 30 miles of new line.

"As a matter of fact," he added, "we are now in good shape physically to serve Kansas City for twenty years to come, to handle a million folk in these two towns. We have anticipated the growth of the community more than the community itself. By providing good transportation to its outlying districts we have brought about a condition where 70 per cent of the folk of Kansas City own their homes; not the Philadelphia narrow-fronted type of house, you understand, but reg-

ular homes, with lawns and gardens round about them, the sort of homes that invariably bring good citizenship in their train. Yet you must remember, and continue to remember, that this property is terribly burdened by the topography of these twin cities, as well as by their vast bulk. In recent years they have spent over $4,000,000 on bridges—you may still recall that flood of 1903 which took out all the bridges along the Kaw—of which this company has paid one-third as its share of construction costs. On one viaduct alone our share of the cost exceeded $450,000. On another we pay $60,000 as an annual rental—6 per cent on a construction cost of an even million dollars—while our line which traverses that viaduct takes in 33 cents a car-mile. And the rental figured out upon a corresponding car-mile basis comes to 27 cents. Not much velvet in that."

It does not look like velvet, to go down to the bottoms along the Missouri and the Kaw and see the repeated great viaducts that already connect the two Kansas Cities, with another still under construction. It looks as if those two ambitious towns were anticipating their growth by fifty years, instead of twenty. It did not look like velvet either to see some other lines taking in 7 or 8 cents to the mile—not quite enough to pay the motormen's wages; on the one-man cars the operator is paid 55 cents an hour, 5 cents more than the motorman, who still shares car honors with a conductor.

It is these thin lines that everywhere form a great special problem for the trolley operator. If a decent minimum service is not maintained, even in the dullest of hours, great public complaint arises—and justly. Here it is then that the small one-man car can easily justify itself. And in Kansas City it is used, not alone on short-haul traffic, as in some other large cities, but on lines 8 or 9 or 10 miles in length. While in the case of at least one route—out to fashionable Sunset Hill—it is used and liked by the very best of the company's traffic. It is with a view to pleasing the most discriminating of its patrons, no matter in what part of the city they may reside, that the company has made these safety-cars much more attractive in finish and appearance than the standard cars of the type. It feels that it is good psychology, and therefore good business, to appeal to the taste of its riders.

And even if the individual cost of these cars today closely approaches that of the last long double-truck cars that the company bought, just after its reorganization, that matters not. The operating savings are the thing that has swung it into the large purchase of one-man cars—seventy at the time I visited the plant in January, ninety-five as these paragraphs come to your eye. One man at 55 cents is certainly a real saving over two at $1 an hour.

Prior to 1900 the company's wages for its platform-men were never in excess of 15 cents an hour. In the fall of that year the scale began slowly to rise—to 16 cents for the two-year men and 17 for the three. Six years later beginners were getting the 16 cents, with three-year men rated at 20. By Aug. 1, 1914, one-year and two-year men were getting 22 and 23 cents respectively, although with ratings up to 28 cents an hour for men ten years in the service. Three years later the wage scales for one, two and three-year men were 26, 27 and 28 cents. The highest pay then was for the six-year men, 33 cents. Nine months later this entire scale was brought up an even 5 cents an hour each. There were two other of these intermediate jumps until the present scale was reached—in October last. It provides 47, 48 and 50 cents an hour for the three different years of service, an arrangement which was reached with the gratuitously offered help of the War Labor Board at Washington.

These cold figures do not tell the labor story of the Kansas City Railways—no, not by one-tenth. That story is told in blood—literally. It begins back in August, 1917, when the Kansas City traction system was forced to abandon the non-union, open-shop policy to which it had held for many years. Kealy at that time was off the job—in camp, in charge of the Third Missouri Regiment, of which he was colonel. He did not return to the railway until five months later, when he had been discharged from the army, for physical disabilities. In the meantime the union of the Kansas City Railways employees had been formed. It had been recognized, but purely and simply under open-shop conditions. In other words, those of the men who desired to belong to it were allowed to do so, yet union affiliation was not a pre-requisite for employment upon the system.

Kealy came back from the army to real trouble. He foresaw it and he began to roll up his sleeves in preparation for the real fight of his

The upper view is at the New Union Terminal. The lower views are, at left, traffic conditions in Twelfth Street east from Baltimore Street, and at right, the congestion in Walnut Street, looking north from Twelfth Street, Kansas City, Mo.

life. He had it. Trouble began to rumble from that summer day of 1917, when under the changing industrial conditions due to our actual participation in the war the Amalgamated set up shop in the carhouses of the two Kansas Cities. Three months later trouble became an actual rupture. For it was in March, 1918, that a trivial wage disturbance of the laundrymen there at the great bend of the Missouri quickly fanned itself into a labor conflagration that tied up 30,000 of the cities' workmen in a useless and utterly asinine "sympathy strike." The street-car men went out too. One might almost add, "of course." They had been looking for some such rare opportunity to show their new-found strength. For four days no trolley cars moved in the streets of either Kansas City and a big hyphenated American community had full chance to see what local transportation meant to it. A delegation of three union agents walked into Kealy's office, with a boss plasterer as its talking chairman. He did not talk much there. He had hardly begun his enunciation of principles before Colonel Kealy asked him if he was a street-car man. The walking delegate stammered. Kealy made it clear that he would be glad at any time to meet with the president of the Street Railwaymen's Union or any other employee of the company, but did not see where he had any street railway matters to discuss with men representing other trades in Kansas City.

"Are *you* a street railway man?" he repeated.

"No," stammered the union agent, "but—"

"No buts here," said Phil Kealy, his finger swinging in a great arc and beginning to point, with menacing definiteness. "The elevator is at the end of the hall. The stairs are nearer, quicker—and safer."

The committee took a single look into Kealy's eyes, saw the two fists and remembered an engagement elsewhere. After which one W. D. Mahon, big chief of the Amalgamated, came to Kansas City from Detroit and listened to Kealy's reminder that the trolley company looked to Amalgamated to play fair with a concern that was making and keeping pay contracts and endeavoring to play fair on its own account. Mahon did not hesitate. He is too much of a diplomat. He saw the force of Kealy's argument and ordered the trolleymen back to work. And for eight months there was peace.

But not the peace that cometh of perfect understanding. Rather was it the peace that camouflageth a wealth of misunderstanding, and so eventually must break asunder. In the Kansas City case it took those eight months to come to the rending point. This time the trolleymen struck—and struck for fair. Kealy decided that he would fight the matter out, to a fine finish. The war was over; labor conditions already were descending from the abnormal. And so with the press of the town solidly behind him—even the *Star*—the commercial organizations and the retail merchants—already in the vortex of Christmas shopping — he fought it out.

These three illustrations show, respectively, at top, another view of the New Union Terminal; at left, Twelfth and Walnut Streets during a rush hour, and at right, a view of Main Street looking north from Twelfth Street, Kansas City, Mo.

It was a glorious fight. Technically it is not over, even yet. The strike order of Amalgamated still stands against the Kansas City Railways. But within forty-eight hours of the big walkout of its workers the company had forty-five of its normal service of 650 cars back in operation again. It stuck fast and with the help of more than a thousand national guardsmen of Missouri, 500 United States marshals and some 700 policemen—to say nothing of conservative citizens—kept those forty-five cars going, and day by day added to their number until the service had been brought back to normal. Today as many people are riding in its cars as in the same days of 1918. And while the gross business is still 10 per cent below that of 1917, the patronage is increasing daily and in large volume.

Yet do not let this last statement beguile you into underrating the serious phases of a strike that lasted actively from December, 1918, till May, 1919, and that almost developed into open warfare. More than seventy-five of the company's cars were attacked and wrecked by dynamite or rocks or other projectiles. Not only did its property loss run high, but the loss in riding was terrific. No wonder that its fiscal year over that winter showed an operating deficit.

But it did not give up. Kealy won his fight—honestly and fairly. To the mere 200 out of the 1,500 trainmen who stood by the company he recruited a brand new force. He used no strike-breaking agencies. He found his new men very largely in Camp Funston, which was then rapidly demobilizing. The boys came in their uniforms and ran the cars. They liked the excitement. It made up in some small part for the big fight that they had missed overseas.

And when two of them would bring a badly smashed car into the car-house one of them would be sure to say to the depot supervisor:

"A bit of bad luck, boss. Give us another and we'll see if we can't do better with her."

What the Force Is Today

No panic, that. Out of such stuff has the new operating force of the Kansas City traction system been upbuilded. It has strength and force and courtesy. And even if the *Star* does persist in printing front-page stories about the courtesy of Mr. Mitten's conductors over in Philadelphia and overlooking the courtesy of the boys in Troost Avenue, that does not feaze the K. C. boys. I have not often ridden upon cars where the platform-men were of a higher, cleaner or more obliging type than those I found upon the cars there. The traction company has abandoned its former rather elaborate system of "welfare work"—what a disgusting sound that very word is beginning to have. It feels—and I think very rightly—that it would prefer to pay its men a fair wage and that they would prefer to buy their own entertainment and luxury.

Today its wage schedules are well ahead of those that rule in Kansas City for clerks or elevator men or many other trades that call for the same equipment of education and training. It brings to its platforms men from all of these ranks, and finds no difficulty whatsoever in keeping these platforms filled. For three months now its elaborate employment offices, which it was forced to open even before the coming of the strikes, have been closed. And a labor turnover of more than 300 per cent in war days has been reduced to 25 per cent annually.

Moreover, the morale of the working force is coming back—definitely and in large measure. When, last fall, the strike of the soft-coal miners began to paralyze eastern Kansas—the traction company for some weeks was forced to burn oil in its boilers, at an enormously increased expense—some 200 of the platform-men of the traction system came forward voluntarily and offered their services, either to go down into the Kansas mining field or else to help replace the switchmen at the Kansas City steam railroad terminals, who had gone out in sympathy with the striking miners.

The public pays. It generally does. And yet for reasonably good service—a full-hour service amounting to 65 per cent of that in rush hours—good cars, good men, Kansas City pays no more than St. Louis or a number of other cities—8 cents a single fare, two for 15, five for 35 cents—an increase far less than those of wages or of materials, to say nothing of most of the other necessities in a man's life.

The city which regulates the service and the wages also regulates the rates of fare. The men who represent it upon the board of the Kansas City Railways know that the fares must represent these other things and that the plant must be kept ready and waiting for the coming of the million people that are expected at the bend of the Missouri.

Who Will Build the Railways of the Future?

One thing more. I could not leave Colonel Kealy without asking him for a stray thought or two on the future of the traction industry across the land. He had expressed his disbelief in the zone system and the motor bus, at least so far as Kansas City at the present time and in the immediate future was concerned. What then were his constructive beliefs? He stated them fairly and frankly, as seems to be his way:

"Ordinarily I am one of the most optimistic people in the business," said he. "All my life I have fought pessimism out of things. Yet it looks to me as if the really big problem of this business was not even reached as yet. Every large street railway across this land is in a growing community; our urban centers are developing at a fearful rate. Their transportation facilities are nowhere near keeping pace with them. They need development upon a tremendous scale. Yet, how can they be developed without capital? The industry is bankrupt. Its credit is *nil*. For the life of me I cannot see how a bankrupt industry can respond to the growth needs of the community which it is supposed to serve. Here is a problem that municipal ownership today cannot solve. The most of our American cities are already deeply in debt and are petitioning their state legislatures for relief—along new lines of taxation. Few of them can or will help their street railways. And as for the general public, today the holder of traction securities feels stung to the limit. No sane man feels that he wants to buy trouble—or a lawsuit.

"Let me repeat: The whole structure of our rapidly growing urban centers of America is predicated upon adequate transportation. It forms their arteries, through which must move the very blood of their civic life. If there were anything else to replace this arterial structure I should say 'discard it.' But we cannot discard. We must work out our own salvation with the material in hand, no matter how inadequate it may seem, no matter how overwhelming our problem. It seems to me that the biggest step that the traction companies have gained was in getting away from the 5-cent fare. That was 90 per cent of their trouble in recent years. If the business is to continue its cost must be met. There is no more relation between a 5-cent fare and the cost of service than there is between dollar wheat and a loaf of bread. While the traction problem is a national problem and must remain a national problem, there is no more real relation between the fares in Kansas City and in New York City—to make a definite comparison—than there is between labor or fuel or fare costs."

You are quite right, Col. Phil J. Kealy. Neither is there any more relation between these things in Kansas City and the city of New York than there is relationship between the definite and scientific franchise scheme under which you are operating and the clubbing-to-death method by which the Mayor of New York is trying to solve the terribly vexatious and involved traction problem of the community that he heads. At least your course is definitely laid for you. Your fares have been increased—a little at least. Your property is protected—in no small degree. And I am willing to believe that there are few security holders in either Interborough Rapid Transit or Brooklyn Rapid Transit that would not gladly exchange their holdings for those of the Kansas City Railways. Personality does count, whether it is in a City Hall or in a street railway office. And your personality might well be written down as an asset for the Kansas City Railways system. Optimism—you tingle with it. If you had not been an optimist you would not have won that long-drawn internecine struggle. If you were not an optimist today you would be coolly sitting back in your office, handling your plant and calmly waiting for Kansas City to grow up to it. Strength to your fists and quick growth to Kansas City!

Brief Review of World's Traction Situation

Some Notes Based on a Study of Electric Railway Literature in All Countries

IN THE latest issue of the "Jahrbuch der Elektrotechnik," dated 1919 and covering 1918, a chapter is devoted to electric transportation and motor applications. The subject of electric main line and street railways is treated by Dr. W. Kummer.

As this chapter gives a bibliography of the important literature of the year 1918, from the standpoint of this authority, and as he digests the various articles and papers for convenient reference, an abstract of parts of the chapter is given here. Reference to the bibliography appended to the article are given at appropriate points throughout the text.

Dr. Kummer says that among the contributions which have added most to our knowledge of the fundamental principles of train movement, there should be mentioned a work by J. Jahn[1] on the relation between wheel and rail with regard to the factors of force and motion. This study furnishes the first useful figures on sliding friction losses that take place at the periphery of the wheel when the forces reach the friction limit. That these friction losses in electric locomotives, where the coefficient of adhesion is a maximum, are of great importance is explained in an article by Dr. Kummer,[2] which develops equations for the efficiency at the wheel periphery of a driving axle, taking into account the complete torque and velocity losses. The knowledge of train resistances encountered in practical railroad operation with special reference to electrical operation has been materially increased by a report by V. Glinski[3] covering tests made by the Prussian-Hessian Railroad Administration. These resistance tests shed light on such factors as variable loading, wind and weather. A new railroad system which combines the friction and gear systems has been designed by H. H. Peter. It is distinguished by a gear rack with horizontal tooth contact. This system was described in detail by S. Abt[4]. Full reports on the corrosion from earth currents were given by the general secretary of the Swiss Electro-Technical Society.[5] Our knowledge of the influence of railroad currents, especially alternating currents on signal, telephone and telegraph circuits, has been increased by articles contributed by H. S. Warren,[6] as well as by J. Perret.[7] G. Gut[8] contributed a graphical method of determining the rating of railroad apparatus under intermittent load conditions.

Advances in Heavy Electric Traction

As was the case last year, notable advances were made in the development of regenerative braking. The most important result is that reported by the Oerlikon Company,[9] which employs a simple connection of the standard single-phase series motor. The A. Scherbius system (E.T.Z., 1912, page 164), which divided the armature and field circuits with the series transformer into two circuits coupled inductively, was improved by introducing in the field circuit a voltage of the same frequency as that on the line. This connection is then brought to its most simple form by substituting a choke coil for the series transformer. The characteristics and method of operation of this system were described in detail by H. Behn-Eschenburg.[10] The principal contribution to regenerative braking with direct current series motors was made by W. F. Coors.[11]

Since the art of regenerative braking with direct current and alternating current has progressed to such a point that the energy saving can be computed, irrespective of the kind of current used, W. Kummer[12] calculated the effect of regenerative braking on the cost of train operation, taking into account its effect upon load variations in heavy traffic. Calculations and test results on disturbing motions in electric locomotives with relation to the driving mechanism were presented by P. Leboucher.[13] This report was based on tests of six trial locomotives having the same running gear and the same power, and took place on the French Chemin de Fer du Midi. According to these tests, locomotives with connecting rods and jack shafts develop a series of critical speeds corresponding to the following disturbances: Transverse, oscillations, jerking, vertical oscillations, swaying and shivering, while locomotives with the triangular frame and sliding prism develop critical speeds for only jerking and vertical oscillations; and locomotives with rotating driving mechanism possess no critical speeds for any of these disturbing motions. Engineer A. Causse and H. Goua,[14] who belong to the same railroad organization, gave a thorough demonstration of a hydraulic peak-load power station which absorbs the short period peak loads by means of a special water feeder-chamber. The automatic substations for railroad operation, described in the 1917 Jahrbuch, have quickly developed in America into the automatic primary power plant. An installation of this kind for the Iowa Railway & Light Company was described by J. M. Drabelle and L. B. Bounett.[15] M. Osnos[16] described a novel method of speed control for a 450-kw. single-phase railroad motor by means of a choke-coil connected in parallel with the field winding and oversaturated with direct current. M. Vidmar[17] gave approximate formulas for estimating the current rise when transformers are thrown on the line, which constitutes one of the minor troubles experienced in single-phase railroad operation.

As the section in the Year Book devoted to conditions in the United States and other countries on this continent contains material which is familiar to the readers

[1] J. Jahn, Z. Ver. D. Ing., pp. 121, 145, 160, 248, 339, 651.
[2] W. Kummer, Schweiz. Bauztg., Vol. 72, p. 215.
[3] V. Glinski, Glaser's Annalen, Vol. 83, pp. 48, 53, 91.
[4] S. Abt. (H. H. Peter), Schweiz. Bauztg., Vol. 71, pp. 7, 13.
[5] Bull. Schweiz. EV., pp. 135, 157.
[6] H. S. Warren, Proc. Am. Inst. El. Eng., p. 1119.
[7] J. Perret, Rev. Gén. El., Vol. 4, p. 281.
[8] G. Gut, Bull. Schweiz. EV, p. 35.
[9] Maschinenfabrik Oerlikon, Schweiz Patent 77,317.
[10] H. Behn-Eschenburg, Bull. Schweiz. EV, p. 239. ETZ, p. 481. Rev. Gén. El., Vol. 4, p. 877.
[11] W. F. Coors, Gen. El. Rev., p. 412.
[12] W. Kummer, Schweiz. Bauztg., Vol. 71, p. 191.
[13] P. Leboucher, Rev. Gén. El., Vol. 4, p. 914.
[14] A. Causse and H. Goua, Rev. Gén. El., Vol. 4, p. 658.
[15] J. M. Drabelle and L. B. Bounett, Proc. Am. Inst. El. Eng., p. 497.
[16] M. Osnos, ETZ, p. 224.
[17] M. Vidmar, El. Masch.-Bau., p. 273, Schweiz. Bauztg., Vol. 72, pp. 233, 247.

of the ELECTRIC RAILWAY JOURNAL, no attempt will be made to abstract it here. However, the footnote references numbered 18 to 26, inclusive, will be of interest.

In Europe the scarcity of coal has made electrification projects possible to almost all railroads. In no land, however, has electrification made such progress as in Switzerland, where in 1918 foreign dealers raised coal prices to fantastic heights. Therefore there has now come into being a comprehensive electrification program of the entire state railroads[27] system which will be worked out at the most in thirty years. The private railroads have similar[28] plans. The Gotthard line, the electrification of which has been pushed hard, will soon reach not only between Erstfeld and Bellinzona, but through Bellinzona to the southern boundary near Chaisso.[29] In order to speed up the beginning of electrical operation, sample locomotives[30] were put through test runs, and the main order for electric locomotives put through as rapidly as possible. Excellent reports on these studies of the Oerlikon Company were made by H. Studer.[31] Large orders for locomotives were given in 1918 by the Berne Dekret Railroad.[32] Electrical operation was begun upon the Scherzligen-Berne[33] branch of the Lötschberg and Simplon lines, work on the electrification of which was begun the year before. The Rhät railroad has begun extension of the electrical operation of its Engadin lines by equipping are Filisur-Bevers[34] section, which has an unusually large number of tunnels.

THREE-PHASE IS AHEAD IN ITALY

After Switzerland, Italy, represented by the Italian State Railroads, is the center of the greatest European activity in electrification. At the beginning of 1918 the system had 279.1 miles of electrified line, 242.7 miles with three-phase distribution and 36.4 miles with direct current distribution. Members of the railroad organization had a sharp difference of opinion regarding the advantages of three-phase distribution some time ago, as was reported in the Jahrbuch for 1916. At present in Italian electrical circles the discussion of the question of electrical systems best suited for railroad electrification has reached an acute point. Among the discussions especially noteworthy are those of Ignis[35] and P. Lanini.[36] The firm Brown, Boveri & Company[37] described a new Italian express locomotive which was equipped by them. It was mentioned in the Jahrbuch for 1917.

In Germany the new electrical locomotive for the Schlesen Mountain Railroad should be interesting on account of its novelty. The construction of this locomotive was described in great detail by P. Müller.[38] According to this article the locomotive is equipped with a driving mechanism which may be denoted as of a reversed double side-rod type, in which one motor drives two countershafts. This motor has a capacity of 2,200 kw. and weighs 22 metric tons. Fundamental traffic questions from the Berlin Express Traffic were brought out in open discussion by Giese.[39]

The States Railroad Administration[40] in Austria in the winter of 1917-1918 published a monograph on the studies and preliminary work of a plan for the utilization of the water powers and the electrification of the main-line railroads. From this report it appears that at the end of 1917 the administration had eighteen concessions for water-power plants, having an average capacity during the year of 121,000 kw. F. Sabertsching[41] described a clever method of locating the feeding point in the distribution system of a branch road on the Bludenz-Schruns line which has a certain technical interest.

In France and England the technical circles have been actively engaged in the discussion of the latest project by Engineer A. Sareiaux[42] for tunneling the channel, which naturally involves electric transportation.

In Scandinavia the border railroad from Narvik to Kiruna and from there to Lulea is the principal topic of discussion, and various technical details[43] have recently been published.

ELECTRIC STREET RAILWAYS

The elements of traffic problems for street railways and allied subjects were treated by W. Bethge[44] and Ph. Pforr.[45] A. Bieber[46] in a serial covered the questions of maintenance and repair of street cars. The use of safety control in street car operation was advocated by R. Wolff,[47] while H. Engel[48] gave connections and rules for the use of multiple control. Street railway accounting was covered by contributions by C. Redtmann[49] and A. Paul.[50] Pure electrical braking of street cars was discussed pro and con by E. Volkers[51] and H. Sauveur.[52] The contribution to the use of street cars for the transport of freight was made by P. Loescher.[53] In the line of economy of material, there should be mentioned a proposal of R. Wolff[54] to substitute single pole for double pole brake couplings and from Ph. Scholtes[55] and W. Riechers[56] a plan for introducing three-conductor operation on street railways. R. Zehnder[57] described a device for automatically greasing the rail. From the Zurcher Street Railway Administration, some details of which were described in the 1916 Jahrbuch, reports were rendered on the changing over from the trolley wheel to bow by U. Winterhalter[58] and on optical signals between trailer and motor car by H. Schaub.[59] The mercury converter is used for the first time on 800 volts direct current in the substation Meziers[60] of the suburban line Lausanne-Mondon. Out of the great number of new Swiss railways for high-tension direct

[18]F. H. Shepard, El. Rlwy. Jl., Vol. 51, pp. 237, 559.
[19]A. H. Armstrong, El. Rwy. Jl., Vol. 51, p. 561.
[20]G. M. Eaton, Electr. (Ldn.), Vol. 80, p. 700.
[21]A. J. Hall, Electr. (Ldn.), Vol. 80, p. 722.
[22]El. Rlwy. Jl., Vol. 51, p. 799.
[23]E. R. Hill, El. Rwy. Jl., Vol. 51, p. 556.
[24]El. Rlwy. Jl., Vol. 51, p. 1043.
[25]W. G. Gordon, Proc. Am. Inst. El. Eng., p. 1285.
[26]Electr. (Ldn.), Vol. 81, pp. 511, 530, 550.
[27]Schweiz. Bauztg., Vol. 72, pp. 74, 161.
[28]ETZ, p. 78.
[29]Schweiz. Bauztg., Vol. 72, p. 92.
[30]Schweiz. Bauztg., Vol. 72, p. 9.
[31]H. Studer, Schweiz. Bauztg., Vol. 71, p. 213. ETZ, p. 293. Gén. Civil, Vol. 72, p. 437.
[32]Mitt. Brown, Boveri & Company, p. 202.
[33]Schweiz. Bauztg., Vol. 72, p. 237.
[34]Schweiz. Bauztg., Vol. 71, p. 178.
[35]"Ignis," Elettrotecnica, pp. 242, 270, 356.
[36]P. Lanini, Elettrotecnica, pp. 277, 346, 411.
[37]Mitt. Brown, Boveri & Company, pp. 87, 112, 134.
[38]P. Muller, El. Kraftbetr., pp. 129, 137.
[39]Giese, ETZ, pp. 29, 461.
[40]El. Masch.-Bau., p. 20, ETZ, p. 96.
[41]F. Sabertsching, El. Masch.-Bau., p. 167.
[42]Rev. Gén. El., Vol. 3, p. 665. Schweiz. Bauztg., Vol. 72, p. 85.
[43]ETZ, p. 495.
[44]W. Bethge, El. Kraftbetr., pp. 37, 73.
[45]Ph. Pforr, El. Kraftbetr., p. 82.
[46]A. Bieber, El. Kraftbetr., pp. 9, 105, 154, 161, 251, 257.
[47]R. Wolff, ETZ, p. 365.
[48]H. Engel, El. Kraftbetr., p. 145.
[49]C. Redtmann, El. Kraftbetr., pp. 209, 217.
[50]A. Paul, El. Kraftbetr., p. 225.
[51]E. Volkers, El. Kraftbetr., p. 243.
[52]H. Sauveur, El. Kraftbetr., p. 289.
[53]P. Loercher, El. Kraftbetr., pp. 1, 31.
[54]R. Wolff, El. Kraftbetr., p. 236.
[55]Ph. Scholtes, ETZ, pp. 161, 347.
[56]W. Riechers, Mitt. Ver. Elektricitätswerke, p. 50.
[57]R. Zehnder, Schweiz. Bauztg., Vol. 72, p. 62.
[58]M. Winterhalter, Schweiz. Bauztg., Vol. 71, p. 204.
[59]H. Schaub, Schweiz. Bauztg., Vol. 72, p. 185.
[60]Mitt. Brown, Boveri & Company, p. 42.

current up to 2,000 volts, which were described during the report year, it appears to us of interest to mention the Schöllen Railway[61] because it employs regenerative braking.

Practical Ideals for the Claims Department *

BY H. K. BENNETT
General Claim Agent Eastern Massachusetts Street Railway, Boston Mass.

IF ANY CLASS of men need a superabundance of gray matter, keenness, alertness, adroitness, intuition and the various other attributes that go to make up men with convincing power, it is the men who go out day by day to handle the personal injury claims of any electric railway company. When an adjuster goes out on a case he is master of the situation and is the company itself. His every word and action will be judged accordingly. By the manner in which he approaches claimants, their animosity can be dispelled and adjustment can be made with comparative ease.

The claims adjuster should be able to meet all kinds and conditions of people. He should be able to state facts and back them up, right wrongs if such exist, put himself "on the other side of the fence" and see the case through the eyes of the other man.

I have always believed that the claims department should act in an advisory capacity, especially to the operating and rolling stock departments. The claims men are out among the public as are no other officials of the company. They observe trainmen while the latter are on duty, and are in a position to see changes that could advantageously be made. Claims men ride the cars, and they have the best opportunity in the world to note such defects as loose floor boards, protruding nails and screws, saw-tooth platform edges, slippery treads, loose lamp sockets, bad rails, loose wires, line corners where hedges or bushes need trimming, etc. A claims man of the right sort has a golden opportunity to make friends for his company. He is in daily contact with the public, with doctors, with lawyers, with men of all nationalities and beliefs, etc. If he does not keep peace with the public and treat its members in a manner absolutely aboveboard and on the level, he is sealing his own doom and that of his company.

With all due respect to the publicity men, I am firmly of the belief that claims departments can mold public opinion to a large degree. When a claims department has made a friend of a claimant, the news will spread quickly through the neighborhood in which the latter resides, even if this has been antagonistic.

I have thought at times that there are those who do not always see beyond the results produced by a claims department, who do not give enough thought to the ways and means by which the results are accomplished. Oftentimes large settlements are frowned upon, and at the same time hundreds of settlements that are made in the course of daily work for small amounts entail labor that sometimes seems almost superhuman. The changing of a claimant's attitude to one of receptivity for the ideas of the claims adjuster is done at the expense of bodily energy. While this is, of course, all in the day's work, it would be well for the managers to get behind the scenes occasionally and see how the work is performed.

As to the question of higher cost of claims, I have four reasons to suggest for the increases. These are higher wages, general social unrest, increased cost of living and the increased extent to which claimants take advantage of a situation where the liability cannot be denied.

The greatest menace that confronts railway companies today is the automobile accident. It is not alone the damage to the automobile, but the claims for injury to the occupants. When one considers the fact that the negligence of a driver cannot be imputed to the person or persons riding with him the importance of this subject is evident.

The roads are choked with pleasure cars and trucks of all sizes, driven often by irresponsible persons who always feel themselves to be in the right, and they pull in front of a car going in the same direction without giving the motorman half a chance to stop, putting all of the burden upon him and expecting him to be a mind reader. In case of accident the burden is always on the defendant to prove that the plaintiff was negligent. How long is the claims department going to stand for this sort of thing? When are we going to get our legislatures to pass commonsense laws and to put restrictions on securing automobile licenses so as to bar the lame, the halt and the blind from securing these? If we all push forward to a common goal, we can go over the top in this matter and stir public opinion to the point where greater stringency will be demanded of the commissions that have the matter of licensing automobiles in charge.

Let us get together in all matters that relate to the prevention of accident, even if this means treading on the toes of the mighty, and calling attention to the deficiencies of those in whose hands the remedial power lies. Let us never stop until we have attained our object.

[61]Mitt. Brown, Boveri & Company, pp. 23, 47, 71.
Bibliography—Key: Bull. Schweiz E. V.—Bulletin des Schweizerischen Elektrotechnischen Vereins. El. Kraftbetr.—Elektrische Kraftbetriebe und Bahnen. El. Masch.-Bau.—Electrotechnik und Maschinenbau. El. Rwy. Jl.—ELECTRIC RAILWAY JOURNAL. Electr. (Ldn.)—Electrician, London. ETZ—Electroteknische Zeitschrift. Gén Civ.—le Génie Civil. Gen. El. Rev.—General Electric Review. Mitt. Brown, Boveri & Co.—Mitteilungen von Brown, Boveri & Company. Mitt. Ver Elektricitätswerke—Mitteilungen der Vereiningung Elektricitätswerke. Rev. Gèn. El.—Revue Générale de l'Electricité. Schweiz-Bauztg.—Schweizerische Bauzeitung. Z. Ver D. Ing.—Zeitung des Vereins Deutscher Ingenieure.

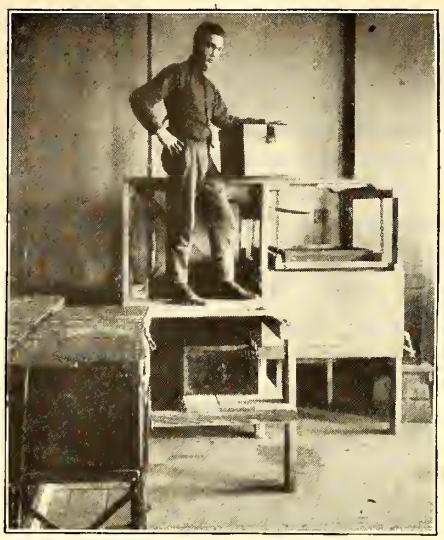
*Abstract of address before the New England Street Railway Club, Boston, Mass., April 29, 1920.

Welfare Work Progressing at Baltimore

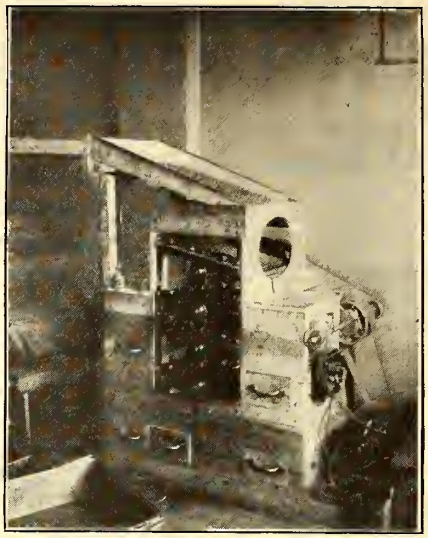
ACCORDING to the annual report of the United Railways & Electric Company for the year ended Dec. 31, 1919, the welfare work begun in 1918 was continued under the auspices of the United Railways Association of Baltimore. This association has its own corps of doctors and nurses who give free medical and nursing attendance to employees. The company also continued its pension and insurance plans.

The association during its first fiscal year expended: For sick benefits, $22,091; for hospital expense, $4,091; for doctors' and nurses' expense, $13,779; for contributions, $1,205, and for Christmas and miscellaneous expense, $260; a total of $41,426.

During the year the company spent $66,834, exclusive of what the association had spent for pensions, insurance and other welfare work, as follows: For pensions and gratuities, $9,686; for insurance, $32,492; for contributions to United Railways Association, $12,200; for miscellaneous items, $5,072, and for welfare expense, $7,584; a total of $66,834.



DEVICE DESIGNED BY COMPANY AND USED TO SEPARATE COINS AND TOKENS FROM TICKETS



THIS MACHINE, ALSO DESIGNED BY THE COMPANY, SORTS THE COINS AND TOKENS INTO COMPARTMENTS

THESE COUNTING MACHINES ARE USED FOR COUNTING TOKENS, NICKELS AND CENTS

Handling Increased Fares Mechanically

Kansas City Railways Perfect Mechanical Devices to Handle Counting and Sorting of Tokens, Tickets and Coins Resulting from Increased Fare

WITH the advent of a higher fare and a resulting increase in the use of tokens and tickets, new counting problems confronted the Kansas City Railways. These have been largely overcome by the development of certain mechanical devices which have been substituted for hand-counting methods.

It was found that the metal token and the paper ticket, both of which are sold at a rate lower than the cash fare, supplanted to a large extent the cash previously collected. The first step taken in an effort to simplify the handling of this class of fares was to equip all cars with non-registering fare boxes. With these a separate check is not made of the individual conductor, but the returns are considered as line or division returns. In order further to increase the use of tickets and tokens, the token is sold on the car by the conductor at 7½ cents and the paper ticket is sold off the car in books of seven rides at a rate of 7 cents per ride. While the fare box eliminates the individual car check, it does not involve the consideration of the poor line with the prosperous line of the division, as the returns are tabulated by lines.

The counting of fares is done at the general office of the company. The locked magazines are removed from the fare boxes at the division points and are placed in a vault. The contents of the magazines are collected daily by the money car, the magazines being emptied into a metal strong box. A separate box is provided for the receipts of each line and after collection the box is locked and tagged to show the line and division from which it is taken. In addition each box bears a painted number as a further means of identification. Collection on one-half of the system is done during the early morning hours in order to provide work for the counting force in the early part of the day. While the counting of this collection is being handled in the accounting department, the boxes are picked up by the money car from the remaining division points on the system.

EQUIPMENT USED IN SORTING MADE BY RAILWAY COMPANY

In the accounting department in handling the contents of the boxes they are sorted, counted, checked by meter, weighed, packed and prepared for banking in the order given. The separation of the tokens and coins from the paper tickets is accomplished by a machine constructed by the company. This consists of a hopper, a swinging tray and a series of receptacles, and in fact is patterned very much after the ordinary "jig" separator used in the ore-mining industry. The contents of the boxes are emptied into the hopper of the machine and the swinging tray is agitated by the operator, with the result that the paper remains in the upper tray while the tokens and money are forced by gravity through a series of apertures to the trays beneath.

The trays containing the tokens and coins are passed to another machine which separates the coins into individual compartments for the several denominations and the tokens into a separate compartment. This machine works at the rate of 2,000 coins or tokens per minute. It also was designed and constructed by the company. The sorting of the coins is accomplished by the agitation of the screen over a series of inclines at the rate of 280 movements per minute. From this machine coins of each denomination are passed to a special motor-operated disk counter, of which there are five altogether. Three of these count tokens, one counts nickels and the fifth counts pennies. The coins pass through the registering mechanism of these machines into bags containing respectively 500 tokens, $50 in nickels and $10 in pennies. When the correct amount is deposited in the bags an automatic stop on the meter shuts down the machine.

The count of this machine is checked by weighing the bags on a sensitive scale. The tabulation of tickets is checked in a similar manner, this having been found more satisfactory than counting by automatic machines due to the fact that unevenly torn tickets caused con-

AT LEFT, COUNTING TICKETS, AN OPERATION WHICH HAS LARGELY BEEN SUPPLANTED BY WEIGHING. AT RIGHT, GENERAL VIEW OF THE "CASH ROOM" OF THE KANSAS CITY RAILWAYS

siderable extra labor on the part of the tabulator. After the count has been checked by weighing, the bags of coins are sealed with metal seal and deposited in special boxes, in which they are taken to the depositories. The tokens are again placed in circulation and the tickets are passed from the scale to a masticating machine which mutilates them beyond redemption.

All coins of denomination larger than 5 cents are counted by hand, bundled and prepared for banking. Through the sale of tickets off the cars, the handling of coins of large denomination through the fare boxes has been materially decreased. Such coins reach the counting room through the division cashiers, who supply the conductors and who in turn purchase their supply from the general office. As stated before, the fare-box returns consist largely of tokens and of paper tickets. At present, however, there is a considerable quantity of nickels and coppers. There are, of course, some dimes, but the number of these is decreasing and the outlook is that as the public becomes familiar with the reduced rates at which tickets and tokens are sold there will be a still further decrease in the number of coins of all denominations.

Electrification of Railways in England

Sir Eric Geddes, Minister of Transport of Great Britain, has formed a committee to study the subject of electrification of railways in that country. It consists of the following: Sir Alexander Kennedy, chairman; Sir John Aspinall, A. R. Cooper, Philip Dawson, Sir Alexander Gibb, C. H. Merz, Sir Philip Nash, Sir John Snell, Sir Henry Thornton, Roger T. Smith and Major Redman, secretary. The committee is to report on:

1. Whether any regulation should be made for the purpose of insuring that the future electrification of railways in the country is carried out to the best advantage in regard to interchange of electric locomotives and rolling stock, uniformity of equipment and any other matters.

2. If any such regulations are desirable, what matters should be dealt with, and what regulations should be made?

3. How far it is desirable, if at all, that railways or sections of railways already electrified should be altered so that they may form parts of a unified system?

Is the Non-Electric Street Railway Car a Serious Possibility?

The Author Believes That There Is a Field for a Self-Propelled Safety Car, but Considers the Steam Power Plant to Be Superior to the Oil or Gas Engine for the Purpose

BY FERDINANDO C. CUSANI
Milan, Italy

ADVANCE information in the automotive technical newspapers points out the fact that Henry Ford, all criticism notwithstanding, is seriously pursuing his quest for a lightweight, non-electric street car. Many urban transportation experts have been denouncing the Detroit motor-car maker's action as the rankest of follies, taking a certain number of things as granted which perhaps the builder was not even thinking of and laying too much emphasis on some rather optimistic assertions and predictions which will perhaps have to be considered later on.

It is undoubtedly true that the gasoline motor cannot compete for economy of operation, for regularity of torque and horsepower output and for maintenance with the electric motor, while at the same time some of its organs, like the carburetion and ignition apparatus, are very fragile and troublesome at best. But, in the writer's opinion, this fact is not sufficient to debar any non-electric motor from the street railway field or, rather, from some special phases of street railway operation where, if the problem be carefully tackled, such a motor may prove a real help to electric service.

If we consider carefully the question of urban, suburban and branch-line transportation we shall find that there are at least three instances in which a lightweight vehicle, easily operable and totally independent of any outside source of power, would prove a boon to many railway operators, as follows:

(1) During the factory rush hour in medium-sized communities where lines are congested only at the end of the working day, and where it is therefore necessary either to give very inadequate and poor service to factory operatives leaving or going to work or to keep a good part of the generating equipment idle during normal hours.

(2) In the small city which has been presented by too optimistic promoters with a street railway line or system which appears incapable of operation except at heavy loss and where, due to the small size of the generating plant, the fuel handling, power-house operation and general upkeep make the cost of the kilowatt-hour rise to impossible heights.

(3) On the long suburban lines on which traffic is scarce, and where either costly substations or much feeder copper have to be provided for very infrequent and light service, or on the steam railroad branch lines which, being mostly only non-paying propositions, give the few and sparse settlers something quite akin to no service at all.

Some Unsatisfactory Experiences with Self-Propelled Cars

Steam-engined motor cars have been extensively experimented with in all countries of Europe, from Great Britain down to Italy and Hungary, but they have generally failed to give satisfactory results, up to the point that most of their owners are dismantling them or consigning them to the scrap heap. Steam-electric rolling stock, which first appeared in the late '90s in France under the Heilmann patents, has been long forgotten, while gas-electric cars have been developed and built in the United States and European countries with a varying degree of success.

Straight gasoline or oil-motored cars made their appearance about a decade ago both in the United States and in England, the latter country shipping a large number to India as tramway cars and to South America as branch-line and inspection cars. As to these latter types, the writer's experience points them out, generally, as a very indigestible hash of motor-bus motors, automobile appliances and railway rolling stock. He still shudders at the recollection of a certain special type which had been meant for India but had been sent to his own country, and which, weighing about twelve tons and accommodating twenty seated passengers, was supposed to operate under all conditions by means of a 30-hp. London bus engine geared to one single axle. Suffice it to say that the hand brake, which had a fixed handle and an impossible brakegear, was supposed to be operated with the left hand; that the clutch was so designed that it required a 220-lb. motorman to jump with all his might on the pedal and to pull a lever with both hands in order to start the car or to change from low to high gear; that the reversing gear was so located at the middle of the car that, whenever there was any necessity of backing into a switch, etc., the motorman was required to indulge in the aforesaid declutching gymnastics, while the conductor had to kneel on the floor of the center compartment and pull with all his strength at a certain handle which would, and often would not, make the reverse gear mesh in.

No doubt these sad perversions of engineering have created an unfavorable feeling against self-powered cars, but the writer has in mind a totally different type of car which, following the general constructional characteristics of the Birney one-man safety car, should embody as motive power a rather advanced type of power plant which was developed in America a few years ago for the automotive field, that is, the boilerless steam motor.

In the most highly perfected form this power plant comprises an instantaneous high-pressure steam generator, where a forced blast of air and oil is ignited by a catalytic process; steam motor units which are to be geared to the axles, a condensing radiator and an electric generator, to take care of the fuel fan motor and of the lighting of the car. In most of the automobile races and tests the steam cars were barred out because the more regular torque and the better pick-up ability would place these in a privileged class as against the gasoline, speed-gear automobiles. In view of the fact that we look forward to finding a motor with a better torque than the internal combustion motor, a steam engine built as a unit along the lines of gasoline-motor constructional practice would seem rather creditably to fill the bill.

If our ideal steam "one-man" should be equipped with two Doble single-expansion, double-acting, two-cylinder motors of about 25 hp., directly geared with each axle, and located on the truck in the same general way as the ordinary electric motors, it should not be exceedingly difficult to locate the steam generator at the center of the truck, while the electric generator to charge the ignition and lighting battery could be geared to one of the axles or to the crankshaft of one of the motors. A light and compact steam-driven air compressor, which would certainly weigh less and be of much simpler construction than its electric prototype, could easily be located anywhere on the truck or car. The rather small water and fuel tanks could find a place on the trucks, outside the axles, while a condensing radiator, enclosed in a box with shutters controlled by a thermostat in such a way as to minimize the loss of heat in the condensing process under all climatic conditions, could be easily located on the roof, in place of the trolley supporting stool. The controls could be arranged in the same general way as the electric ones, the throttle handle taking the place of the controller handle and the reversing bar taking the place of the reverser of the controller. All safety devices, door-operating mechanism, etc., could be installed following the usual safety-car practice. Heating could be effected through small steam radiators connected in series with the condenser, the variation in condensing surface being taken care of by the thermostat arrangement.

Steam Car Would Have a Simple Control

It was claimed by the makers of the automobile in which this power plant was employed that the use of crude oils as fuel is much more economical and less dangerous than that of gasoline, while it is certain that the expense for lubrication in connection with steam is certainly negligible in comparison with that which must be met with in internal-combustion engines. And, although a well-built steam motor would appear to be almost foolproof, and certainly less delicate than the electric motor with its burnouts, flash-overs and the like, in case of damage a simple valve arrangement would allow the cutting off of the damaged motor just as is done with electrical equipment.

The control would simply consist of a throttle, located near the generator, and of the reversing gears embodied in each motor, which all would be easily operated by handles on each platform, through suitable rod connections. This would certainly be, from the standpoint of simplicity, a much better arrangement than the rather heavy and cumbersome electric controllers, with all their complicated sections, fingers, coils and cables which are an eternal puzzle to the

average "mote." As to the actual operation of the car, it would be identical with that of the electric cars, inasmuch as it would be necessary to move the reverser forward and then to notch up. Coasting would be as possible as with electric motors and there would be no "idling" necessary during stops, as with the "gas" engine. Moreover, in case of emergency, the reverser could be used as in common practice, a thing by no means possible with internal-combustion motors of the common type.

As for the safety devices, these could all be kept in their present form, barring the breaker-operating cylinder, in place of which an air-operated steam valve ought to be installed between the steam generator and the throttle in such a way that whenever the airbrake should be normally applied, or whenever the controlling handle should not be held down, the steam would be shut off from the motors. This would effectually prevent any brake application with the power on, and at the same time would make the operation of this steam car totally similar, up to the smallest details, to that of the standard safety car.

And now as to the usefulness of this type of car, we might say that while its first cost would not differ essentially from that of the same type of electric car, the rather low cost of the fuel used, the fact that, unlike the conditions with the gasoline motor, coasting would be a regular possibility and idling would be totally unnecessary, and the simplicity of operation would possibly make it not a competitor but rather a helper of the electric safety car.

Let us consider case (1) above: Here the power station maximum output would be kept rather near to the average load during quiet hours; substations and feeders would be distributed along in such a way as to take care of the normal load, thus keeping no power equipment idle; the rush hours would be handled by the regular electric cars, to which would be added a certain number of steam safety cars. It may be objected that in many cases excess power for rush-hour operation may be purchased from local power companies, and that, therefore, no generating equipment would have to be kept idle. But, in any case, both substations and feeders of ample capacity would have to be provided to take care of a few hours' overload.

Looking at case (2), we see that, in a small city where the traffic does not allow for rather frequent headways, the generating station is a rather costly affair. Unless in case of breakdown the service be omitted, it is necessary to have at least two generating units, each of which should be fairly able to carry the load of the whole system. Where this is done by hydro-electric power, and therefore it is only a question of providing converters, the power generation may be cheap enough; but when one considers the boilers, with their complement of condensers, water-circulating pumps, coal and ash-handling devices, and the consequently larger man-power involved, the ratio between the tons of fuel used and the miles run by the cars becomes abnormally low. Here the steam safety car would enable the company to dispose of its uneconomical plant and to run its infrequent service by independently propelled cars, while the power house may be put to better use for commercial purposes, where a more constant power load factor may perhaps be found.

Considering case (3), we find that around many American cities suburban lines have been built in the times when trolley line and land values were booming, while nowadays their operation seems almost prohibitive in sparsely settled country. Many electric railways have inaugurated a policy of retrenchment by cutting off and abandoning these unprofitable lines, where very often a substation has to be operated for a few cars only and where rather heavy cars can be operated only at a heavy loss. The steam safety car would allow the operators to move all their electrical equipment to some more profitable division, to cut down labor expense and track maintenance, while the right-of-way would be conserved for happier times and the good will of the inhabitants of the region would not be lost. In the same way steam railroad branch lines and "jerkwater" roads could be made more profitable through better and more frequent passenger service.

Of course it is not intended that a steam safety car as above outlined may be a panacea for all kinds of street railway ailments; far from it. But a careful study of the question might not be out of place now, when all railways are trying to find ways to cut down costs while at the same time they are endeavoring to furnish their patrons with better and more efficient service.

Swedish State Railway Electrification

REPORTS from abroad indicate that the Swedish State Railways are planning in a broad way for future electrification. The present situation is summarized by Georg Brochuer in a recent issue of the *Tramway and Railway World*, London.

Mr. Brochuer points out that the Kiruna-Riksgränsen section of the Lapland iron ore railway on the Norwegian frontier was the first serious venture. This involved the building of the large Porjus power station.* This section was open for full electric working March 1, 1915. A connecting line between the iron ore company's tunnel station and the iron ore railway station of the State Railways has since been constructed and has been in use since March 4, 1918. Parliament has also sanctioned the electrification of the eastern section from Kiruna to Svarton on the Bothnian Gulf, and the line from Kiruna to Natavara will be the first completed.

This Lapland railway electrification is 15 cycles, single phase, with 15,000 volts on the contact line. Minor difficulties have been eliminated and the system is working very smoothly.

The State Railways have been making estimates as to power requirements and facilities and estimate that in 1925 they will require somewhat over 412,000,000 kw.-hr., not including the Kiruna-Svarton section, the requirements of which are calculated not to exceed 90,000,000 kw.-hr. Other railways of the country will require more than 250,000,000 kw.-hr.

The main object of the electrification is to make the railways independent of importation of coal from abroad, and it is planned to carry out the program beginning with those sections which consume the largest quantities of coal, without electrifying isolated sections. The first on the list stands the railway between Gothenburg and Stockholm; next come the Iarna and Katrineholf-Mahno-Trelleborg lines, etc.

*See issue of ELECTRIC RAILWAY JOURNAL for Sept. 5, 1914, page 418.

Union Terminal for Los Angeles

If Carried Out as Recommended by Commission, Subway and Elevated Are Suggested for Electric Lines

THE recommendation of the California Railroad Commission for a Union Station at Los Angeles carries with it certain recommendations relating to the Pacific Electric Railway and Los Angeles Railway Corporation. The recommendations are contained in a 600-page report, submitted by the chief engineer of the commission and mentioned briefly on page 300 of the issue of this paper for Feb. 7.

The electric railway changes depend upon the location adopted for the union terminal. If this is at the Plaza, as recommended in the report, an electric subway is proposed from the present Pacific Electric station at Sixth and Main Streets, northerly on Main Street until it passes under the proposed Union Station. The route is then to continue as an elevated railway a short distance to Brooklyn Avenue, where the present tracks and grade would be met.

South from the present Pacific Electric station at Sixth and Main the present elevated line is to be extended to Alameda Street and then south to Fourteenth Street. Later a subway on Sixth Street at right angles to the one already mentioned, by which cars could be through-routed to the Main Street station and also the Hill Street station of the Pacific Electric is suggested as a possibility.

In commenting on the proposed electric railway changes, the report mentions the following general principles as being applicable to the development of a rapid transit system:

For rapid transit lines serving the commuter district, an elongated terminal is better than a stub-terminal, because passengers are not left at a single point but are distributed. Such a terminal would be especially valuable at Los Angeles because of the long and comparatively narrow business district. For hauls beyond the commuter's zone stub-terminals are preferable, but they should be adjacent to the distributing lines.

Through routes are better than loops for rapid transit lines because they require less time and less car mileage.

There should be at least four entrances or trunk lines to the city for the interurban system. The ones opposite should be connected so as to secure through routing.

There should be a transfer point where these lines cross.

The subway should be for interurban lines only. The subway stations are three or four blocks apart and at these points transfers can be issued to the local cars, which will continue to operate as at present.

From an operating standpoint a balanced traffic is desirable.

Coach yards will be required for the long haul lines.

There should be no grade crossings in subways, not even at junctions.

A universal transfer system is desirable if it tends to bring about (a) elimination of duplicate service, (b) better distribution of passengers, (c) uniform fares, (d) a better satisfied public.

Elevated lines are undesirable in commercial, hotel, retail and residence sections on account of the noise, unsightliness, extra climb, detours and the shutting off of light. These factors are of less importance in an industrial or wholesale district.

The justification for a subway is sometimes based upon the density of population along the route, but there are other factors which are of importance, namely, (a) greater safety, (b) greater speed, (c) greater regularity, (d) greater capacity.

Open cut construction is less objectionable than elevated through residential districts, is less expensive than subways, and simplifies the separation of grades.

In developing plans for a rapid transit system, the possibility of ultimate electrification of the steam lines should be kept in mind. Some of the advantages of such electrification are conservation of fuel oil, reduction of noise and smoke and fire risk, and superior tractive qualities.

The report says that the Pacific Electric Railway system operates 1,100 miles of track and serves a population of 1,000,000 in more than fifty incorporated cities and towns located in four different counties. In 1918 about 68,000,000 passengers were carried, divided about equally between interurban and local or 5-cent fare passengers. The passenger revenue was $7,500,000 and the freight revenue was $2,350,000. In 1917 the road carried 65,000,000 passengers, while in the same year the steam roads of the entire State of California carried only 39,000,000 passengers.

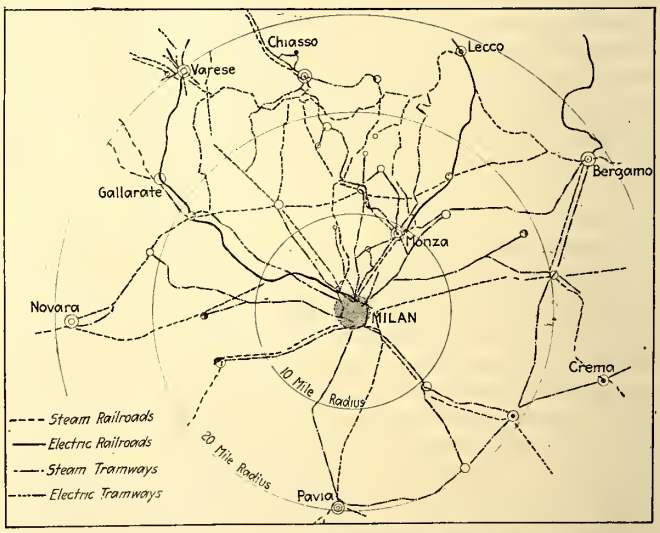
The Los Angeles Railway is strictly a passenger road and operates 390 miles of track and 880 passenger cars. The revenue for 1918 was $6,577,638, and during that year 130,538,704 passengers were carried. Few changes are recommended in the Los Angeles Railway, principally the rerouting of certain lines because of the change in the steam railroad terminal.

In addition, the report recommends a high speed electric line between Los Angeles and Pasadena. At present through service is supplied by two lines of the Pacific Electric Railway and by local service on one of the steam railroads. The proposed new line would follow somewhat the route of the Santa Fé Railroad along the course of the Arroyo Seco.

Milan as Interurban Center

MILAN, Italy, is the center of what is probably the largest interurban electric network in Italy. Certain of these interurban lines were among the first in Italy to be equipped with electric power. The lines in Milan and several of the interurban lines have long been owned by the Italian Edison Company.

Recent reports from Milan refer to the organization



THIS MAP DEMONSTRATES THE IMPORTANCE OF MILAN AS A TRANSPORTATION FOCUS

of the Lombard Electric Traction Company with a capital of 6,000,000 lire as a subsidiary of the Edison Company, to take over all of the steam and electric railways (outside of the Italian State Railways) radiating from that city. This would mean a total of some 850 miles of track.

The accompanying map gives a good idea of the situation, showing steam and electric railroads and steam and electric tramways.

Transport 11,000,000,000 Passengers*

Trolley Operation as It Affects Production Discussed Before Nation's Business Men—Plea for the Co-ordination of all Means of Transportation

BY JOHN H. PARDEE
President American Electric Railway Association

I AM before you today as a representative of an industry which has a stake in the prosperity, progress and productivity of the United States, represented by an investment of between six billion and seven billion dollars. The stake of the people of the United States in this industry is not so easily computable in dollars and cents. It is, however, so great that the interruption of the local transportation system of the country would result in the paralysis of business to an extent best understood by those who have experienced the results of an even partial interruption of service in our crowded communities. Thus, a half hour's tie-up of the rapid transit lines of New York City during the morning rush hours means a loss to the employers of the metropolis of at least $50,000. Two hundred thousand people lose thirty minutes of the working day and the lowest prevailing wage for common labor is 50 cents an hour.

More than 26,000 miles of urban electric railway track serve practically the entire city population of the United States, while 18,000 miles of interurban trackage perform a similar service for the people in our rural communities. During 1917 these lines carried 11,304,000,000 passengers, which was an average of 108 5-10 rides for each man, woman and child embraced within the population of the country. When these figures are compared with the statistics for steam railroads, showing a total of passengers carried amounting to 1,102,000,000, an average of 10½ rides per capita, the very close and intimate relation between electric railway operation and the habits and comfort, the convenience and the welfare of our people, as all of these affect productivity, is clearly demonstrated.

Local transportation is the circulatory system of the municipal body corporate, and when circulation ceases or becomes stagnant the body itself either perishes or ceases its development, and so the large modern city is impossible without adequate local transportation. In Toledo, a city of 200,000 population, no street cars moved for a period of twenty-seven days recently, and the loss to the business interests of the city, which loss is entirely aside from that sustained by the individual car rider, was estimated by one of Toledo's business men to be at the rate of $50,000.

Production, in the last analysis, depends upon the efforts of the individual. It is labor that converts raw material into usable commodities and it is labor which produces the foodstuffs which alone sustain human life. To attract labor to industry and to secure from labor its greatest efficiency it is necessary that conditions surrounding the employment of labor should be maintained at such a standard of convenience and comfort to the worker as will meet his reasonable requirements. It was this undoubted truth which led those in charge of production for the United States during the war to bend their efforts in the task of increasing production toward improving the local transportation and housing conditions in connection with the industries whose greatest productivity was necessary to the Government's war program. The two largest users of commodities and foodstuffs during the war were the navy and the army departments, and each promptly organized extensive agencies whose sole business was to accelerate production by the provision of such adequate local transportation and housing for workers.

BRINGS WORKER AND WORK TOGETHER

I have recently read an article by Major Gardner F. Wells, who, under Otto M. Eidlitz, was in charge of transportation matters for the United States Housing Corporation. When the armistice was signed this bureau had already furnished more than six millions of dollars to be used in the improvement of electric railway service in connection with war production plants and had commitments involving the expenditure of some $8,700,000 in addition, had the war continued. Some of Major Wells' observations resulting from his experience at the head of this bureau are pertinent to the question which we are considering. He states that the average per capita expense to the housing corporation of providing dormitories for workers was $550, while to provide houses capable of housing two workers the cost ran from $3,500 to $5,500. With this cost he contrasts the expense of providing local transportation for some 8,000 men so as to make available houses in sections of the community not immediately adjacent to the plant, which was but $35 per capita per year.*

The Bureau of Passenger Transportation and Housing of the Emergency Fleet Corporation performed the same service for shipyards and plants connected therewith. Both of these governmental agencies found it was impossible to control the residential habits of the workers in the various plants under their supervision and that men preferred to select their own places of residence, not in relation to their place of work, but for social and other reasons unconnected therewith.

I have emphasized these phases of the transportation problem because one of the main functions of urban transportation is to bring the factory and the worker together; to permit the worker to enjoy living conditions which are impossible in the usual factory districts, and to decrease living costs as the conditions of existence are improved. This function pertains also to the interurban electric railways serving rural communities. It is not so much the farmer owning and working his own farm that this country lacks today as it is the farmhand working for wages, and this is true because rural population drifts toward the populous centers on account of the more attractive living conditions that are

*Abstract of address delivered at "Increased Production" meeting of United States Chamber of Commerce, Atlantic City, N. J., April 28, 1920.

*See issue of ELECTRIC RAILWAY JOURNAL, Jan. 4, 1919, page 7.

there available. There has been no more potent agency in changing and equalizing these conditions than interurban electric railways. Indeed, the character of a rural district, its population, the prosperity of its people, their degree of contentment, can be judged to a very large extent by the degree to which interurban railways have made them accessible to the larger communities and have made the larger communities accessible to them.

We are apt to think of transportation in its relation to production exclusively from the standpoint of the carriage of goods and commodities and to lose sight of the marked effect upon production of passenger facilities. Yet the latter function of a transportation system is no less important than the former and this is true not only as to city systems but for suburban and interurban systems as well.

Need of All Forms of Transportation

We all believe that increased production is the only solution of the problem of high costs. We all know the important part that transportation plays in production. We all know and realize that the transportation facilities of the United States are today very much less than those which are needed for the production required. In this situation it is simply the part of common sense to avail ourselves of every facility which can be utilized to improve, extend and expand such facilities and to bring them into co-ordination with each other so that each may perform the part which it is best fitted to perform. The 18,000 miles of interurban electric railway track which now serves the country is being utilized only to a part of its capacity. It is capable of performing a very much larger and a very much better work in the service of the public. Transportation on rails is of all methods of land transportation the cheapest. To incur large expenditures for new forms of transportation before making the greatest use of those already existing is waste. Of the total revenues of the steam roads of the country approximately 70 per cent are derived from the transportation of freight. Of the total revenues of electric railways less than 3 per cent is derived from freight. Yet three-sevenths of all electric railway trackage is of a character that lends itself to transportation of goods between communities, while practically all of the rest can be put to efficient use in connection with the intramural distribution of commodities.

Building Up a Transportation System

If, as I believe, there is need in the interest of production for the fullest development of all methods of transportation, and work enough for all to do, then the problem we face is that of assigning to each its proper place in our transportation scheme—of co-ordinating all the facilities which are available and preventing waste in money and in effort through unreasonable and destructive competition.

We know that there is a part of the work of transportation which the steam road can perform more economically and more efficiently than can either the electric railway or the motor vehicle. We know that in its own sphere the electric railway is the most efficient and the most economical, and that for certain service the motor vehicle has no rival. It is, therefore, our business, as men whose primary interest is the increasing of production, to encourage each of these transportation methods to the utmost, so long as it operates within the field to which it is best adapted, and to discourage any attempt it may make to pre-empt, to the detriment of its transportation sister, a field to which it is not adapted and in which its efforts will do no more than cause economic waste, without lasting improvement in service.

As to Transportation Costs

We should not deceive ourselves as to transportation costs. In the broader view of all economic problems, which an organization such as the Chamber of Commerce of the United States is in justice to its entire membership bound to take, the cost of transportation must be reckoned not alone upon those charges which any particular agency of transportation is compelled directly to bear, but upon all costs, however paid, incurred in the provision of the service. Thus, the $633,000,000 which, according to the estimates of the United States Department of Agriculture, is available for the construction of good roads during the year 1920 constitutes a capital charge against transportation by motor trucks and motor buses to the degree and extent with which these vehicles make use of such roads, and the cost of road maintenance is an operating charge against motor vehicle operation, just as surely as the cost of construction and maintaining the tracks of either steam railroads or electric railways is a charge against the cost of transportation by such carriers, whether it be reflected in transportation rates or in tax budgets. No accurate measure of the cost of transportation is otherwise possible, and without accurate information as to cost it is business folly to attempt any plan of development and impossible to assign to the various forms of transportation their particular part in the general scheme.

The transportation problem of today in its practical aspects is largely a terminal problem. No large city of the country has at the present time sufficient terminal facilities. Their provision involves such enormous capital expenditures that any means by which terminal congestion can be relieved and terminal requirements reduced must be welcomed not only by the steam roads but by industry. The interurban railway in connection with city systems offers such relief to the extent that the interurbans can relieve the steam roads of traffic within the sphere of their operations. The city which is adequately served by street railway tracks is in an excellent position to solve its distribution problem, in so far as it concerns traffic, both passenger and freight, originating or destined for territory served by its interurbans. The expense involved is the expense of establishing small terminals in such locations as will best serve the population, and is inconsiderable as compared with the enormous expenditures requisite for any great expansion of steam road terminals.

Short-Haul Business at a Loss

It is an admitted fact that, principally because of large terminal charges, most of the short-haul passenger traffic on steam roads in and out of the larger cities is not only unprofitable but is actually carried at a loss. Close analysis will undoubtedly disclose the same condition of affairs as to freight traffic. The loss so sustained is absorbed in charges upon long-haul traffic and is added to the burden borne by the consumer. This loss can to an extent be eliminated by the utilization of trackage and facilities already in existence, while at the same time a quicker and more convenient means of transportation is provided.

I am unfolding to you no Utopian dream. The plan that I am offering is to a limited extent already in operation in several cities, where the roads are being used for the carriage and distribution of lighter freight and express received from connecting interurbans. In the Borough of Brooklyn the extensive Brooklyn Rapid Transit system not only distributes to manufacturing plants cars received from steam railroads, but carries in its own cars commodities between various parts of the borough. An examination of franchises and agreements recently proposed or made effective indicates that this intensified use of street railway facilities is in the minds of those who are now closely studying the electric railway problem. In Chicago, Philadelphia, Montreal, Cincinnati, Denver, Dallas and Youngstown provisions covering the transportation of freight were included in the new grants, while in Boston the right to transport freight had already been given.

Feeding Our Communities

Most essential of all production is the production of food, while its distribution after production is an equally important factor in the cost of living. The electric railway is a ready-made, an almost already equipped, agency to facilitate distribution and to lower its cost. In co-operation with the motor truck it can do much to solve this immensely important problem. Where there has been this co-operation, and there are many instances, notably those in Illinois, the results have been excellent. Where there is competition, the results have been disastrous to both, and in spite of temporary reduction of transportation charges or improvement in facilities it is the public that has in the end suffered. The community which does not have what they call in the South a "back country," that is, a rural district, producing for it much of the foodstuffs which support its inhabitants, pays extravagant prices for what it eats. The development of such a supporting community is as essential to the progress and welfare of a city as is its own development, and there is no one means of equal potency in this task of development to the interurban.

I am not here to urge upon you the claims of the electric railways as a savior of either the transportation or the production situation. What I believe, and what I know that you believe, is that both those electric roads which serve the cities and those which serve the country have a part to perform in this work of increased production to which this meeting of the chamber is devoted; that their efficient operation is essential to any program which the chamber may decide upon, and that like every other part of the machinery of production they must be put into such a condition of efficiency as well enable them to perform their task.

For your purpose, for the purpose of the people of the country, they cannot be considered as merely private enterprises whose sole object is gain; they must be regarded as public necessities, performing a public service, and, under this concept of their character and functions, be put into such a position, both financially and in the public mind, as will permit them to do the work completely and well.

Service Is Controlling Factor

In the marvelous development which in a period of barely three decades has transformed the isolated units of horse or mule drawn cars to the extensive local transportation systems on the surface, above the surface and below the surface the relations of these carriers and the public they serve have become involved, tangled and complicated, so that both the public, and to an extent the operators, have lost sight of the real purpose by reason of which the industry exists.

This is service, and all other considerations are subordinate to it and important only as they affect service. Today these transportation companies are failing in their business of providing service, are failing to utilize to the full in the public interests the possibilities of their facility, because they are so restricted and so hampered by public misconception and public prejudice that they have neither the financial resources nor the public co-operation necessary for their task.

What Electric Railways Want

What they ask in the public interest in order that they may properly serve the public, and in their own interest in order that their money honestly invested be not confiscated, is that the laws, ordinances or agreements which now control them be so readjusted as to make the price at which the product is sold dependent upon the cost of production, and not upon an arbitrary fixed allowance, bound over any considerable period of time to be too large or too great.

Hope for this readjustment, hope for a new era, hope for co-operation, lies in the business men of the country, and until they realize that this highly essential utility, with all its possibilities for public good, can never properly perform its function until the shackles of destroyed credit and public enmity are removed the electric railways can neither assume their full and proper share in the work of increasing production or in providing the service to perform which they were created.

In normal times the capital requirements for extensions, betterments and improvements of the electric railways of the United States are more than $200,000,000 a year. Today, because of deferred maintenance and rehabilitation, a much larger sum is required, and in so far as the operations of electric railways affect production their usefulness is halted by their present inability to secure these funds. Until the flow of new money into electric railway enterprise is resumed they are powerless materially to increase their activities in furtherance of your production efforts.

The plain truth is that their credit no longer exists, that it has vanished because of their inability to earn a living wage, and that as a result a necessary public service is being slowly perhaps, but no less surely, destroyed. This is a fact pertinent to the problem which you are considering. Our ability to help the public depends upon the help which the public extends to us.

Terminal Facilities Called Archaic

A. H. SMITH, president of the New York Central Railroad, speaking before the Merchants' Association of New York recently, said that the American public is criminally wasteful in its neglect to allow the development of proper terminal and city distribution facilities. He said that New York City is spending at least $200,000 per day in extra terminal and distribution charges, made necessary by this lack of facilities. There has been no substantial progression in this line in twenty-five or thirty years. This is a fundamental transportation problem, basic to the city's well being, and matters cannot stand still much longer.

The public must allow and encourage transportation agencies to develop and take care of the situation.

Removing Snow in Boston

Boston Elevated Railway Finds That the Electric Shovel Cuts Snow-Handling Costs in Half

IN Boston during the past winter several devices were used for removing snow from the car tracks and the adjoining roadway. An opportunity was thus afforded for the preparation of comparative figures on the cost of removing snow by the various methods. In addition to the regular complement of snowplows and sweepers used to keep the lines clear during a storm, this company uses Ridlon horse-drawn snow removers and push scrapers for cleaning around transfer points and terminals and auto trucks, snow sleds, double-tip carts, electric steel dump cars and flat service cars with trailers for cleaning up and hauling snow. Road machines and snow levelers are also used for leveling snow at the side of the street.

In the territory served by the Boston Elevated Railway there are only a few sewers of capacity sufficient to permit their use for snow-dumping purposes. Even these few are not located within the limits of the territory from which the bulk of the snow has to be removed. Where it is possible to make use of sewers, this results in an average saving of 59 per cent as compared with hauling snow to dumps.

The company is obligated to remove entirely from the streets, level with the curb or leveled sufficiently to make roadways passable, all snow which has been plowed from the railway tracks. The amount that has to be removed depends upon the location, but in all cases the work must be accomplished to the satisfaction of the city superintendent of streets. The railway company does this on all streets in which car tracks are located and has no special agreement with the city whereby obligation areas are consolidated in various sections. No contracts are made with outside interests for the removal of snow, but trucks and carts are hired for this purpose.

Records kept during the work of the past winter indicate that the average cost per cubic yard for removing snow by various methods was as follows: Auto trucks 60 cents, snow sleds 80 cents, electric steel dump and service cars 62 cents, double-tip carts 93 cents. Cars with clamshell buckets were used to clear away drifts and to open up lines that had become blockaded, the snow being picked up and cast to one side. This method resulted in a cost of approximately 3 cents per cubic yard.

METHODS AND DEVICES USED TO REMOVE SNOW IN BOSTON

No. 1. Electric shovel biting out big chunks.
No. 2. Loading a flat car with electric shovel.
No. 3. This snow dump resembles a Sahara Desert.
No. 4. Electric shovel loading snow sleds.

Thew electric shovels and derrick cars equipped with clamshell buckets were used with considerable success in some instances for loading snow. This method produced a large saving as compared with hand loading, estimated to be at least one-half of the expense. The accompanying illustrations show these machines in operation. In some cases the snow was loaded onto flat cars, while in others it was dumped into sleds or carts. In addition to this method demonstrations were made of the feasibility of using tractors for hauling snow levelers and plows for breaking up ice. The caterpillar type proved to be most efficient and it is believed that there is a possibility of making use of tractors for this purpose when they have been sufficiently improved to meet the conditions.

In Boston snowplow routes are determined upon

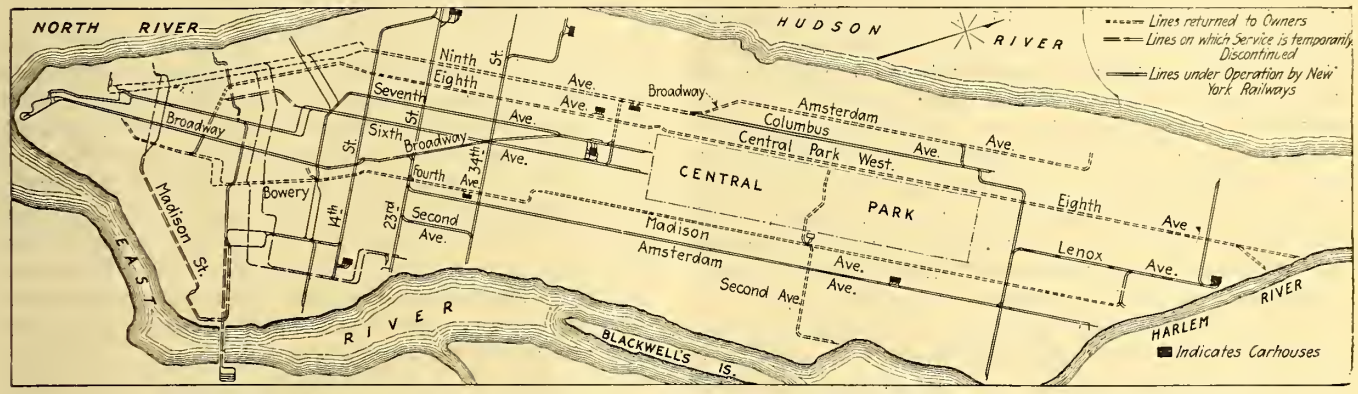
previous to the winter months. Permission is obtained to dump snow from bridges into tide water or sewers, snow dumps are secured and arrangements are made with contractors as to the number of teams, trucks and so forth that will be needed. Additional quarters are also established in some of the outlying districts and a few men are assigned to these for the purpose of looking after snow, hiring men, teams and other equipment.

When a storm begins the plows are sent over the previously arranged routes in sufficient frequency to keep the lines clear. Men are stationed on all special work, around stations and terminals, and keep at work continuously until the storm ceases. The hauling of snow then begins, the most important points being cleaned first. If the company's own forces are not capable of handling the situation extra men, teams, trucks and so forth, previously arranged for, are called upon and the work is kept up almost continuously until conditions again become normal.

The ELECTRIC RAILWAY JOURNAL is indebted to H. M. Steward, superintendent of maintenance of the Boston Elevated Railway, for the above information.

New York Railways Valuation Reported

Complete Stone & Webster Appraisal Shows Values for the Various Component Parts of New York Railways — Four Sets of Figures Offered on Different Bases



TRACK MAP OF NEW YORK RAILWAYS COMPANY AND OPERATED COMPANIES. THE MAP WAS BASED ON MAY, 1919, DATA AND WAS LATER CORRECTED TO INDICATE TERMINATED LEASES AND ABANDONED LINES

AN APPRAISAL of the seventeen companies comprising the New York Railways system is reported to Job E. Hedges, receiver, under date of Jan. 1, 1920, by Stone & Webster. The over-all figures of this appraisal were announced by Judge Mayer on Feb. 5, 1920, as previously indicated in these columns, to be approximately $144,000,000, based on June, 1919, prices, and approximately $89,000,000 based on pre-war prices. The complete appraisal report is now available and it contains some very interesting information as to the value of the various owned and leased companies which make up the New York Railways system as a whole.

The appraisal gives figures for the physical property, general construction costs not easily allocated among the various items of construction, organization prior to construction, working capital and property not used in railway operation. The appraisal does not contain any figures for the following items:

1. Going value of property.
2. Special value of land for railway purposes.
3. Profits of promotion.
4. Discounts on securities.
5. Special value of existing franchises.
6. Net investment in superseded property.

The appraisal covers land, trackage, miscellaneous buildings, such as power stations, substations, carhouses, etc., rolling stock, power and substation equipment, one double-track tunnel, the complete distributing and transmission systems and the shop equipment, tools, furniture and fixtures, etc.

The appraisal is arranged in subdivisions in accordance with the uniform system of accounts of street and electric railways as prescribed by the Public Service Commission for the First District, State of New York. Four price bases were used:

1. Cost to reproduce new, at pre-war prices.
2. Cost to reproduce new, at pre-war prices, less depreciation.
3. Cost to reproduce new, at 1919 prices.
4. Cost to reproduce new, at 1919 prices, less depreciation.

Pre-war prices are defined as the average of prices prevailing during the period 1910 to 1914 inclusive, and the 1919 prices are taken as of date June 30, 1919. Depreciation was figured on a straight-line basis and deductions were made for the portion of expected life which had elapsed up to June 30, 1919. Stone & Webster state that "this 'depreciated value' was computed at the specific request of the receiver, and not because we believe it represents a 'fair value' of the company's property, on which the allowable rate of return should be figured." Costs of construction organization and superintendence, field engineering, factory inspection, etc., which could be allocated and charged directly to specific items were applied by percentages as follows:

	Per Cent
Track work	
Tunnel	10
Electrical distribution system	10
Rolling stock	0
Power and substation equipment	10
Shop machinery and tools	0
Buildings (average)	10

NEW YORK RAILWAYS VALUATION SUMMARIZED BY SEVERAL ACCOUNTS

	At Pre-War Prices		At June, 1919, Prices	
	New	Less Depreciation	New	Less Depreciation
Land	$10,388,800	$10,388,800	$10,751,850	$10,751,850
Construction and equipment:				
Material and labor	51,657,360	36,283,616	92,843,200	64,696,870
Contractors' services	3,967,028	2,924,655	6,995,479	5,160,715
General construction costs	8,918,004	8,395,526	14,219,916	13,554,413
Total	64,542,392	47,603,797	114,058,595	83,411,998
Organization prior to construction	8,392,475	8,392,475	12,476,025	12,476,025
Working capital	2,882,305	2,845,591	3,264,874	3,204,698
Total property used in railway operation	86,205,972	69,230,663	140,551,344	109,844,571
Property not used in railway operation	2,792,998	2,285,525	3,503,833	2,682,086
Total property	88,998,970	71,516,188	144,055,177	122,526,657

The total amount of the above charges is 7.37 per cent of the reproduction cost of material and labor of the entire property. An allowance of 5 per cent was made for omissions and contingencies on all items, except paving and rolling stock. It was assumed that much of the work would have been done by a contractor, and the cost of contractor's services was taken at 10 per cent on all items of material and labor except such items as would be purchased by the railway company's own organization, such as land, right of way, rolling stock, shop equipment, tools, furniture and fixtures, miscellaneous equipment and materials and supplies. Contractor's charges for paving were included in the unit cost of paving. The net amount for contractor's service is about 7½ per cent of the cost of construction.

The general construction costs include administrative and legal organization, engineering cost, interest during construction and taxes during construction. Organization prior to construction includes the cost of preliminary investigation and the cost of perfecting a permanent organization.

The accompanying tables indicate better than can be done by words the result of the appraisal and the comparative figures arrived at on the four bases. It also serves to show the complex ownership of the property operated by the New York Railways Company.

With the exception of carhouses and the land on which they are located, which are owned by five or six of the component parts, all the property of the subsidiary owned and leased lines consists of track, paving, underground construction and electrical distribution. The New York Railways Company owns all the rolling stock, shops and equipment and power and substation equipment.

NEW YORK RAILWAYS VALUATION SUMMARIZED BY COMPANIES

	At Pre-War Prices		At June, 1919 Prices	
	New	Less Depreciation	New	Less Depreciation
Property used in railway operation:				
Owned lines:				
New York Railways	$37,594,497	$28,456,454	$60,782,394	$43,848,548
Lexington Ave. & Pavonia Ferry R.R.	3,280,850	2,652,820	5,782,681	4,664,563
South Ferry R.R.	659,889	546,877	1,128,848	931,880
Broadway Surface R.R.	2,011,213	1,714,867	3,546,184	3,022,035
Columbus & Ninth Ave. R.R.	1,269,160	1,021,872	2,205,110	1,770,619
Central Crosstown R.R.	202,682	166,110	349,922	284,028
Fort George & Eleventh Ave. R.R.	443,328	367,660	766,070	631,537
Total, owned lines	45,461,619	34,926,660	74,561,209	55,153,210
Leased lines:				
Twenty-third Street Railway Co.	1,535,267	1,291,460	2,574,873	2,134,159
Broadway & Seventh Ave. R.R. Co.	12,593,619	10,802,887	18,233,015	15,166,332
Bleecker St. & Fulton Ferry R.R. Co.	886,059	719,447	1,575,345	1,260,399
New York & Harlem R.R. R.R. Co.	6,792,019	5,761,722	11,705,740	9,878,675
Sixth Avenue R.R. Co.	4,351,239	3,659,684	7,398,700	6,177,800
Forty-second Street & Grand St. Ferry R.R. Co.	2,062,043	1,760,374	3,347,254	2,803,879
Christopher & Tenth St. R.R. Co.	1,158,764	941,625	2,065,020	1,655,127
Eighth Avenue R.R. Co.	6,598,186	5,480,360	10,786,716	8,885,975
Ninth Avenue R.R. Co.	4,398,003	3,586,341	7,657,643	6,206,838
Thirty-fourth St. Crosstown Ry. Co.	369,154	300,103	645,829	522,177
Total, leased lines	40,744,353	34,304,003	65,990,135	54,691,361
A—Total property used in railway operation	86,205,972	69,230,663	140,551,344	109,844,571
Property not used in railway operation:				
Owned lines	769,114	578,459	1,107,515	791,292
Leased lines	2,023,884	1,707,066	2,396,318	1,890,794
B—Total property not used in railway operation	2,792,998	2,285,525	3,503,833	2,682,086
C—Total property—(A+B)	88,998,970	71,516,188	144,055,177	112,526,657

Ole Hanson on M. O.

Former Mayor of Seattle Tells How the Seattle Municipal Railway Became the Football of Politics

THE annual report of the Seattle Municipal Railway, abstracted in the April 3 issue of this paper, showing a net loss of $517,173 for the year ended Dec. 31, 1919, makes a fitting "Exhibit A" for an address of former Mayor Ole Hanson recently delivered before the New England Association of Gas Engineers and reprinted by the Illinois Committee on Public Utility Information. In this address the former Mayor of Seattle pointed out some of the abuses which enter into the political administration of public utility properties.

He explained that, rather than have the private corporation compelled to do impossible things, he, as Mayor, arranged for the purchase of the property at actual cost. This plan was formally approved by the voters, and the Mayor made every effort to keep the cars from running at a loss. Efficiency methods were applied and various non-transportation charges were eliminated so as to preserve the 5-cent fare. "The right thing to have done," said Mr. Hanson, "the thing I wanted to do, was to have the public pay a sufficient increase, commensurate with the cost of hauling, especially as we had to reduce the principal and pay the interest." The former Mayor said that instead of taking the public utility out of politics it became at once the football of politics. Candidates for office promised extensions which could never prove profitable, and it soon became evident that if these programs were to be carried out the municipal street railway system would become a liability and not an asset. As a daily newspaper said in commenting on this situation, "Street cars cannot be run efficiently with politics as their motive power."

Seattle's experience with municipal operation, as related by the former official head of the city government, is likely to prove timely propaganda for those who dislike to see public funds wasted or political corruption practiced in such experiments. If the Detroit voters had assimilated some of the common-sense views of the former Mayor of Seattle it is not likely they would have been so generous in the approval of a proposition to spend $15,000,000 of the people's money to build a competitive system of railways for their city. It required a first-hand statement from the head of the Glasgow tramways system to knock into a cocked hat the municipal ownership aspirations of a former Mayor of Chicago in 1905.

Permanent Electrolysis Committee Suggested

In Ruling Handed Down April 13 Railroad Commission of Wisconsin Outlined Past and Present Conditions in Milwaukee and Recommended Plans for Future Procedure

ON PETITION of the Milwaukee Electric Railway & Light Company, the Railroad Commission of Wisconsin investigated the adequacy of the provision made for preventing interference with service furnished by other public utilities using subsurface metallic structures and formulated general recommendations looking toward further electrolysis mitigation.

Its ruling, handed down on April 13, recites that a hearing on the above matter was held on June 13, 1918, with representatives of the utilities whose property was affected in attendance. The testimony at the hearing consisted largely of a general statement by G. W. Van Derzee of the Milwaukee Electric Railway & Light Company on the causes of electrolysis and methods of mitigation, together with a statement of what had been done to relieve conditions as they developed. The hearing resulted in an understanding that the commission would conduct a survey of the Milwaukee electrolysis conditions, supervised by a representative of the Bureau of Standards, and that the order would be withheld until the work was completed.

The report then goes on to outline the work of a temporary committee which was organized, consisting of one member of the engineering staff of the commission and one from each of the utilities interested. E. R. Shepard of the United States Bureau of Standards was engaged to superintend the work, which was carried to completion about the middle of September, 1918. Elaborate tests were made, and a description of these, together with an abstract of the report made to the commission, was contained in an article by Mr. Shepard printed in the issue of the ELECTRIC RAILWAY JOURNAL for April 19, 1919, page 770.

In general the commission felt that the result of the survey indicated the electrolysis conditions in Milwaukee to be comparatively good, and the present system of mitigation is credited with being principally responsible for this condition. The commission is of the opinion, however, that further improvements can be made which may best be determined by continuing the survey. While it might be possible to lay down definite limits of track gradient, over-all potentials, limits of voltage from pipe to rail, details of rail bonding, etc., which would be proper under present conditions, it would be impracticable to lay down definite limits which would be proper as well for the present and also for the future with the changing conditions which are sure to come.

COMMISSION RECOMMENDS PERMANENT COMMITTEE

The commission expressed the belief that the matter could be much more effectively handled by a permanent committee, consisting of representatives of all of the interested utilities, who should preferably be resident engineers acting with the co-operation of the Railroad Commission. This committee would continue taking the necessary observations and making tests to check the conditions periodically, to prescribe such changes, etc., as are needed to maintain proper conditions and to submit a report of these observations to the commission upon a suitable standard form to be adopted by the committee. At least one general report should be sent to the commission in December of each year, as well as copies of the minutes of all meetings of the full committee.

The commission pointed out that co-operation of all whose interests are affected is necessary, as was emphasized in the statement of Judge Oscar M. Fritz in the case of the City of Milwaukee *vs.* Milwaukee Electric Railway & Light Company, as follows:*

"Those propositions, if accompanied by reasonable co-operation between the parties to the action, and between the defendants and other public service corporations under the supervision of the Railroad Commission, afford the opportunity for a sensible and immediate solution of this engineering problem."

The commission further recommended that the committee be known as the Milwaukee electrolysis committee and that it have officers consisting of chairman, secretary and treasurer, the committee to have supervision over electrolysis mitigation work and the carrying out of such improvements as may be found necessary. The expenses which the committee may incur in the discharge of its work are to be borne by all the utilities represented on the committee in such proportion as may be agreed upon.

It is further recommended that the Milwaukee Electric Railway & Light Company and all other electric railway companies and utilities within the city of Milwaukee or its suburbs which are in the business of transmitting electric street railway current, or whose substructures are subject to electrolysis from this current, fulfill such recommendations as may be made to them by the committee and otherwise co-operate fully with the committee. The committee should be organized at the earliest practicable date and should proceed at once upon its work. The main object of the work should be to prevent the leakage of the negative return street railway current from the rails so far as practicable. This may be accomplished by such additions as are necessary and practicable to the insulated negative return feeder system now in use, by securing of proper rail joint conductance and, if on further investigation the results warrant its adoption, by the use of a three-wire supply system.

The committee should also investigate the drainage of currents from substructures through connections which already exist, taking the necessary steps to secure proper measurement and supervision of the drainage, and should also make such further drainage taps, with suitable provision for maintenance and inspection, as seem necessary to determine to what extent this plan shall be adopted for the disposal of the residual current.

In order to prevent competitive drainage no connec-

*This abstract is from an interlocutory court order issued by Judge Fritz in branch No. 2 of the Milwaukee County Circuit Court on Feb. 11, 1920, with particular reference to damage to the Maple Street underground water main.

tions in addition to those at present in use should be made except upon notice to the committee in writing, and these connections should at all times be under the control of and subject to the recommendations of the committee. The temporary or permanent drains should be so installed and controlled as to prevent injury to existing substructures.

The commission is not disposed to prescribe standards of this kind pertaining to over-all potentials, track gradients, potential differences or joint resistance. It is, however, suggested that the following standard for track bonding be established for the present by the committee, namely, that the resistance of 10 per cent of the rail joints shall not exceed that of 10 ft. of rail, and that this standard be subject to such changes as seems warranted by the committee.

The commission further recommended that the committee should request the Milwaukee Electric Railway & Light Company and other electric railway companies to make regular tests of the joint resistance of their entire systems and to submit to the committee the result of these tests. The committee should then decide whether further bond maintenance should be ordered.

All matters concerning which the committee is unable to come to an agreement should be immediately referred to the commission for a decision. The committee should submit to the commission minutes of all regular meetings and a detailed yearly report of the work accomplished and the electrolysis conditions as they exist at that time. The commission ordered that jurisdiction is retained by it for such further order as may be necessary from time to time with respect to matters which cannot be settled to the satisfaction of the parties through the medium of the voluntary committee recommended above, and for such further orders as may become necessary in the event that such a committee cannot be organized or should not accomplish satisfactory results.

A. I. E. E. Super-Power Committee

PRESIDENT Calvert Townley of the American Institute of Electrical Engineers has appointed the following special institute committee on super-power system:

W. S. Murray, consulting engineer, New York, chairman.
Harold V. Bozell, associate editor ELECTRIC RAILWAY JOURNAL.
H. W. Buck, of Vielé, Blackwell & Buck, consulting engineers, New York.
George Gibbs, of Gibbs & Hill, consulting engineers, New York.
John W. Lieb, vice-president New York Edison Company, New York.
Malcolm MacLaren, professor of electrical engineering, Princeton University.
William McClellan, vice-president Cleveland Illuminating Company.
Charles S. Ruffner, vice-president the North American Company, New York.
David B. Rushmore, General Electric Company, Schenectady.
Charles F. Scott, professor of electrical engineering, Yale University.
Percy H. Thomas, consulting engineer, New York.

This action was taken as the result of a motion adopted at a technical session of the institute during the recent midwinter convention recommending to the board of directors of the institute that a committee be appointed to carry on the movement initiated by Mr. Murray. At a meeting of the board of directors of the institute held in Pittsburg, March 12, President Townley was authorized to appoint the committee.

C. E. R. A. Committees Appointed

"Brown Book" No. 10 Gives Officers and Complete Committee Appointments for 1920 and New Traffic Agreements, Forms, Etc.

THE "Brown Book," which is the official publication of the Central Electric Railway Association, has been issued. It lists the officers and executive committee, which were noted on page 528 of the March 13, 1920, issue of the ELECTRIC RAILWAY JOURNAL, and gives the company members, committee appointments, the president's address at the recent annual meeting, secretary-treasurer's report and various traffic bulletins, interchange agreements, etc. The personnel of the new committees of the Central and its allied associations and of the committees which have been changed from those of last year, as published on pages 736 and 737 of the issue of this paper for April 12, 1919, follow:

CENTRAL ELECTRIC RAILWAY ASSOCIATION

Hotel and Arrangement: W. H. Bloss, chairman, Ohio Brass Company, Mansfield, Ohio; H. A. Nicholl, Anderson, Ind.; L. G. Parker, Cleveland Frog & Crossing Company, Cleveland, Ohio; F. R. Coates, Toledo; W. D. Hamer, W. D. Hamer Company; H. E. Rasmussen, Indianapolis Electric Supply Company; F. N. Root, Root Spring Scraper Company, Kalamazoo, Mich.

Interurban Freight and Motor Truck Competition: A. Swartz, general chairman, Toledo, Ohio. Indiana: Bert Weedon, chairman, Indianapolis, Ind.; J. A. Greenland, Fort Wayne, Ind.; Paul T. Payne, Dearborn Chemical Company. Ohio: F. R. Coates, chairman, Toledo, Ohio; E. F. Schneider, Cleveland; S. D. Hutchins, Westinghouse Traction Brake Company, Columbus, Ohio. Michigan: W. S. Rodgers, chairman, Detroit, Mich.; F. W. Brown, Jackson, Mich.; F. N. Root, Root Spring Scraper Company, Kalamazoo, Mich.

Membership: Harry Reid, chairman, Louisville; F. R. Coates, Toledo; S. W. Greenland, Fort Wayne, Ind.; C. F. Smith, Findlay, Ohio; R. A. Crume, Dayton, Ohio; G. T. Seely, Youngstown, Ohio; W. H. Douglas, Willoughby, Ohio; George Whysall, Columbus, Ohio.

National Safety Council: James Harmon, chairman, New Albany, Ind.; H. A. Nicholl, Anderson, Ind.; E. C. Hathaway, Railway Audit & Inspection Company; E. C. Carpenter, Akron, Ohio; R. Feustel, Fort Wayne, Ind.

Program: C. L. Henry, chairman, Indianapolis; John Benham, International Register Company, Chicago; F. D. Carpenter, Lima, Ohio; S. D. Hutchins, Westinghouse Traction Brake Company, Columbus, Ohio; H. G. Gilpin, Springfield, Ohio; W. S. Rodger, Detroit, Mich.; W. K. Morley, Grand Rapids, Mich.

Publicity: Harry L. Brown, chairman, ELECTRIC RAILWAY JOURNAL, Chicago; H. J. Kenfield, *Electric Traction*, Chicago; C. J. Laney, Akron, Ohio.

Rules Governing Interchange of Equipment: H. A. Nicholl, chairman, Anderson, Ind.; Harry Bullen, Detroit, Mich.; A. Swartz, Toledo, Ohio; J. W. Glendenning, Jackson, Mich.; E. M. Walker, Terre Haute, Ind.

Standardization: H. H. Buckman, chairman, New Albany, Ind.; R. C. Taylor, Jackson, Mich.; F. J. Foote, Springfield, Ohio; Charles Sigler, Warsaw, Ind.; F. Heckler, Sandusky, Ohio; C. T. Dehore, General Electric Company; Terence Scullen, Cleveland, Ohio; Sylvester Potter, Detroit, Mich.; C. A. Brown, Toledo, Ohio; K. A. Simmon, Westinghouse Electric & Manufacturing Company; J. W. Osborn, Indianapolis, Ind.

Uniform Charges for Repairs to Interchanged Equipment: H. G. Gilpin, chairman, Springfield, Ohio; Irwin Fullerton, Detroit, Mich.; H. R. Biery, Anderson, Ind.

Supply Men: S. D. Hutchins, chairman, Columbus, Ohio; L. G. Parker, secretary; H. C. DeCamp, W. H. Bloss, L. E. Gould, James H. Drew, J. Alexander Navarre, E. C. Folsom, S. W. Crawford, E. F. Wickwire, F. N. Root and E. J. Smith.

Transportation: G. K. Jeffries, chairman, Indianapolis, Ind.; E. Smith, Fostoria, Ohio; H. G. Gilpin, Springfield, Ohio; H. P. Harrsen, Jackson, Mich.; J. F. Keys, Detroit, Mich.; J. C. Schade, Warsaw, Ind.; C. C. Collins, Cleveland, Ohio; W. K. Morley, Grand Rapids, Mich.; R. R. Smith, South Bend, Ind.

Track and Roadway: T. R. H. Daniels, chairman, Indianapolis, Ind.; T. H. Sundmaker, Springfield, Ohio; John Kerwin, Detroit, Mich.; L. A. Mitchell, Anderson, Ind.; A. V. Brown, Sandusky, Ohio; H. D. Sanderson, Jackson, Mich.; E. D. Eckroad, Akron, Ohio.

Electric Railway Express: H. A. Nicholl, chairman, Anderson, Ind.; W. S. Rodger, Detroit, Mich.; E. F. Schneider, Cleveland, Ohio; C. J. Munton, Kendalville, Ind.; H. P. Harrsen, Jackson, Mich.; G. K. Jeffries, Indianapolis, Ind.; S. W. Greenland, Fort Wayne, Ind.

The committee on readjustment has been discontinued.

CENTRAL ELECTRIC TRAFFIC ASSOCIATION

Joint Freight Tariffs: J. H. Pound, chairman, Benton Harbor, Mich.; Bert Weedon, Indianapolis, Ind.; C. B. Grandy, Toledo; C. C. Collins, Cleveland; J. O. Bradfield, Columbus, Ohio.

Joint Exception Tariff: C. O. Sullivan, chairman, Lima, Ohio; J. H. Crall, Indianapolis, Ind.; J. A. Greenland, Ft. Wayne, Ind.; N. Rumney, Detroit, Mich.; J. H. Pound, Benton Harbor, Mich.; W. S. Whitney, Springfield, Ohio; F. D. Norveil, Anderson, Ind.

Joint Weight and Inspection Bureau: J. H. Crall, chairman, Indianapolis, Ind.; F. D. Norveil, Anderson, Ind.; W. S. Whitney, Springfield, Ohio; O. H. Murlin, Dayton, Ohio; W. S. Rodger, Detroit, Mich.; C. P. Ryan, Kokomo, Ind.; W. J. Chisholm, Toledo, Ohio.

Official Interurban Map: J. H. Crall, chairman, Indianapolis, Ind.; O. H. Murlin, Dayton, Ohio; W. S. Whitney, Springfield, Ohio; J. H. Pound, Benton Harbor, Mich.; J. O. Motto, Warsaw, Ind.

Rules Governing Settlement of Freight Claims: M. E. Graston, chairman, Anderson, Ind.; J. S. Moore, South Bend, Ind.; I. Santon, Bluffton, Ind.; C. B. Kleinhans, Toledo, Ohio; C. O. Sullivan, Lima, Ohio; N. Rumney, Detroit, Mich.; W. J. Chisholm, Toledo, Ohio.

The committees on boosting and military traffic have been discontinued.

CENTRAL ELECTRIC RAILWAY ACCOUNTANTS' ASSOCIATION

Freight and Express: E. O. Reed, chairman, Lima, Ohio; L. W. Van Bibber, Springfield, Ohio; C. B. Baker, Findlay, Ohio.

Light and Power: H. T. Ledbetter, chairman, Toledo, Ohio; C. C. Cash, Toledo, Ohio; C. B. Baker, Findlay, Ohio; R. H. Ewan, Fostoria, Ohio; Irwin Fullerton, Detroit, Mich.

Membership: K. A. George, chairman, Kokomo, Ind.; V. R. Shick, Kendallville, Ind.; Homer Ruhl, Decatur, Ind.

Program and Arrangement: A. C. Van Driesen, chairman, Toledo, Ohio; E. O. Reed, Lima, Ohio; C. C. Cash, Toledo, Ohio.

Readjustment: J. P. Longon, chairman, Hamilton, Ohio; L. T. Hixson, Indianapolis, Ind.; B. E. Bramble, Peoria, Ill.

Safety Cars in Birmingham

Another Large City Successfully Inaugurates Frequent Service as a Business Getter

ON Jan. 25, 1920, the Birmingham Railway, Light & Power Company placed in operation sixteen of twenty-five new safety cars recently purchased. These cars are equipped with Westinghouse 506-A-2 motors and K-63-B control, the air brakes being also of Westinghouse make. Unfortunately the appearance of the new cars was about coincident with that of the influenza epidemic, so that it is difficult to evaluate the results of the first month's operation of the new cars. However, toward the end of February, J. S. Pevear, general manager of the company, stated that for a three-week period following the installation the receipts of the line on which the cars were installed showed a 25 per cent increase over the three weeks previous thereto. A very considerable part of this increase came from other lines, passengers being attracted by the great improvement and frequency of service. Another part came from a bus line which had been operating in competition with the railway.

Mr. Pevear states that so far as the public is concerned there has been nothing but favorable comment, and there has been no trouble whatever in handling the negro patrons. He attributes the success with the public in general, and with respect to the race question, to the fact that the experience of other companies using safety cars has been applied in Birmingham, and the company has gone a little further than others in that 97 car-hours per day on the line in question have been replaced with 214 car-hours with the safety cars.

Contrary to the general practice in introducing safety cars, a local advertising campaign with newspaper advertisements, placards, etc., was not conducted. The new plan was announced to the public simply by the distribution of a small printed explanation to the patrons of the one line on which the cars were to be operated. The notice was distributed the day before the line was converted.

The local public spirit in accommodating itself to the new car is indicated by the fact that there was no confusion, even though the people at Birmingham had not been accustomed to pay-as-you-enter cars, and in addition the segregation of the races in the new cars was reversed from that in the older cars. Formerly the negroes entered at the front door and were seated from the front door to the rear, while the white patrons entered by the rear door and were seated in the rear of the car, the division point being indicated by signs on the back of the seats.

The safety cars are used on the Highland Avenue-Lakeview line, a double-track loop line which serves one of the best residential sections in the city. Formerly, four two-man double-truck cars were operated in each direction on a ten-minute headway. Now, eight safety cars are operated in each direction on a five-minute headway. The schedules are staggered so that the outer section of the loop is given a two and a half minute headway, counting both directions.

In the downtown section the safety cars operate over ten blocks of the most congested business district and over the same tracks as a number of lines using double-truck cars. No confusion has been experienced due to the mixing of the two types of cars.

The safety cars are equipped with signs on the two ends, the signboards being lettered on one side "Please have exact fare ready" and on the other "Car full." No specified limit of passengers has as yet been set before the "Car full" sign is displayed, this being left to the judgment of the operator. No complaints have as yet been made due to the use of this sign, and the railway officials anticipate none, due to the shortness of the headway on which the cars are operated.

A 6-cent fare is charged in Birmingham and no tickets are used. A noticeable feature has been the encouraging extent to which the passengers are co-operating with the managment by having exact fare ready.

The newspaper comment upon the introduction of safety-car operation in Birmingham was highly appreciative, the *Ledger*, *News* and *Age-Herald* publishing enthusiastic articles. Among other things the *News* said editorially:

> The great advantage of these new one-man cars to the public is that they increase the revenues of the company and reduce its expenses. That result is too apparent for detailed elaboration. . . . The one-man car is . . . one of the chief ways in which the public can co-operate with the company. By all means . . . the whole people, white and colored, should welcome this admirable effort of Receiver Bradley and should see to it that it is appreciated and made successful.

Skip Stop for Trains Only, Mixed in with Single-Car Units

Plan Adopted by New Orleans Railway & Light Company to Permit Use of Trailers as Means of Increasing the Service

A SKIP-STOP, regular-stop scheme of operation on the Canal Street line of the New Orleans Railway & Light Company is being followed, primarily as a means of utilizing trailers to increase the number of seats per hour. Incidentally, the plan makes it possible for those riders who object to the skip-stop plan to select a car which will stop at their particular street, and it may further serve gradually to educate the public to the advantages of the skip stop, it having been necessary to abandon the skip-stop practices adopted in war time.

The real reason for the present skip-stop plan was to make it possible to haul trailers behind part of the cars on the line and at the same time maintain the schedule of the single-car units. The company was faced with the imperative need for additional equipment, and as trailer cars but no additional motor cars were available, the use of the trailers was made possible by the adoption of this combination scheme of operation.

Between the hours of 7 and 9:30 in the morning and 4 and 7 in the afternoon certain of the motor cars operated on the all-day schedule haul trailers having a seating capacity of sixty-four passengers. Eight of these trailers are now operated on the Canal Street line. These two-car trains are marked on the front dash with a "two-car train" sign and of course the project was thoroughly advertised before it was inaugurated. All single-car units on the line make all stops. The two-car trains, when signaled, make stops which are spaced two or three blocks apart, depending on the length of blocks. The stops for the trains are marked by a yellow band on the trolley pole or a special post. Passengers about to board a car know that at the points marked with this yellow band any car will stop for them, while at intervening points only the single-car units will stop.

This plan has worked out satisfactorily in supplying the additional seating capacity required, and it saves some energy and one man. In addition, it is inducing passengers to walk a short distance after getting off the car on the way home, for the sake of the more comfortable ride which results from the fewer stops, and in boarding cars in the outlying sections, to walk a short distance for the sake of being at a point at which all cars stop. It is thought that the people may gradually acquire this habit, looking toward an ultimate complete skip-stop installation.

The motor cars which are used to haul these large trailers are each equipped with two G. E. 57 motors. There was some misgiving about the ability of these motors to carry the extra load, but they have worked out very satisfactorily. The trailers were equipped with air brakes and supplied with air from the motor car by means of hose couplings.

War Skip-Stop Measure Abandoned

As in many other cities, the skip-stop plan installed by the Fuel Administration as a coal-conservation plan had to be abandoned in New Orleans after the war, because of public demand. The war skip-stop plan was inaugurated in New Orleans on Sept. 15, 1918, whereby every other street was made a stop for all cars. The public kicked about having to walk the extra blocks in rainy weather, so the plan was later altered so that all stops were made in inclement weather. But this did not seem to allay the criticism and it became necessary on Dec. 17, 1918, to discontinue the skip-stop plan altogether. Then the plan outlined above was installed in the late summer of 1919, and, thus far, it seems to be meeting with the approval of the riders.

Fire Insurance Rate Cut

IN 1910 the Philadelphia Rapid Transit Company carried fire insurance of $18,500,000, at a one-year rate of 50 cents per $100. By effective inspection on the part of the company the rate was cut to 25 cents in 1914, and commencing Jan. 1, 1919, the company set up its own insurance fund and assumed about $8,000,000, or approximately one-third, of its entire fire risk, then covered by expiring fire insurance policies.

Before a year had expired, namely, in December, 1919, due to the superior "housekeeping" of the company's inspection bureau, the good work of its supervisor of insurance and its fire insurance brokers, an offer was received from approved fire insurance companies to assume the insurance of its entire fire risk, which had increased to an insurable value of $27,000,000, at a rate of 52 cents per $100 for three years. This offer was accepted. This rate is equivalent to 17½ cents per $100 per annum and represents a saving of over $88,000 per annum when compared with the rate in effect in 1910.

The first insurance fund which was set up on Jan. 1, 1919, has been abolished.

Meeting of Commerce Chamber

Addresses and Resolutions of Electric Railway Interest at Atlantic City Meeting — Referendum Ordered on Resolution Forbidding Strikes on Utilities

WHILE the address of President John H. Pardee on April 28 was the outstanding feature of electric railway concern at the annual meeting of the United States Chamber of Commerce at Atlantic City this week, it was not the only event of interest to utility men at that meeting. Several resolutions affecting electric railways directly or indirectly were passed and the board of directors was increased to thirty-four, to represent not only geographical divisions but in certain cases also national activities, such as transportation, finance, civic development, foreign commerce, etc. Thus in the future there will be two members on the board who will directly represent transportation and communication. The two representatives of transportation elected on April 29 were Howard Elliott and L. B. Stillwell.

An abstract of the address of Mr. Pardee on electric railways is published on page 897 of this issue.

On Wednesday evening there was an address by James H. McGraw on "The Function of the Business Press in Relation to Increased Production." On Thursday, Joseph H. Defrees was elected president for the ensuing year.

The Resolutions Passed

The principal resolutions passed of electric railway interest follow:

Against Public Ownership of Utilities

This annual meeting considers it especially appropriate that, in view of the subject to which it has given attention, it should set out and reaffirm the declaration of the seventh annual meeting respecting the principles which should govern the relations of government to business, as follows:

The very essence of civilization is that there be placed upon the individual only that degree of restraint which shall prevent his encroachment upon the rights of others, thus releasing to the utmost individual initiative in every proper direction.

Our form of government most effectively expresses and maintains this principle. Within our basic law exists ample provision for such changes as may from time to time be necessary to safeguard our people. It is therefore essential that our government should scrupulously refrain from entering any of the fields of transportation, communication, industry and commerce or any phase of business when it can be successfully undertaken and conducted by private enterprise. Any tendency of government to enter such fields should be carefully weighed in the light of its possible effect upon the very genius of our institutions.

Good Traction Service Is Indispensable

Every phase of the life of a community is affected by the success or failure of its traction lines in providing a service which is indispensable to the public. Careful regulation, joined with concern for the business stability and success of traction lines, should prevail in each city of the country. Adequacy of service at the lowest rate compatible with continued efficiency is the paramount consideration from the public point of view, and neither factor can be sacrificed to the other without public detriment. Each community is urged to consider the situation of its traction service from these two points of view, in order that it may ascertain and apply proper remedies if the increased costs common to all business have been unaccompanied by added revenue sufficient to maintain the service requisite for the industrial and commercial efficiency of the community.

Preparation for Interruption of Necessary Services

Continuous supply of the necessaries of life and of industry is essential to the public welfare. Preparation to meet emergencies arising from unexpected stoppage to the supply of such necessaries should be undertaken by each community. Information should be collected for immediate and effective use when occasion arises respecting available supplies of such necessaries as food and fuel, the trucks and other means of transportation that can be called into use and the men who are willing to respond and serve from patriotic motives.

Anti-Strike Resolution Referred

The resolutions committee announced that there were a number of resolutions upon which, for a variety of reasons, the committee could not recommend declarations by the annual meeting. Sometimes the organizations from which resolutions have come have requested that they should be referred to the board of directors for further consideration before action is taken. In other cases declarations which are recommended to the annual meeting cover portions of resolutions, and the remaining parts are of such importance as to warrant further consideration. In several cases the board of directors has already arranged for early referenda upon committee reports involving similar propositions. With this explanation the committee recommends reference to the board of directors of the resolution on anti-strike legislation, originally submitted by the Philadelphia Bourse and reading as follows:

Whereas, it is most desirable that all strikes or lockouts in connection with railroads or other public service corporations should be prevented; and

Whereas, while we recognize the opposition of the leaders of organized labor to such legislation, we contend that the services to be rendered by these corporations through their officers and employees are of such vital necessity that they must be considered in a different light from those performed by agencies of other classes, where if necessary they can be dispensed with temporarily or be performed by other corporations or individuals to a greater or less extent, and that therefore these corporations, their owners, the stockholders, their officers and those who voluntarily become employees must be subject to different rules and regulations than would be considered desirable for other industries or employments which are not vitally necessary for the welfare of practically the entire nation; and

Whereas corporations engaged in the transportation of passengers, mail and freight, or in transmission of messages, as well as those supplying water, light, heat or other similar necessities of life, are regarded by custom or law as performing a public service, and as a rule, which is only just, their franchises being limited monopolies are granted upon the condition that service is continuously performed, and they are subject to control and regulation in the interest of the public service by the several states in which they operate and by the United States; and

Whereas these public service corporations can only render service to the public through the medium of numerous operating employees, who voluntarily enter the employ of such corporations and thereby assume duties and obligations to the public which become paramount to any personal claims; and

Whereas these employees by virtue of their positions are public servants and as such owe a duty to the public which cannot be lightly disregarded any more than the corporations may disregard theirs, nor should they, after voluntarily assuming the duties of their positions, be any more free as a body to refuse their services to the public than the corporation should be to arbitrarily discontinue operating its lines; and

Whereas it should not be possible for either the corporation or the employees to stop the operation of these public services, upon which commerce and industry and the welfare of the entire nation are dependent; now, therefore, be it

Resolved, That we urge the enactment of federal and state legislation which will declare operating employees of public service corporations to be public servants and as such not free to leave the service simultaneously or approximately so, or at any time except upon due and sufficient notice, and which will also forbid the corporations discontinuing operation by "lockouts" or similar methods; and be it further

Resolved, That such legislation should provide for the settlement of all questions concerning wages and working conditions by the representatives of the separate corpora-

tions and of the employees of the same, if possible, but provision should also be made for arbitration (where other methods have failed) before a board upon which the employee, the employer and the public shall be represented. The arbitration should be compulsory and final and provision made for the enforcement of the award or the punishment of either party refusing to accept it.

Association News

Meeting of Valuation Committee

THE American Association committee on valuation met in New York on Monday, April 26. The committee agreed that the present report on valuation should be reviewed and probably increased to take care of rate of return.

The committee expressed appreciation and suggested indicating formal recognition of the work of the Illinois State Electric Association, the Illinois Electric Railways Association and the Illinois Gas Association in their work along these lines and suggested co-operation with them in further consideration of the subject of valuation. There was discussion of requesting the National Electric Light Association and the American Gas Institute to get up reports on valuation and rate of return similar to the American Association report. It was thought there should be separate reports by the three associations rather than a joint report.

The principle of joint inventories and joint prices on inventories was approved. It was further suggested that one or two appraisal experts might be added to the commmittee personnel with advantage.

Heavy Traction Committee Active

AN ALL-DAY meeting of the Engineering Association committee on heavy traction was held at association headquarters on April 28. Those present were: Sidney Withington, New Haven Railroad, chairman; J. C. Davidson, Norfolk & Western Railway; G. M. Eaton, Westinghouse Electric & Manufacturing Company; C. H. Quereau, New York Central Railroad; L. S. Wells, Long Island Railroad. J. H. Davis, Baltimore & Ohio Railroad, was represented by Mr. Bellew. Members of the committee unable to attend were: A. F. Batchelder, General Electric Company; R. Beeuwkes, Chicago, Milwaukee & St. Paul Railway; J. V. D. Duer, Pennsylvania Railroad; R. C. Taylor, Michigan Railway. The list is given in full as it has not previously been published.

The meeting was taken up with the preparation of a questionnaire on electric switching locomotives; with the planning of an amplification of the data collected by the 1915-1916 committee, and by starting a scheme for co-operating with the corresponding committees of other national associations.

Committee on Schedules Meets

THE committee of the T. & T. Association on economics of schedules held its second meeting of the year at the offices of the United Railways & Electric Company of Baltimore on April 24. Those present were: Edward Dana, Boston, chairman; H. E. Hicks, Rochester, N. Y.; Alexander Jackson, Newark, N. J.; J. A. Stoll, Baltimore, and L. H. Palmer, Baltimore, sponsor.

The committee, after discussing the reports submitted by the members showing the relation of dead time to live time on their respective properties, prepared a detailed analysis of what constitutes car-hours. This analysis covers both revenue and non-revenue cars, and if followed will make schedule statistics of various roads comparable, whereas at the present time this is impossible due to the lack of standardization. Definitions with regard to speed were also prepared to show what items in the analysis were to be combined in order to obtain the proper information.

To round out its report, Mr. Jackson is to prepare a discussion on the effect of increasing schedule speeds on platform expense, on investment and on traffic, and Mr. Stoll a paper outlining the methods in use for making traffic checks for use as a basis for schedule making.

Express and Freight Traffic

THE committee on express and freight traffic facilities and costs held its organization meeting at association headquarters on April 26, 1920. There were present in addition to Chairman P. P. Crafts, Eastern Massachusetts Street Railway, T. H. Stoffel, Westinghouse Electric & Manufacturing Company; C. E. Thompson, Chicago, North Shore & Milwaukee Railroad, and G. T. Seely, Mahoning & Shenango Railway & Light Company, sponsor.

The committee is to confine its activities to the question of basing freight rates on actual costs and plans to formulate what might be termed later a standard method upon which local and interline rates can be figured. In order to substantiate its data the committee will send out a questionnaire to a few of the electric railways which conduct freight business.

The American Electric Railway Association is sending out a data sheet asking for information on motor bus companies, whether auxiliary to, the competitor of or providing service on routes independent of electric railways. The questions related to equipment of buses, operating expenses, municipal and state regulations, etc.

Burning Tie Rod Holes in Rails

A LARGE electric railway company in the Middle West has experienced a great many rail breakages in a stretch of track laid in concrete foundation and paving and in which the holes for the tie rods had been burned with an acetylene flame instead of drilled. This process is so much cheaper than drilling that it was considered worth experimenting with, despite the fact that it has been pretty well established that the burning process has a deteriorating effect upon the high-carbon steel in rails.

This company is inclined to believe, however, that the cause of many of the breakages may be attributable more to the execution of the work of burning the holes than to the method. In other words, it is inclined to believe that if the hole could be started at its center and enlarged into a perfectly smooth hole of proper diameter the weakening of the rail at this point would not be serious. However, the burning as done by the average track mechanic is likely to produce a hole with a jagged circumference, which then has a great tendency to tear or crack away from the hole and so weaken the rail as to result in a break. The experience has been such, however, on the trial made that the company will not make further use of this method until it has determined more exactly just what effect the burning of the hole has on the surrounding metal.

Recent Happenings in Great Britain

Labor Matters Are Reviewed—London County Council Boosts Fares —Many Other Important Developments

From Our Regular Correspondent

The most important matters in connection with British tramways during March were the prolonged negotiations and the final settlement of the demand of the employees for an increase of 10s. a week in wages. The Joint Industrial Council for the industry, brought into operation for the first time, proved a useful medium, but the agreement conceding 6s. a week increase could hardly have been reached without the Government promise of new legislation for increasing fares. The following brief narrative of events will be interesting to American electric railway authorities.

THE proceedings in the application, which was on behalf of all the tramway workers of Britain, struggled along during March. On the eleventh of the month the Joint Industrial Council discussed the report of a committee on the financial position of the undertakings, but no agreement was reached. The employers' representatives appeared to admit that a case had been made out for some advance, but they considered that the question of the amount should not be determined until the Prime Minister had promised that the Government would enable tramway undertakings to meet their obligations by an increase of fares. The case for both parties was subsequently laid before the Minister of Labor and the Minister of Transport. The latter informed the representatives, after he had studied the matter, that a government bill would shortly be introduced in the House of Commons to enable tramway undertakings to raise their fares above present maxima, as otherwise there would soon be no municipal tramways running.

Union Impatient

The Joint Industrial Council continued its meetings in the latter part of the month, but failed to come to an agreement. Despite the prospect of the Government bill, the union leaders, on March 27, sent out notices calling a strike of all tramway men in Britain on April 3.

Interesting events followed in rapid succession. On March 29 the Minister of Transport stated in the House of Commons that the Government had no authority to increase the charging power of tramway undertakings owned by local authorities. There was power, however, under the ministry of transport act to raise charges in the case of company-owned undertakings, but it could not be done if the municipal undertakings could not get the same advantage. Therefore a bill was necessary. The promised bill was introduced on March 30, and on the following day, in view of Government action, the Joint Industrial Council reached an agreement. An increase of 5s. a week in wages was granted as from March 29, with another 1s. a week as from June 1, making the total advance above pre-war wages 40s. The strike notices were accordingly withdrawn.

New Bill Ready

The bill will probably pass into law within a very few weeks. It is called the tramways (temporary increase of charges) bill. It removes limitations under an existing act, and provides that orders may be made by the Minister of Transport authorizing in the case of municipal undertakings increases in fares necessary to enable the undertaking to be carried on without loss, and in the case of company undertakings increases sufficient to provide for interest on loan capital and for a reasonable return on share capital. The Minister is to act with the advice of an advisory committee. The powers are to remain in force till Feb. 15, 1923.

The proposals for substantial increases in fares on the London County Council Tramways led to a struggle at a meeting of the Council. The Labor party opposed the recommendations, and it was only after an all-night sitting that the majority carried the new scale on a vote. The new fares, which are almost the statutory maxima, are 1d. for 1.2 miles, 2d. for 2.4 miles, 3d. for 3.6 miles, and 4d. for any greater distance. Workmen's fares are also increased. The highways committee, however, agreed to withdraw the proposal (now rendered unnecessary) that application should be made to the Ministry of Transport for authority to raise the fares above the statutory maxima, and also consented to the appointment of a special committee of inquiry into the whole question of the finances of the tramways. The main argument put forward by the opposition was peculiar, namely, that no increase in fares would be necessary if the tramways were more efficiently managed. If that were true, then every tramway undertaking in the country must be badly managed.

Committee Suggests Changes

The special committee of inquiry above referred to reported to the County Council in the end of March. The only change which it proposed was a somewhat novel one, namely that during the slack hours of the day—from 10 a.m. to 4 p.m.—there should be a uniform fare of 2d. for any distance beyond the 1d. stage. The object is to encourage shopping and pleasure traffic. At present, although a reduced service is run in the middle of the day, the cars are only sparsely occupied, and the hope is that passengers may increase to such an extent that more instead of less revenue will be obtained. The committee also hopes that people who can do so will be induced by the low middle-day fare to avoid traveling during the rush hours. Another point is that if a more frequent service can be run during the day long spread-over duties for the employees would be minimized. The Council sanctioned the scheme as an experiment.

The bill promoted by the London underground electric railway companies to enable them to double their maximum fares and to abolish workmen's fares was read a second time by a large majority in the House of Commons on March 25. As a result, however, of an agreement between the London members of Parliament and the promoters a motion was adopted instructing the committee to which the bill was referred to amend the bill so as to provide that the maximum powers of charge shall not be more than are required to provide for working expenses, efficiently maintaining and renewing the undertakings, and a reasonable return on capital; and that workmen's return fares shall not exceed the single ordinary fares, with a maximum fare of 3d.

The Minister of Transport is to have power over all the work and proposals of authority. To carry out the suggested scheme legislation is necessary, but there is more hope now that it will be put through than in past times when various commissions and committees reported in vain in favor of the establishment of a London traffic board.

The Ministry of Transport announced on March 24 that the members had appointed the following committee to consider and report to the Minister on the question of the electrification of railways: Sir Alexander Kennedy (chairman), Sir John Aspinall, A. R. Cooper (representing the London Electric Railways), Philip Dawson, Sir Alexander Gibb, C. H. Merz, Sir Philip Nash, Sir John Snell, Sir Henry Thornton (representing the Railway Companies' Association), and Roger T. Smith. Secretary, Major Redman. Of these, Sir A. Kennedy, Mr. Dawson and Mr. Merz are consulting engineers; Sir J. Aspinall, formerly engineer and general manager of Lancashire & Yorkshire Railway, is consulting mechanical engineer to the Ministry of Transport; Sir A. Gibb is director-general of civil engineering to the Ministry; Sir P. Nash is director-general of traffic to the Ministry; Sir J. Snell is chief electricity commissioner under the electricity supply act passed last year; Sir H. Thornton is general manager of the Great Eastern Railway; R. T. Smith is electrical engineer of the Great Western Railway; and A. R. Cooper is civil engineer to the London underground railways. The terms of reference to the committee are to report:

> Whether any regulation should be made for the purpose of ensuring that the future electrification of railways in this country is carried out to the best advantage in regard to interchange of electric locomotives and rolling stock, uniformity of equipment and/or other matters. If any such regulations are desirable, what matters should be dealt with and what regulations should be made. How far it is desirable, if at all, that railways or sections of railways already electrified should be altered so that they may form parts of a unified system.

News of the Electric Railways

FINANCIAL AND CORPORATE • TRAFFIC AND TRANSPORTATION

PERSONAL MENTION

Bond Issue for Relief

Portland, Ore., to Ask Votes to Approve $5,500,000 of Securities to Help Railway

The special committee of the City Council of Portland, Ore., has decided to submit to the voters, at the general election, a bond issue of $5,525,000, the proceeds to be used to carry out the suggestions of the Public Service Commission, with the exception of the acquisition of trackage, which is considered impossible because of constitutional restrictions.

Details of Bond Issue

The bond issue that is proposed will take care of license and franchise taxes, removal of the major portion of the present bridge tolls, abandonment of free carriage of city employees and deferred paving reconstruction, which should have been handled in 1919. In addition the relief to the company planned in the bond issue would relieve it of a portion of the costs of new paving and of the costs of reconstructing old hard surface streets during the next thirteen years.

Authority will be sought to issue one-year bonds, to bear not to exceed 6 per cent interest, and to run for a period of thirteen years. It is planned to issue not to exceed $500,000 of bonds each year, and retire such bonds at the expiration of year from the date of issuance. Thirteen years is the term of life of the present franchise ordinance held by the Portland Railway, Light & Power Company. If the bond issue is approved, the Council will be able to extend the company relief to the amount of $392,000 yearly.

Under the plan, the abutting property owners on streets where carlines have been established will pay for the costs of pavement on the same basis as do property owners on streets where cars are not operated. Extra charges for pavement, resulting from necessity of laying reinforcements under rails, and all extra required by reason of the presence of tracks in the streets, will be assessed to the railway. The remaining charges removed from the company will be paid for from the proceeds of the bond issue, it was announced.

City Attorneys Preparing Papers

Deputy city attorneys have been instructed to prepare the necessary papers incident to the submission to the voters, and the committee will then submit the proposal to the entire Council. Members of the special committee express the belief that with the relief granted to the company, an increase of 1 cent over the present fare will cover the annual deficit which is now faced by the railway and on which is based its application for increased rates. This deficit has been placed by City Engineer Laurgaard at $1,220,000, and the relief measures included in the bond issue total almost $400,000 annually. However, it will devolve upon the Public Service Commission to reopen the fare case as soon as the decision of the voters on the bond issue is known.

Counsel Holds Plan Legal

City Counsel La Roche had previously filed an opinion which stated that it would be legal for the voters of Portland to remove most of the so-called "burdens" of the company, through action recommended by members of the Public Service Commission, as a possible alternative to an 8-cent fare. The application of the company for an increase in fare was held in abeyance recently by the commission.

Fight for Labor Freedom in Buffalo

The International Railway, Buffalo, N. Y., will insist on an open shop in its new agreement with its employees. The closed shop has been in effect since the strike in Buffalo, Niagara Falls and Lockport seven years ago. Herbert G. Tulley, president of the International Railway, says the company will not continue to operate on the closed shop principle.

The attitude taken by the International Railway is indorsed by the Buffalo *Commercial*, one of the leading daily newspapers. That paper has attacked the other Buffalo newspapers for their failure to aid the company in its fight for the open shop. In commenting editorially upon the change in policy on the part of the railway officials, the *Commercial*, under the caption of "A Cowardly Press," says:

> Could anything better illustrate the cowardly servility of the other daily papers of Buffalo to the labor unions than their failure to come to the support of the officers of the International Railway in the latter's refusal to concede the principle of the closed shop to the organization of employees with which the officers have been negotiating for a new working contract?
>
> Here is the prospect of a struggle over a basic principle of our industrial life. Here is an issue that has not merely passed from the academic to the stage of reality, but to a stage that has become acute. Either the officers of the International Railway are right in their position and should be sustained by public sentiment, or they are wrong. If they are right a free press will sustain them. If they are wrong a free press will condemn them.
>
> The *Commercial* is proud to stand by the exhibition of true Americanism made this week by the officers of the railway. It takes them by the hand and offers its congratulations. And we know they are going to insist that their employees shall themselves elect whether to be union men or not, and that men who do not so elect shall not be refused employment and that those who withdrew from such organization shall not be discharged for doing so.

Springfield Making Progress

Campaign in Massachusetts City for a Fair Deal for the Trolley Well Under Way

Springfield, Mass., finding that its electric railways are near death from starvation returns, has adopted a policy like unto that pursued by cities in the eastern part of the State, but has gone those cities one better. Here are some big things that Springfield has decided to do:

Provide a $300,000 bond issue to finance extensions of the Springfield Street Railway in the East Springfield and Van Horn district, through a bond issue to be subscribed by public spirited citizens.

Practically give the railway a monopoly through the following restrictions on jitneys:

Bond of $10,000 for each jitney.

Jitneys to provide for not less than sixteen passengers each.

License fee for each car of $100 a year.

Fixed routes for each jitney, no deviation except by permission of police commission.

Fare on each line to be not more than unit fare of railway (7 cents).

Driver must not make change or collect fares while vehicle is in motion.

Of the $300,000 bond issue to be raised for the purpose of railway extension, $100,000 has already been subscribed. The proposed extensions are continuance of double tracking of the St. James Avenue line into East Springfield and extension of a new single-track line through Carew Street to the heart of East Springfield and over Page boulevard to connect with the Indian Orchard line in Berkshire Avenue.

President Promises Quick Action

Clark V. Wood, president of the Springfield Street Railway, promised that as soon as the sales should reach a point where the success of the campaign was assured, petitions would be presented to the City Council to allow the proposed extensions. Already preliminary surveys have been made by the company. Mr. Wood asserted that the company would use some of the material it now has on hand to start construction of the extensions.

Peter Witt, the transportation expert, told a meeting of interested citizens that the plan for extensions was a perfectly sound one. He asserted that electric railway transportation, far from being moribund, was just coming into its own, and that ten years from now people would laugh over the attitude taken toward the various electric railways today. Electric railway transportation, Mr. Witt said, was naturally monopolistic, and the more fares collected by the street car the lower the rates of fare. Mr. Witt said:

> The time was never better to invest in real railroad securities than now. The day of large dividends has passed, but the water has been squeezed out of the stock and the investor can be reasonably sure of a fair return and a reasonably safe investment.

Valuation the Final Issue

Both Sides at Toledo Agree That This Question Shall Be Left to the Last for Settlement

Considerable progress has been made at Toledo during the week in the meetings of the federal court commission drafting a cost-of-service ordinance and Henry L. Doherty, principal owner of the lines. The discussion has involved the provisions for financing, the control of interurbans, regulation of service by the Council, lease clauses, option clauses, condemnation provisions, and amortization plan. Very little agreement has been made on any of these subjects. Most of them have been passed for future consideration. Both sides have agreed to leave the question of valuation for the final tilt. Mr. Doherty has made it clear to the commissioners that many of the mooted questions will probably be aired in the federal court before any agreement is reached.

EARLIER in the week Mr. Doherty told the city representatives that the going street railway transportation system was worth more than $100,000,000 to the city and that it was entirely up to the city to keep what it has already allowed to be put into the development of the lines and properties. The declaration of the company representatives to take the matter into court was accompanied with such a show of confidence that all company contentions could be upheld in court that immediately the commissioners and city representatives became more conciliatory.

Mr. Doherty Wants Hearing

Although Judge Killits of the federal court set April 22 as the date for filing a petition for a hearing on the present fares and opened the way for either side of the controversy to present a case, Mr. Doherty declared he would ask for a hearing at this late date unless an agreeable draft could be obtained in a short time.

He has now decided to ask for a hearing as a "healthful" thing in clearing up many of the arguments over the whole question which have been dragging along for years. He said the city would be given thirty days' notice of such an action. The matter will hinge directly upon a further increase in fares. He pointed out as his intention in asking for a hearing to prove that the present fare of 7 and 2 cents is not compensatory. This will probably mean the final award of 10-cent fares, it is claimed by the company officials who have presented their figures to the city and whose records have been examined by city accountants and verified.

Will Contest Valuation

The hearing will also seek to show that the Goodwillie-Riggs valuation of $7,110,000 for the railway property is low and on a basis which has been shown in court to be untenable. Mr. Doherty has said that he believes he can prove in court that the property of the railway lines is of greater value than the price of $11,000,000 which he has made to the city. This he believes will hasten a settlement of the franchise question.

Another problem which will be cleared up is the one in which the power prices have been the contention. The ci[ty] has claimed that the Acme Power Company, a subsidiary of the Toledo Railways, Light & Power Company, has been charging the railroad a high rate for power and the Doherty interests thus profit materially.

Mr. Doherty declared that the court investigation would be so planned as to determine the status of a public utility. He claims that the Acme Company is not a utility and that it was not built for that purpose. He said it was a part of a large scheme for a chemical plant to furnish a necessary supply of chemicals to this part of the State. He said the future of that project and of similar companies would depend largely on whether or not they would be immediately classed as public utilities and regulated as such. Mr. Doherty has told the commissioners he is confident he can show that the present rates charged for power are fair.

The city will ask Council for an appropriation of $20,000 to furnish the necessary legal talent for a hearing in federal court as soon as Doherty gives notice that the action will be asked.

In the discussions of the ordinance several Toledo attorneys and financiers have been called into the meetings. Attorneys for the interurbans drew that part of the ordinance which applied to the outside companies and defended it when provisions were called in question by Mr. Doherty. He asked that the company be allowed to deal with t interurbans as in the past, without compelling them to adhere to provisions of the ordinance when they were not parties to the contract. No decision was reached. The commissioners were desirous of letting the city and outside lines come to their own agreement.

The financing provisions of the Milner commission were approved by Toledo financial men and bond dealers, whom Doherty characterized as "nice men but not necessarily experts in large public utility issues."

Mr. Doherty told the city representatives that he had evidence prepared for filing a suit to test the many questions involved in the controversy over a permanent settlement. He said:

> But we do not want to take snap judgment on the city, nor throw any dust. And we will agree to give notice if the city cares to take more time. We want the city to make the contest as aggressive as possible, as that will enable us to present our own case that much more vigorously.

The commission which is drafting a municipal ownership ordinance has its measure ready to present to Judge Killits with the exception of some minor details in connection with approval by the full board.

May 1 is the date on which the extension to the application of the ouster ordinance expires. The federal court, by order of which the cars are now operating, has pointed out that the Milner public utility abandonment law is applicable to the Toledo case. It is quite probable that service will not be interfered with even though the ouster ordinance does become effective so far as the City Council is concerned.

Municipal Ownership Again Urged for Washington

A resolution has been introduced by Senator Jones, Republican, Washington, D. C., calling for an expression by the Senate on the question of the federal government or the government of the District of Columbia taking over the electric railways in the district. The resolution expresses it as the sense of the Senate that Congress act to that end and directs the committee on the District of Columbia to formulate the necessary legislation.

The matter came up for a discussion on April 16. Mr. Thomas said that to his mind the resolution brought to the attention of Congress a subject of prime importance and one upon which summary action should be taken if possible. He said that to have the Public Utilities Commission of the District deliberately place an increased toll upon the earnings of the people of the District by raising fares "for the purpose of saving a corporation from bankruptcy, whose embarrassment is a direct consequence of its own conduct, cannot be justified upon any system of reasoning or logic which I am capable of comprehending."

Mr. Jones explained that the resolution did not pretend to pass upon the merits or demerits of the demands of labor for an increase of wages. He had not inquired into this question, but was prompted to submit the resolution in order to call attention to the situation. He was not generally in favor of government ownership of enterprise, but he had come to the conclusion that about the best thing for the district and the best way to furnish proper and adequate service was for the government to take over the local lines and operate them as one system.

Mr. Nugent fully agreed with this proposal of Mr. Jones, but considered that the action of the Public Utilities Commission in ordering further increase in fares was an outrage. Mr. Dial agreed with Mr. Nugent that if an enterprise could not be run by charging a reasonable compensation for its service, it should be sold out. Mr. Jones explained that he expected to call the resolution up at the very first opportunity. He had no doubt that every Senator's mind was practically made up as to what would be the wise thing to do, and if it should be the sense of the Senate as declared in the resolution, then it will be a direction to the committee to formulate the legislation.

Electric Railways Profited by Switchmen's Strike

Paralysis of Steam Road Freight Service Has Given Electric Lines an Opportunity to Demonstrate Their Service to Many New Customers

The electric railways of the country equipped to handle freight performed a very valuable service during the outlaw strike of the switchmen. This was particularly true of the roads in the Central West, especially those operating out of Chicago. There were some similar isolated instances of the performance of such roads in the East, but as most of the lines there do not, even in ordinary times, go in for this class of business, the aid they were able to lend in the emergency was rather circumscribed. Not only did the roads in the West profit individually, but some of them appear to have profited beyond the immediate moment by winning customers who seem likely to remain with them permanently, and thus become a valuable asset. From the seeker of business on their own account, the electric railways were changed over night to the sought for. The unusual difficulties of travel that prevailed made an intimate canvass of the roads in the Central West impossible, but facts gathered at Chicago about the roads near that city serve to illustrate how the emergency was met there. The press dispatches indicate that elsewhere than at Chicago the conditions differed only in degree and not in kind from those that prevailed near the lake city. The cases are reviewed of a number of the companies.

THE Chicago, North Shore & Milwaukee Railroad has been hauling about forty cars of l.c.l. and carload shipments a day as compared to twenty-five carloads normally. About as much business was offered as the company could handle expeditiously. A point was made of maintaining the usual rapid service, whereby practically all shipments were cleaned up every day. In this connection it is interesting to note that the trucking companies which have been delivering freight to the Wilson Avenue terminal of the North Shore line fell down badly under the greatly increased business offered. This led to a decision by Britton I. Budd, president, to buy three 15-ton tractors and fifteen trailers for use in a pick-up and delivery service in Chicago. The plan will be to drop off empty trailers at a loading point and later pick them up with the tractors when loaded, thus avoiding idle standing time for the motor trucks.

A., E. & C. Working to Capacity

The Aurora, Elgin & Chicago Railroad reports that the express strike in March resulted in an approximate doubling of the l.c.l. freight business handled by that company and that this has again been nearly tripled as a result of the freight strike. The Burlington Railroad, which serves much the same territory as the A., E. & C., has been accepting some freight throughout the strike. Nevertheless the great bulk of the perishable shipments has been handled by the electric lines and there has also been a lot of shipments made over this route for reshipment at Aurora over the Burlington line from there on. The company has been working practically to capacity, but has accepted all shipments offered and delivered them with the usual promptness by using clerks and all other available help in the terminals.

The Chicago & Joliet Electric Railway reports an increase in l.c.l. freight between 200 and 300 per cent of normal. All shipments offered were accepted and delivered promptly through the use of open and gondola cars in addition to the regular express cars. The limiting feature in this connection has been not the capacity of the railway but the difficulty of trucking companies in an outlying section of Chicago.

The Chicago, Lake Shore & South Bend Railway formed about the only outlet for Chicago shipments to the East and South. As a result this company accepted shipments for points as far East as Cleveland and as far South as Louisville, requiring interchange over a number of electric lines. More than 1,500 applications for shipments to these distant points and numerous intervening points beyond the South Shore line's own terminals were accepted. An unfortunate limitation on the amount of such business that could be handled was brought on by a strike of chauffeurs at South Bend, where interchange to the Chicago, South Bend & Northern Indiana Railway requiring trucking had to be made. The local shipments handled by the South Shore line both l.c.l and carload increased materially, however, and were taken without limitation.

The Michigan Railway handled about 50 per cent more freight than ever before in its history, including many shipments for Ohio and Indiana points. The capacity of these cars was increased through the co-operation of the shippers in quickly removing freight and in having the cars loaded and unloaded. Every employee of the road worked to keep the freight moving and every available piece of rolling stock was pressed into service.

Some of the automobile industries in Michigan were able to continue operation only through the service provided by the electric lines. The Reo auto plant in Lansing received bodies from Detroit and the Scripps-Booth Company in Detroit received material from Lansing, the same electric cars being used for the shipments both ways. Any number of Detroit, Jackson, Grand Rapids and other Michigan city industries used this service for shipments to Chicago and to points South and East reached by electric lines. The Michigan situation was further relieved beginning on April 20 with the opening of boat service on Lake Michigan through shipments over the electric lines to the various lake ports.

Detroit Program to Proceed

The Detroit (Mich.) United Railway still has faith in the integrity of the public of the city of Detroit. This is evidenced by the reply of Frank W. Brooks, the company's president, to a recent communication from the Board of Street Railway Commissioners inquiring about construction of the so-called St. Jean Avenue line.

In his letter President Brooks outlines the construction plans of the company for the present year, and states that the program for additional equipment provides for the expenditure of $2,500,000 for double-truck cars of the general type recently put in service in Detroit. Included in the construction program are the following lines:

Completion of the Twelfth Street line to Elmhurst Street.

Completion of the so-called St. Jean line from Gratiot Avenue via Harper, Montclair, Shoemaker and St. Jean Avenues to Jefferson Avenue.

Harper Avenue, double-track from Van Dyke Avenue to Gratiot Avenue.

West Warren from Walton "Y" westerly to the east town line of Springwells.

East Warren Avenue to point near Easterly limits of city.

It is expected to have the Twelfth Street line in operation about July 1, and to complete the other roads as speedily as possible.

The company officials warn that the same elements which have, heretofore, been able to block railway progress may succeed in interfering and preventing the company from carrying out the extension program as announced.

Planning for New Texas Interurban

Details of plans for financing the Dallas-Wichita Falls interurban line will be worked out at a meeting in Dallas, Tex., during the first week in May, of a party of Eastern capitalists, officials of the Dallas Railway and Dallas and Wichita Falls citizens interested in the construction of this line.

Engineers have estimated that the line can be built at a cost of $7,500,000, with about $2,000,000 additional for power stations and transmission lines. Citizens of Dallas, Wichita Falls and other towns on the line will be asked to put up in cash in advance an equity of 20 per cent of this amount, which sum is to be duplicated by the Strickland-Hobson interests in lieu of the commitments made in 1917. The Eastern capitalists then will complete the financing of the project. Owen Young, New York, vice-president of the General Electric Company, will be a member of the party of New York capitalists that will meet in Dallas.

The proposed interurban is to be constructed by the Dallas (Tex.) Railway in lieu of two interurban lines each at least 30 miles in length as provided in the service-at-cost franchise granted to the Dallas Railway by the city of Dallas in 1917.

10 Per Cent Advance in Jersey

A voluntary increase in wages for employees of the Public Service Railway, Newark, N. J., effective on May 1, was announced by President Thomas N. McCarter of the company on April 27. The raise will apply to motormen and conductors and to shopmen, linemen and trackmen. It approximates 10 per cent of the present wages and will mean an additional outlay for payrolls of practically $100,000 a month. Between 6,000 and 6,500 men will be benefited.

The company's action was decided upon notwithstanding a contract covering rates of pay which was entered into with the men last August to cover a period of two years. This contract does not expire until August, 1921. Mr. McCarter said:

> Changed conditions which could not have been foreseen last August prompted the company to increase the wages of its employees. When the present scale was fixed upon it was thought that the peak of high prices had been reached and the cost of living would gradually recede. This has not proved to be true, however, especially in the case of rents and some lines of foodstuffs, and the directors of the company authorized me to make the advance in pay at this time to meet the higher costs and the pretty general increases in rents which become effective with the first of May.
>
> It is a tremendous additional burden which the company is assuming. To add $1,200,000 a year to the operating expenses means that the volume of business will have to be greatly augmented to meet it and I hope that the public will, to the extent of giving added patronage, join the company in showing appreciation of the good work done by the men in maintaining service during the heavy storms of last winter and during the more recent emergency arising out of the railroad strike.

Short Strike in Scranton

The trainmen of the Scranton (Pa.) Railway struck on April 21. They were out just ten hours. The strike appears to have been precipitated by the inability of the representatives of the company and the men to agree upon the personnel of an arbitration board. Finally, one of the local newspapers made a suggestion which was acceptable to both sides. The strike order, however, had been given previously, and the men went out. They returned to work at noon on April 21 and will continue running cars until their demands are disposed of by the newly appointed board.

Subway Proposal Defeated

The proposal to issue $15,000,000 of bonds for the construction of a subway in Cleveland, Ohio, was defeated in a referendum at Cleveland on April 27 by a vote of 13,099 for and 30,107 against it.

Mayor Harry L. Davis, who originated the idea, expressed disappointment at the result, but said that the plan is not killed but only delayed until people feel that conditions are favorable to the expenditure of money for this big improvement.

The proposition was approved by the board of directors of the Cleveland Chamber of Commerce, notwithstanding an adverse report by the special committee to which it had been referred. The Automobile Club and a number of organizations had also approved the plan. The subway was, however, opposed by the Cleveland Engineering Society, Civic League, Cleveland Real Estate Board, the Cleveland Association of Building Owners and Managers and several other similar but smaller organizations.

Dispute Over Admissibility of Evidence

In a letter to the Cleveland (Ohio) Railway, officials of the local branch of the Amalgamated Association declare they will not discuss any form of open shop or the employment of women on the cars before a board of arbitrators. These questions, they contend, have been decided for all time.

J. J. Stanley, president of the company, says the next step is arbitration. If, after meeting in an endeavor to select a third man, the two arbitrators fail to agree, then the appointment will be made by Judge D. C. Westenhaver of the Federal District Court. Mr. Stanley contends the company has as much right as the carmen to make proposals for arbitration. He regards the board of arbitration as a court with power to decide what is relevant in the controversy.

The men have named Judge Virgil J. Terrell of the Municipal Court to represent them on the board. Harry J. Crawford will act as counsel for C. Loomis Allen, the company's member of the board.

Mr. Crawford and Judge Terrell conferred on April 23, but without result, because the men would not agree to the selection of a third man until Mr. Stanley had consented to an agreement on the points before they are given to the board of arbitration.

Dubuque Tie-Up Continues

The strike of trainmen of the Dubuque (Ia.) Electric Company continues. It has completely tied up the system there since March 1. The details of this situation were quite fully presented in the ELECTRIC RAILWAY JOURNAL for April 17, page 824. In that story reference was made to certain expected developments from an election which was held April 5. It is now reported that in this election the socialist-labor people put three of the five Aldermen in office. The other two men ran on a non-partisan ticket.

Different citizens' committees have sought to present solutions for the existing tie-up, but as these propositions contained no consideration for the needs of the company and looked only to the advantage of the merchants and traveling public, none of them has been acceptable.

The suit in the United States Court for a mandatory order compelling the company to operate was set for hearing on April 27.

London Men Threaten to Strike

A strike of the employees of the London (Ont.) Street Railway is set for May 1 unless the demand of the men for higher wages is met by that date. The employes ask 60 and 65 cents, against 39 and 44 cents an hour, the present scale. The company is operating under a franchise secured twenty-five years ago, giving nine limited and seven unlimited rides for a quarter.

The men struck for more money last July. To settle the trouble, the City Council by by-law allowed the company to sell six and eight tickets for a quarter instead of seven and nine. The company gave the men the increase asked, and they went back to work. Then a citizen got a judgment in the courts declaring the by-law illegal, unless it had the sanction of the people. In January the voters defeated the by-law, but the men continued to draw the increased wages though the company went back to the old scale of fares.

The company declares it cannot meet the new wage demand. A way out of the difficulty may be found in the fact that the Supreme Court at Toronto has upset the finding of the high court judge and has declared that the City Council has the power to permit an increase in fares without the sanction of the voters.

Trenton Suburban Men Strike

The strike of the employees of the New Jersey & Pennsylvania Traction Company, Trenton, N. J., declared on March 24, has been marked with violence, and members of the Pennsylvania State Constabulary, together with Sheriff Hunsberger of Bucks County, had to be called to prevent bloodshed. Traffic on the entire system is tied up. The first two days of the strike two cars were run on the Bristol-Doylestown division, but the operators were stoned and service had to be abandoned. The only cars running out of Trenton are those carrying milk and United States mails. These are not molested.

General Manager Thompson said that the strike was not a question for arbitration. He said:

> What we need is more money and it is not possible that the arbiters would grant more revenue. Our expenses are greater than the receipts and it is impossible to grant any further increases to the employees. We are paying good wages; in fact, higher wages than the Public Service Railway. The wage scale is the same as that of the Trenton line, whose agreement runs for another year. The strike is a great loss to the company, to the employees and to the community at large. We carry between 3,000 and 4,000 passengers daily and the strike means a loss of about $500 daily to the company and employees.

More than 100 men are involved in the strike, including motormen, conductors, powerhouse men, trackmen, etc. The new demands call for 62 cents an hour for motormen and conductors of two-man cars and $1 an hour for operators of the one-man cars, with double time for Sunday and holidays. The men are now being paid 50 and 55 cents an hour.

Service-at-Cost Decision Soon

City and Company Before Indiana Commission in Effort to Afford Local Indianapolis Company Relief

As a result of the conference between the members of the Public Service Commission of Indiana and officials of the city of Indianapolis, which was reported in the ELECTRIC RAILWAY JOURNAL for April 10, page 770, the city of Indianapolis filed a petition with the Public Service Commission proposing that the company abandon its franchise temporarily during the present emergency of high prices and suggesting a service-at-cost plan of operation. The city requests that the present fare of 5 cents with free transfers be continued until hearings have been held by the commission and an equitable plan adopted for providing service at cost.

SOME of the principal features in the plan proposed by the city are as follows:

The appointment of a street railway commissioner by the Mayor, at a salary of $6000 a year to be paid by the railway together with office expenses of approximately the same amount.

The valuation of the property of the railway for rate-making purposes to be fixed at $15,000,000.

The maintenance of a surplus fund of $150,000 and setting aside of 20 per cent of gross receipts for maintenance, repairs and renewals.

The railway to be allowed to earn between 5 and 7 per cent on its investment.

The interurban companies entering Indianapolis, it was suggested, should pay the city company a higher rate for the use of tracks and terminals in Indianapolis.

The service-at-cost plan to terminate when the company is able to maintain a surplus fund of $150,000 for three successive months on a 5-cent fare.

The rates of fare proposed by the city vary from a maximum of a 6-cent cash fare with a 1-cent charge for transfer down to a minimum of the original fares provided in the franchise, viz., six tickets for 25 cents and twenty-five tickets for $1 with free transfers.

COMPANY SUGGESTS MODIFICATIONS

A formal hearing was held at 9:30 a.m. on April 9, at which attorneys for the Indianapolis Street Railway contended that the law establishing the Public Service Commission gave that commission full jurisdiction over all utilities in the State and nullified franchises such as that between the Indianapolis Street Railway and the city of Indianapolis. It was held that the public utility commission act is in itself a basic service-at-cost order, and it is the duty of a commission in all cases to see that service is furnished to the public at the lowest rate possible, at the same time preserving the financial integrity of the various utilities.

Representatives of the company have suggested several modifications to the plan proposed by the city, the salient features being as follows:

That automatic regulation of fares should be provided in accordance with the operations of the fare index fund in a similar manner as provided in the city of Memphis, so that the list of rates of fare would at all times contain at least two rates of fare above and two rates of fare below the rate in effect at any time; the commission to extend this list either upward or downward as might be necessary from time to time.

That instead of the plan being for temporary or emergency relief, it be given the element of permanency, subject only to the general authority of the Public Service Commission to fix rates. It must, therefore, entirely supersede the existing franchise rights and obligations as to fares.

That the physical valuation of the property should be approximately $18,933,101, this being the valuation fixed by the state tax board and being a valuation at which a 7 per cent return will meet all the obligations of the company.

That the maintenance fund of 20 per cent of gross receipts should be subject to increase or decrease on order of the Public Service Commission to meet the carrying cost of maintenance. The net income should be enlarged so as to provide for all items which the company must pay to properly maintain its credit and keep alive. If there should be a surplus arising from the agreed rate of return, it should belong to the company for proper corporate purposes and should be put into improvements, thus building up the value of the property behind the company and securities.

That the board of public works of the city of Indianapolis should continue to have authority over the operation of the company, including schedules, types of cars and equipment used, extensions to be made, etc. etc. If the board wishes to appoint an expert to give all of his time to the study of railway operation, such commissioner should be appointed and paid by the city. The accountants of the Public Service Commission could audit the accounts of the company as often as might be desired by the city, and submit such audits to both the city authorities and the Public Service Commission. The company pointed out that this plan would eliminate the possible evils of building a political machine out of street railway commissioners.

Several suggestions were also made in regard to the surplus or fare index fund with modifications of the percentage of surplus revenue paid into the fare index fund when the rate of fare reaches certain points. It was suggested that as a reward for and an inducement to efficiency and economy in operation there should be a provision that a varying portion of any excess earnings applicable to the index fund above the cost of service as established, depending upon the rate of fare prevailing when the excess was earned, should go to the company, and only the balance to the surplus or fare index fund.

The suggestion of the company is, briefly, that between operation under the maximum rate of fare and the minimum rate of fare there would be certain stages at which a varying proportion of excess profits would be diverted to the city or to the company. That is, varying from a central point in the fare list, as the rate of fare might be gradually reduced, the company as an inducement to and reward for efficient operation would receive an increased proportion of excess profits above the amount paid into the fare index fund, until when the absolute minimum fare was reached all of this excess would go to the company. The reverse would operate in case the fares were advanced, the city receiving a gradual increase in its proportion of the surplus revenue until the maximum rate of fare was reached, when it would receive all such surplus above the amounts paid into the fare index fund.

A further hearing was held before the Public Service Commission on April 24, when a full discussion was had, principally regarding the city's contention that the company should revert to operation under the present franchise as soon as the emergency period is over.

The commission announced that a decision would hardly be reached for two or three weeks.

Strike on Staten Island

Electric railway service on Staten Island, New York City, has been stopped entirely. The Midland Railway there ceased to run cars last January after a dispute with the city over fares. On April 27 the trainmen of the Richmond Light & Railroad Company went out on strike. They have been getting 45 cents an hour. They want 75 cents, an eight-hour day and time and one-half for overtime. There is steam service on the island, but this is only just recovering from the effects of the outlaw railroad strike.

The representatives of the union place the blame for the suspension of service on the company. They say that at the request of the officers of the company the strike was put off until the men learned the fate of the Jenks service-at-cost bill, defeated by the Legislature in its closing hours. The spokesman for the union says that, had the bill been passed, it would have meant an increase in wages for the men. The company took the position that wage increases were impossible without higher fares. Mayor Hylan, through Commissioner of Plants and Structures Whalen, made a fruitless attempt to settle the difference between the company and its men.

Municipal buses in use in Manhattan and Brooklyn were rushed to Staten Island by the city in order to afford the residents there some measure of relief. There are 125,000 people on Staten Island. The buses, of course, are by no means a substitute for the electric railway service, but they have saved the residents from being practically marooned.

On April 28 the company was thrown into receivership, as noted elsewhere in this issue.

Mr. Whalen is calling for permanent municipal operation of both the electric railway and the electric lighting service on the island. He bases the city's right peremptorily to seize the property on the ground that the company by its failure to provide service has laid itself liable to such seizure.

Wages Increased in Colorado Springs

The Colorado Springs & Interurban Railway, Colorado Springs, Col., has agreed to advance the wages of its trainmen 5 cents an hour. The request of the men was for an advance of 12 cents an hour. There is no intention at present to advance fares. The company has, however, addressed the City Council on the matter, stating plainly the adverse conditions under which it is operating. The letter was filed with the Council because that body has jurisdiction over the public utilities operating in the city.

News Notes

Another Park Abandoned.—An order has been made by the Public Utility Commission to the Bridgeton & Millville Traction Company, Bridgeton, N. J., to sell Tumbling Dam Park in Deerfield township, Cumberland County. The park was operated by the company for many years as an amusement resort. It contains thirteen acres.

Atlantic City Men Want More.—The employees of the Atlantic & Suburban Railroad, Atlantic City, N. J., have presented demands to the company for an increase in wages of from 50 to 75 cents an hour, or from $4 to $6 a day. For a ten-hour day the men would receive $7.40. An increase in pay was granted the men last fall. A. J. Purinton, receiver of the company, told the employees that the court, to which he is responsible, would probably have to settle the matter.

Wage Increase in Manchester.—Announcement was made on April 16 that a 5 per cent increase in wages had been granted the employees of the Manchester (N. H.) Street Railway after the final conference between the management and the men. The uniform men will now have wages of from 50 to 60 cents an hour with time and a half for overtime; carhouse men 50 to 58 cents an hour and an eight-hour day; and the track men 55 cents an hour. Some 200 men are affected.

Hospital Service for Employees.—Arrangements have been made by the Northern Ohio Traction & Light Company, Akron, Ohio, to establish a hospital room at Silver Lake Junction, in charge of a graduate nurse. It will be in operation about June 1. This is the first step toward taking care of employees all along the line. If it proves beneficial and effective, hospital rooms will be established at each division point. There are 469 employees on the northern division.

Wage Conference at Springfield.—Representatives of the roads controlled by the New England Investment & Security Company met on April 14, with C. V. Wood, president of the company, and presented for consideration a schedule of wages calling for a maximum of $6.40 a day as compared with $5.13 a day now received. An eight-hour day is asked. The lines involved are the Springfield, Worcester Consolidated, Milford, Attleboro & Woonsocket and Interstate Consolidated.

Public Service Bills Fail.—All of the measures regulating electric railways, telephone and telegraph companies, the rate fixing power of public service commissions, telephone rates and the measures calculated to represent the wishes of the water power interests, as well as the measures relating to hydro-electric development, failed of passage in the New York Legislature just adjourned. Not even local bills permitting certain municipalities to acquire their own electric light plant were passed.

Transportation Committee for Chicago Engineers.—The Western Society of Engineers has appointed the following men as the members of the urban transportation subcommittee of the public affairs committee: H. H. Easterly, A. L. Drum & Company; E. J. Blair, organization engineer, Chicago Elevated Railways; R. F. Kelker, Jr., transportation supervisor, City of Chicago; D. J. Brumly, terminal engineer, Illinois Central Railroad; and J. V. Sullivan, assistant to the president, Chicago Surface Lines.

Commission Bill Proposed for Texas.—At the direction of Mayor Frank P. Wozencraft of Dallas, Tex., the legal department of the city of Dallas has drafted a public utilities commission bill, creating such commission and placing all public utilities in Texas, including electric railway systems, under its direction. This bill will be presented at the meeting of the Texas League of Municipalities to be held in Dallas, May 14-16. It is hoped to secure the indorsement of the measure by the league. Steps will then be taken to have the measure introduced in the Legislature.

Sentiment Against Odd Coins.—According to a newspaper dispatch from Washington no enthusiasm is being shown on Capitol Hill in connection with the proposal that 7 and 8-cent pieces be coined to meet the demand for their use in the payment of electric railway fare. Members of the committees concerned seem to be of the opinion that this would tend to sanction the permanent retention of fares at that level. In addition it is feared that the existence of coins of those denominations would be an inducement for the immediate advance of telephone rates at coin phones as well as the advance of many articles which are sold for 5 cents.

Wage Discussion Renewed.—On April 22 officials of the Northern Ohio Traction & Light Company and representatives of the branches of the Amalgamated Association at Akron, Canton, Massillon and Cuyahoga Falls resumed consideration of the wage question at Canton. It is rumored that the men will drop other demands if they are granted a wage of 80 cents an hour straight time. Company officials stated that every cent added to the trainmen's wages would mean an increase of $15,000 in the annual expenditures. A. C. Blinn, general manager, is quoted as saying the men probably need and should have an increase in wages, but that the company's expenditures must be kept within its income.

Proposed Railway Elects Officers.—The Peoria & Chillicothe Electric Railway held its annual meeting at Chillicothe, Ill., recently for the purpose of electing officers. This company proposes to build an interurban line between the two towns in its name, but it was stated that there is no intention of undertaking the construction work until prices of material and labor are more reasonable. The officers elected were: President, O. A. Brock, Peoria; vice-president, E. V. Mattice, Chillicothe; treasurer, E. A. Mitchell, Chillicothe; secretary, Walter E. Emery, Peoria. The former president, John F. Lynch, resigned on account of moving to Oklahoma, and Frank N. Coon, Chillicothe, was elected to fill his place as a director.

At Work on Enabling Legislation.—The private bills committee of the Legislature of Ontario on April 15 spent the majority of the morning on a bill authorizing the city of Ottawa to acquire its street railway. Alderman Pinard insisted that a money by-law be first ratified by the ratepayers. A referendum had already been carried, but in the opinion of Mr. Pinard many who had voted on this were not property owners. Mayor Fisher of Ottawa took issue with Mr. Pinard on the question. Mr. MacBride urged that arbitration proceedings should be first carried on. To this Mayor Fisher objected on the ground that the railway is not to be taken over until 1923. A salaried commission of three is to be appointed to operate the railway. Members of the City Council are ineligible. Consideration of the bill will be continued at the next meeting of the committee.

Court Against Deferred Pavement Payment. — Judges Hamilton and Shohl of the Court of Appeals, in a joint opinion rendered on April 12, held that the city of Cincinnati could not issue bonds amounting to $60,800 to be paid back with interest by the Cincinnati Traction Company in ten annual installments for the purpose of improving car tracks on Freeman Avenue on the ground that a municipality cannot lend its credit to a private enterprise. Judge Cushing, in a dissenting opinion, maintained that the procedure was not a lending of credit but a species of assessment. The decision reverses the opinion of Judge Frank R. Gusweiler of the Superior Court that the city could replace worn-out car rails at the time it improved the street because this act came within the police power of the city. Saul Zielonka, City Solicitor, said the matter would immediately be taken up to the Ohio Supreme Court.

Programs of Meetings

Missouri Association of Public Utilities

The Missouri Association of Public Utilities will hold its next convention June 3, 4 and 5 at Jefferson City, Mo.

Iowa Electric Railway Association

The Iowa Electric Railway Association will hold its annual convention at the Fontanelle Hotel, Omaha, Neb., on May 20 and 21.

Financial and Corporate

Will Offer Bonds Locally

Company at Houston Proposes to Ask Subscriptions at Home — Mr. Bradley Explains

Luke C. Bradley, district manager for Stone & Webster in Texas, has announced that the Houston Electric Company proposes to offer a security of the company to the public of Houston which will yield the rate of return fixed by the court, 8 per cent, less the actual cost of sale.

Small Denomination Bonds

By this arrangement it is hoped to establish a partnership between the riders and the company. The obligations will be sold in small denominations. The money so obtained will be used to purchase cars, provide additional trackage facilities and make other improvements. Mr. Bradley said:

There is no room for prejudice in the discussion of the problem of the street car transportation. The matters under discussion are governed by serious business facts. No city can expand or develop without a fully maintained and efficiently operated railway system. Stagnation of growth is bound to result if the electric railway does not keep pace with the city's growth.

The new order of things is co-operation. In discussing this phase of the situation I want you to consider the matter from the standpoint of transportation purely; transportation for yourself and for the people of Houston—not only the Houston of today but the Houston of tomorrow.

Think of it as a means of transportation, more than 45,000,000 passengers per year. When you consider the providing of means for transporting this enormous number of people in twelve months it must appeal to you at once as a great big business proposition. It is one which prejudices cannot solve. It is in the interest of those 45,000,000 people that I want to call your attention to some of the things which can be effected through the co-operation of that triangle—the public, the city and the street railway company.

I should like to ask you if you regard Houston as a finished city? I should like to ask you to measure your hopes, your aspirations for Houston; to compute the possibilities of the future as you can see it, and then tell me if you think it possible for Houston to gain that position unless it is helped and fostered by a street railway system that meets every demand which its people may properly make upon it.

The extent to which co-operation obtains will determine absolutely the rate of fare per passenger which must be charged in order to provide a transportation system which will adequately meet the needs of the Houston of today and the Houston of tomorrow.

Mr. Bradley Suggests Economies

Then Mr. Bradley took up a long list of subjects bearing on the railway situation. He declared that the heating of cars is impracticable on account of the great investment in equipment that would lie idle ten months out of the year. He advocated fewer safety stops, a distribution of peak loads by means of the industrial plants turning out their employees at different hours each day and more skip stops. He said the company should be relieved of the necessity of paving between the tracks in residential districts. He also said the use of more "safety cars" would bring better service.

When it came to jitneys, Mr. Bradley said:

I am not going to say very much about this, the greatest of all parasites, which for over five years has sucked the very blood out of your transportation system.

He said the matter was one for the public to decide and that the decision would have a great deal to do with the fares to be charged on street cars.

Mr. Bradley scored the railroads for frequent blocking of railway crossings. Other subjects he took up had to do with automobile traffic regulation, accidents, transfer privileges, taxation, rerouting of cars, etc. He touched only briefly on the question of a new franchise.

The fixing of a value for the property was reviewed in the issue for March 20, page 622.

P. R. T. Earnings Increasing

The income account of the Philadelphia (Pa.) Rapid Transit Company for March and for the three months ended March 31 follows:

March	1920	1919
Operating revenue	$3,179,961	$2,883,594
Operation and taxes	2,234,354	2,021,329
Operating income	945,607	862,264
Non-operat'g income	45,109	46,533
Gross income	990,716	908,798
Fixed charges	816,476	806,060
Net income	$ 174,240	$ 102,737

Three Months Ended March 31—

	1920	1919
Operating revenue	$8,921,677	$8,217,117
Operation and taxes	6,499,627	5,882,412
Operating income	2,422,050	2,334,704
Non-operat'g income	123,997	142,123
Gross income	2,546,047	2,476,828
Fixed charges	2,446,666	2,418,064
Net income	$ 99,380	$ 58,763

Another Receiver on Staten Island

On April 28 Capt. John J. Kuhn was appointed receiver for the Richmond Light & Railroad Company, Staten Island, New York City. The receiver was appointed by Judge E. L. Garvin in the federal court, Brooklyn, to serve until June 30, 1920, on application of the Westinghouse Electric & Manufacturing Company. The receiver's bond was fixed at $25,000. The receivership is due to a strike of trainmen upon refusal of the company to grant their demands for wages aggregating 75 cents an hour, an eight-hour day and time and a half for overtime.

An investment of $5,111,657 is involved, represented by $2,871,750 of stock and $2,200,000 in bonds. The railway proportion is estimated at 67.4 per cent of the total and covers 32 miles of track, 123 motor passenger cars and the necessary storage yards and shops.

July Maturity Discussed

Present Problem for Interurban Railway $800,000 Which Must Be Paid on July 1

Bondholders of the Lockport & Olcott Railway Company, operated as a part of the International Railway, Buffalo, N. Y., held a meeting on April 15 to determine what can be done relative to $800,000 of bonds payable in July. Elliott G. McDougal, president of the Bank of Buffalo and chairman of the bondholders' protective committee of the International Railway, said the International Railway cannot handle the securities and that unless some way is found to tide over the demand another receivership will ensue.

$420,000 in Interest Due

There is $420,000 in interest due on the outstanding issue of $17,200,000 of International Railway improvement and refunding bonds. The International Railway must also pay $475,000 in July for city and state taxes. With the men demanding a wage increase which will amount to $4,000,000, Mr. McDougal explained the situation is critical.

The bondholders' committee, Mr. McDougal said, has mapped out a plan to take up the $800,000 by issuing to each Lockport & Olcott bondholder a five-year 7 per cent bond on a par for par basis to be secured by $1,200,000 of improvement and refunding 5s.

The Lockport & Olcott is an interurban division of the International running between Lockport and Olcott Beach, a summer resort on lake Ontario. A large amount of freight and express is carried over the line. It is in the heart of the Niagara County fruit belt.

Charlottesville Company Prosperous

According to the annual report of the Charlottesville & Albemarle Railway, Charlottesville, Va., for the year ended Dec. 31, 1919, gross earnings from railway operation increased from $40,107 in 1918 to $50,957 in 1919—equivalent to 27.5 per cent. The railway revenues were 33.3 per cent of the total gross earnings of the company. Operating expenses for the railway were $35,977 in 1919 as against $33,249 in 1918, an increase of 8 per cent. Railway expenses represented 45.5 per cent of total operating expenses of the company. Net earnings from the combined operation of the railway, light and power departments were $73,850, an increase of 38.5 per cent over 1918.

The amount available for dividends in 1919 was $40,736, as against $21,172 at the end of the previous year, equivalent to a 6.43 per cent return on the $500,000 of common stock after payment of a 7 per cent dividend on the $122,700 of outstanding preferred stock. In 1918 this return amounted to only 2.51 per cent. A dividend of 5 per cent was paid on the common stock for the year 1919. None, however, was paid in 1918.

Utility Men and Bankers Discuss Financing

Tremendous Rates Now Asked for Loans Prohibit Utility Financing—$100,000,000 Needed for Chicago Utilities

A number of Chicago's most prominent public utility men and bankers appeared before the Illinois Public Utilities Commission in Chicago on April 29 to present evidence in a special hearing called to consider the general financial difficulties of all the utilities of the State. Samuel Insull, president of the Commonwealth Edison Company, People's Gas Light & Coke Company, Public Service Company of Northern Illinois and chairman of the board of the Chicago Elevated Railways; Henry A. Blair, president of the Chicago Surface Lines, and B. E. Sunny, president of the Chicago Telephone Company, presented a survey of the situation with respect to their several companies. Following this the problem was presented from the bankers' point of view by E. D. Hulbert, president of the Illinois Trust & Savings Bank and the Corn Exchange National Bank; H. L. Stuart, of Halsey, Stuart & Company; General Charles G. Daws, president of the Central Trust Company of Illinois; Chester Cory, vice-president of the Harris Trust & Savings Bank; David R. Forgan, president of the National City Bank, and Charles S. Schweppe, a partner of Lee, Higginson & Company.

THE utility men showed the very large sums of new money that are now necessary for capital expenditures due to the postponement of work during the war and gave their experience in trying to float these expenditures. They declared that the utilities have lost their credit because the public is frightened over the value of public utilities securities already outstanding and because there are so many industrial investments on the market offering higher rates of return and with more favored conditions surrounding them. The utilities in many cases cannot get money at any price. Even the securities of such companies as the Commonwealth Edison and the Chicago Telephone Company, which have an unquestioned credit standing, can be marketed only at a cost that is prohibitive.

Mr. Insull said that utilities of Chicago alone need $100,000,000 to bring facilities up to normal. He attributed the inability of the utilities to get new money very largely to two things:

1. The public has been driven away from this class of investments by the continuous agitation in the community against one or another utility company led by some politician who talked ostensibly for the good of the people but usually for the good of that individual.

2. The effect of valuations for rate-making purposes upon the junior securities.

As regards the second Mr. Insull said the valuations have been so held down that the junior securities are very seriously affected. This had a very important bearing on the present deplorable condition.

Mr. Blair and Mr. Sunny outlined briefly the needs of their companies. They also told the experience they have had in getting a market for permanent financing.

The substance of the testimony of the three utility men was to urge upon the commission the necessity for permitting rates that will produce earnings sufficient to maintain the credit of the company and provide a return to junior securities holders so that their confidence can be restored.

The bankers brought out that about $450,000,000 of bonds and notes of utility companies and industrials have been placed since Feb. 1 and that, despite the unprecedented quantity of money in circulation, there was such a great demand for funds for investment that there was really a serious shortage. They pointed out the features which make industrials more attractive than utility securities and were unanimous in stating that the utilities must be permitted to earn a greater margin over their interest requirements as a factor of safety.

General Daws doubted the practicability of a commission establishing a fixed rate of return. This could not possibly meet the varying conditions of the money market. He also denounced the manner in which the utilities are dragged into politics and decried the fact that the people do not get the arguments about the utilities on the square. These things, he pointed out, were among the most serious causes of the loss of confidence of investors.

High income taxes, the enormous issues of Government bonds, the large amounts of these bonds in the Federal Reserve Bank, and the practice of utilities in continually refunding their bonded indebtedness instead of taking it up were also among the reasons cited for high rates and the poor market for public utilities securities and the tightness of money generally.

Conference on Kansas City Finances

The financial affairs of the Kansas City (Mo.) Railways were discussed on April 14 when three Chicago members of the bondholders' protective committee conferred with the city transportation committee of the Chamber of Commerce which recently recommended "service-at-cost" and suggested readjustments of the company's securities.

The session was executive. Those who attended were Arthur Reynolds, vice-president of the Continental & Commercial Bank, Chicago; H. L. Stuart of Halsey, Stuart & Company, Chicago; John E. Blunt, Jr., vice-president of the Merchants' Loan & Trust Company, Chicago, and J. F. Downing, Kansas City, of the protective committee. Committeemen from the Chamber of Commerce who attended were Frank D. Askew, chairman; J. M. Bernardin, Conrad H. Mann, F. L. Hall, Herbert V. Jones and John A. Prescott.

Mr. Askew is reported to have said after the meeting that a receivership for the railway was a remote possibility. It was the consensus of opinion that the chief trouble is the company's inability to borrow money. With its present schedule of fares the company is making money, but it is unable to secure funds with which to make improvements without borrowing at rates that are ruinous.

Chicago Elevated Earnings Deficient

The earnings of the Chicago Elevated Railways for February, 1920, the first month's report under the 7½-cent rate of fare put in effect on Feb. 1, showed a net deficit of $37,524 as detailed below. Net earnings of $167,424 are compared with $218,090 for the month of January, when an 8-cent fare was in force.

Gross earnings	$1,231,511
Total expenses	1,064,087
Balance for interest	167,424
Fixed interest charges	204,949
Net deficit for February	37,524
Payroll for February, 1920	$637,660
Per cent of operating expenses paid to labor	59.9
Total passengers carried February, 1920	15,099,464
Cost of carrying each passenger in February, allowing for fixed interest charges	8.4 cents

Small Connecticut Company Doing Well

Richter & Company, Hartford, Conn., are offering at $145 a share, subject to sale and change in price, stock of the Bristol & Plainville Tramway, Bristol, Conn. This company operates an electric railway connecting the towns of Bristol, Plainville, Forestville and Terryville, furnishes electric power which it buys from the Falls Village plant of the Connecticut Power Company, in these towns, and operates a gas and heating plant in Bristol and Plainville. The bankers say that the electric railway branch of the business operates at a substantial profit and "has the distinction of being about the only street railroad to show a profit on a 5-cent fare." The present capital is $825,000. The original capital was $250,000 and this was increased to $375,000 in 1908 by a 50 per cent stock dividend. In August, 1914, the capital was increased to $562,500; in October, 1916, to $618,000, and in July, 1919, to $825,000, the present amount outstanding, all of this new stock being offered to stockholders at par. The company has paid dividends continuously since 1899. The present rate is 10 per cent. Including the value of rights which have accrued, the average return on par value during the past eight years has been about 13½ per cent.

Financial News Notes

Certifies to Stock Increase.—The Eastern Texas Electric Company, Beaumont, Tex., has filed an amendment to its charter with the Secretary of State at Austin increasing its capital stock from $2,500,000 to $4,850,000.

Lincoln Company Retires Bonds.—The $250,000 of Lincoln (Neb.) Traction Company 5 per cent bonds due Jan. 1, 1920, were retired at maturity. The company issued one-year notes in an amount sufficient to meet the bonds. The earnings of the company for the year 1919 are reported as follows: Gross revenue, $1,061,008; interest and taxes, $157,452; net revenue, $50.306.

Colorado Line May Be Abandoned.—It is stated that Judge Horace G. Lunt, attorney for the Colorado Springs & Cripple Creek District Railway, Colorado Springs, Col., is to make application to the federal court for permission to discontinue operation over most of the line. This is due primarily to lack of freight shipments and the consequent loss in operating revenue.

Relief from Tax Refused.—The City Commission of Tulsa, Okla., has denied the petitions presented by the Tulsa Street Railway and the Oklahoma Union Traction Company asking exemption from the payment of the gross revenue tax of 2 per cent levied by the city and also from payment of $100 per car per year bonus assessed by the city. These assessments are provided by the franchises which were granted to each company.

$4,200,000 Issue Before Commission.—The United Railways, St. Louis, Mo., has filed formal application with the Public Service Commission for the issuance of $4,200,000 of receiver's certificates. Of this amount $1,900,000 is to be used to take up a similar amount of bonds of the Broadway line, which mature on May 1, and the remainder is to take up $2,300,000 of receiver's certificates issued last Aug. 18, to mature in one year. The rate of interest asked to be approved for the new certificates is 7 per cent.

Scrip Dividend Covering Four Quarters.—The scrip dividend of 6 per cent which was declared on March 31 on the preferred stock of the Kentucky Securities Corporation, Lexington, Ky., represents the four accumulated quarterly dividends of 1½ per cent each of Oct. 15, 1918, Jan. 15, April 15 and July 15, 1919, being all the accumulated and unpaid dividends to April 15, 1920. This dividend scrip is payable in cash at the company's option on or before April 10, 1925. It will be mailed to holders of the preferred stock on or before April 30, 1920.

Boston Company Would Use Subway Fund.—H. Ware Barnum, general counsel for the Boston (Mass.) Elevated Railway, on April 15 requested for the trustees permission of the State Department of Public Utilities to use $3,081,000 of the funds received for the Cambridge subway for payment of outstanding notes. The trustees desire to use $1,500,000 for the redemption of notes of the Boston Elevated Railway and $1,581,000 to take up obligations of the West End Street Railway. By this proposed transaction, Mr. Barnum said, a substantial saving in interest will be made. There was no opposition to his petition.

Preparing to Foreclose.—The Guaranty Trust Company, New York, N. Y., through its attorneys, Stetson, Jennings & Russell, has filed in the County Clerk's office a lis pendens preliminary to foreclosing a mortgage aggregating $18,061,289 against the property of the New York Railways. The mortgage covers all of the rolling stock, franchises and other property. The company is now in the hands of Job E. Hedges as receiver. The action was taken by the trust company to protect its interests. The mortgage, dated Jan. 2, 1912, was to secure an issue of New York Railways thirty-year first real estate gold bonds.

Texas Road Sold Under Foreclosure.—The property of the Greenville Railway & Light Company, Greenville, Tex., has been sold at public auction under a decree issued by the United States Court for the Northern District of Texas to satisfy a judgment in favor of the Dayton Savings & Trust Company, Dayton, Ohio. The property was sold to the Dayton Savings & Trust Company for $26,000. The trust company held bonds issued by the railway and light company to the amount of $444,170, on which interest payments had been defaulted. It is announced that the company will continue to operate under the new ownership without material change in management or policies.

Brooklyn Lines Discussed at Inquiry.—The affairs of the Brooklyn City Railroad were discussed at length at the session of the Board of Estimate of New York City on April 28. W. D. Loudoun, Deputy Commissioner of Accounts, testified concerning the operating income of the Brooklyn City lines. He declared that the company had provided $300,000 to pay a dividend of 2½ per cent on a capitalization of $12,000,000 for the first quarter of the fiscal year 1920. Dr. John Bauer, financial adviser to the corporation counsel, discussed the financial condition of the New York Municipal Railway Corporation. He declared that the company was overcapitalized. The board will resume the traction inquiry on May 5.

Abandonment May Follow Wage Demands.—Demands of employees of the Buffalo & Lake Erie Traction Company, Buffalo, N. Y., for salary increases aggregating more than $80,000 annually may result in the abandonment of the interurban line between Buffalo and the Pennsylvania State line. George Bullock, receiver for the road, proposes a conference with members of the bondholders' committee at which he will probably recommend that attorneys for the road ask for an order directing the sale of the property under foreclosure. If the main line is abandoned, it is expected that the Fredonia-Dunkirk branch will be continued, because this division is said to be the only stretch of the road which is meeting expenses.

Berlin Bonds Appear to Be Bargain.—Von Polenz & Company, Inc., New York, N. Y., and Berlin, Germany, own and offer for "spot delivery at New York" 4,000,000 marks of 4 per cent bonds of the Electric Elevated & Subway Railway incorporated in 1897 and operating about 17 miles of standard gage elevated and subway railways in Berlin. The bonds are in denominations of 500 and 1,000 marks. They are being offered at $20.50 per 1000 marks. At the normal rate of exchange the bonds would be worth about $238 per 1000 marks. If the coupons are cashed at the present low rate of exchange the bonds net 4 per cent. The annual interest figured at normal exchange would amount to $10.71, or more than 50 per cent.

Plan an Appraisal Board.—An ordinance has been introduced in the City Council of Seattle, Wash., providing for the appointment of a board of appraisers to determine a purchase price at which the city may acquire the lines of the Seattle & Rainier Valley Railway. The bill provides for three appraisers, one appointed by the Mayor, one by the company, and the third by the two appointed members. The bill also provides an appropriation of $5,000 from the general fund to recompense the board, the company to furnish a like amount. The company recently offered the city its lines for $1,656,000. Councilman William H. Moore, empowered by the utilities committee to make an appraisal for the city, fixed the valuation at $837,565. The appraisal board is expected to adjust the discrepancy in the two valuations.

Dallas Earns Small Return.—The Dallas (Tex.) Railway earned a return of 4.98 on its investment during March, according to figures given out by Richard Meriwether, vice-president and general manager. Gross earnings amounted to $248,372 and total expenditures to $211,921. A total of 5,395,000 passengers were carried during the month, of which number 13.3 were transfer passengers. Street cars during the month traveled 619,336 car-miles, averaging 8.7 passengers per mile at an average speed of 9.1 miles an hour. Approximately $78,000 was spent in improvements during the month. Included in this sum was the Myrtle Street extension and reconstruction work on Ervay Street and Jefferson Avenue. Of the total amount of expenditures $37,558 was for repairs to track and $21,986 on equipment.

Traffic and Transportation

Utilities Board Abolished

British Columbia Electric Railway Finds Itself Face to Face with Anomalous Conditions

The Public Utilities Commission of British Columbia has been dissolved by the Legislature of the province. The act on April 17 only required the signature of the Lieutenant Governor to become law. Very little scope had been left to the commission as the railway lines of the British Columbia Electric Railway had been taken from the control of the province and placed under the Dominion Railway Board.

Wants Local Regulation Restored

Petitions had been presented to the Dominion Government to have the railway restored to provincial control. The removal of this railway from the jurisdiction of the provincial commission was clearly established as being a mistake on the part of the Dominion House of Commons, and already reports have been received in Vancouver that the act has been passed amending this control and placing the British Columbia Electric Railway back under provincial jurisdiction.

The provincial Legislature of British Columbia provides in repealing of the public utilities act for the revival of all agreements binding the railway as if the public utilities act had never been passed. Just what effect this will have upon the 6-cent fare charged in Vancouver, New Westminster and other communities is somewhat doubtful. The company's franchise provides for a fare of 5 cents. The 6-cent fare was granted until April 9, 1919. Consequently the provincial government, by the public utilities act, extended this privilege until the Public Utilities Commission could investigate the necessity for such a fare.

Confirmed by Railway Board

That is, the British Columbia Electric Railway was removed from the jurisdiction of the province, its fares were confirmed by the Dominion Board of Railway Commissioners, and it is now under such confirmation that fares are being charged. If the Dominion government should cancel this jurisdiction over the company, this would throw the company back on original agreements, and it would then be without recourse to either Dominion or provincial commissions.

Another curious feature of the repealing act of the provincial government is a clause which might be said to confiscate one-half of some $48,000 now held in trust by the railway. It was decided in the public utilities act that the provincial government continue the 6-cent fare after April, 1919, and that the additional cent over the 5-cent statutory fare should be paid into a fund until such time as the provincial commission could investigate the merits of the 6-cent fare. If it transpired that the company was not entitled to this additional cent, the fund was to go to the Vancouver General Hospital for its benefit.

$48,000 Fund for Distribution

The contributions to the fund up to July 7, 1919, amounted to about $48,000. They stopped on that date owing to the company coming under the jurisdiction of the Dominion government and having its fares approved. The repeal act now contains a clause to the effect that this fund shall be divided equally between the railway and the Vancouver General Hospital without suggesting that any investigation whatever as to the merits of the fund be made. Whether or not this is confiscation it is difficult to say, but it appears quite probable that the cost of giving service from April to July 7, 1919, warranted much more than a 6-cent fare, in which case the British Columbia Electric Railway would be entitled to the whole of the fund.

New Buffalo Fare in Effect

The 7-cent fare authorized several months ago by the Public Service Commission was put into effect on the Buffalo, N. Y., lines of the International Railway at 6 a.m. on April 18. Four tickets are sold for 25 cents. The tickets were placed on sale in the company's ticket offices three days before the fare increase went into effect. The tickets are now sold by conductors and ticket salesmen stationed at congested points.

The effort failed that was made by the municipal authorities to stop the increase from becoming effective through formal application for a stay pending a review of the Public Service Commission's decision. The court refused to grant a stay. The International Railway at its own request was made a party to the proceeding, which was argued in the Supreme Court in Troy on April 17.

The International Railway still is trying to have the city join with it in an application to the Public Service Commission to restore the basic 5-cent fare and make a 3-cent charge for the first transfer and a 2-cent charge for the second transfer. The city insists upon a 2-cent charge for the first transfer and a 1-cent charge for the second transfer, pending a final solution of the traction problem through a service-at-cost plan.

Service at Cost Proposed

Rochester Mayor Takes Action to Relieve New York State Railways—Wants Service Improved

Several years of legal warfare over the question of the 5-cent fare in Rochester, N. Y., culminated on April 27 in a recommendation by Mayor Edgerton that the Common Council enter into a new agreement with the New York State Railways for a service-at-cost plan. The Council was requested to make an investigation at once, and if it deemed such an agreement advisable to direct the preparation and execution of a cost-of-service contract. The company has announced its willingness to accept the new plan.

It was pointed out to a representative of the ELECTRIC RAILWAY JOURNAL by Corporation Counsel Charles L. Pierce that any agreement which might be entered into embodying the ideas set forth in the Mayor's communication to the Council would not abrogate the contract now existing between the city and the company. The law committee of the Council will determine, after a public hearing, whether the plan shall be given a trial, and it is predicted that a favorable report will be presented on May 4.

The Council will be called upon to designate a basis for arriving at a valuation upon which a return is to be fixed. The three courses open to the Council, one of which must be adopted, follow:

1. Base it upon the original cost of the company's physical property, add cost of extensions and deduct depreciation.
2. Set the valuation at the present cost of replacement of the company's equipment.
3. Make it the cost of replacement under pre-war or normal conditions.

Since the rejection of the city's plea to the Public Service Commission to compel the company to improve service the Mayor has apparently become convinced that the establishment of better service is dependent upon allowing the company a higher fare. Mayor Edgerton stated in his letter to the Council that the company had agreed to accept the following terms:

That they are willing that the arrangement shall include a system of bookkeeping which shall positively disclose all transactions within the city of Rochester, in order that we may know exactly what the income is from the city system and what is done with the money, the books to be kept under the supervision of representatives of the city, who shall be paid by the company.

That the contract shall also provide for operation under the absolute control of a commissioner to be appointed by the city and paid by the company, in whose hands shall be placed the matter of schedules, routing, equipment, extensions, and all other things having to do with operation.

The representatives of the company further indicate that they are ready to agree that the company shall receive from operations in the city of Rochester as its sole compensation, only such an amount as will equal a fair return, to be fixed by agreement, upon the value of the property actually used in the service in Rochester; this value to be agreed upon if possible, and if not, to be determined by arbitration. The return which the company will get under such an agreement will have no relation whatever to the amount of its capital stock or bonds and the rate of fare charged will always be fixed at just enough to pay the cost of operation and upkeep and the aforesaid return on the value of the property used.

Favors Canton Increase

Peter Witt Recommends Straight 5-Cent Fare with 1-Cent Transfer Charge—Matter Before Council

After making an examination of the books and a survey of the Canton (Ohio) city lines of the Northern Ohio Traction & Light Company, Peter Witt, Cleveland traction expert, has recommended a straight 5-cent fare, with a charge of 1 cent for transfers. The rate is now six tickets for a quarter, no charge being made for a transfer. An effort was made to have Mr. Witt's report acted upon at the City Council meeting on April 20, but the matter was finally referred to the Council's public utilities committee. The company desires a decision as soon as possible because of the negotiations that are now under way with employees on the question of a new wage scale.

Last year the company received from fares $651,915. The number of revenue passengers carried was 14,821,152 and the number carried on transfers was 2,689,410. If the amount due the property from the receipts had been put back into it, Mr. Witt said the books would have shown a loss of $26,236. The company claims that it will need an additional $125,000 this year to take care of the increase it must grant employees and the higher prices it must pay for materials. This, Mr. Witt said, he does not dispute. This sum added to the receipts of last year, plus the amount necessary to recoup the loss, shows that $803,151 will be needed to furnish the same service that was given last year.

Would Yield $886,034

Mr. Witt estimates that there will be an increase of 15 or 20 per cent in the traffic this year and that the rate he has suggested will yield about $886,034, which should allow a net dividend of $83,152. While this would be wholly inadequate as a return on the investment, Mr. Witt says there are certain economies which can and should be put into effect that will result in a saving large enough to finance the improvements which the lines need.

Mr. Witt finds that cars are not kept in good condition because the ordinance against smoking and spitting on the floor has not been enforced. He suggests that the ordinance requiring car doors to be left open when crossing steam and electric railway tracks be repealed. This recommendation will likely be adopted, as there appears to be a sentiment in favor of it.

A portion of the report reads:

> In the light of what has happened wisdom decrees that whatever changes are made should be made with a clear understanding that if the rate of fare to be provided proves at some future date to be too high the right of the city to order a reduction should not be questioned; should it prove to be too low a corresponding right should lie with the company for an increase, in order that it may protect its property and be assured of an income that will make possible the financing of the extensions and betterments the conditions of the city will require to take care of Canton's growth.

Mr. Witt was employed by the city of Canton to make a survey of street railway conditions and report his conclusions to the City Council. In return for an increase in the rate of fare he holds that the company should double-track its line throughout the city. Adequate service, he points out, is impossible without this improvement. Mr. Witt suggests that three of the five tracks in the public square be removed. He also advised the erection of shelter sheds for waiting passengers in that location.

Seven Cents in Parkersburg

The West Virginia Public Service Commission has granted an increase of 2 cents on fares to the Monongahela Valley Traction Company. The new fare is 7 cents on all local lines and on the interurban lines will be 7 cents in each zone between Parkersburg and Williamstown. Through fare from Parkersburg, W. Va., to Marietta, Ohio, will remain at 25 cents as heretofore.

The following schedules will prevail regarding the selling of books and special ticket books:

Book containing fifty tickets, each ticket good for 7-cent fare, $3.25.
Book containing 100 tickets, each ticket good for 7-cent fare, $6.50.
Strips of fifteen tickets, each ticket good for 7-cent fare, $1.
Strips of ten tickets, each ticket good for one continuous fare between Parkersburg and Greenmont, 70 cents.
Scholar's book containing twenty tickets, each ticket good for 7-cent fare, 70 cents.
Scholar's book containing 100 tickets, each ticket good for 7-cent fare, $3.50.
Scholar's book containing twenty tickets, each ticket good for one continuous passage between Williamstown and Central, 70 cents.
Scholar's book containing twenty tickets, each ticket good for one continuous passage between Parkersburg and Greenmont, 70 cents.
School tickets shall be good for transportation of any school child on any day during the school year between the hours of 7 a.m. and 6 p.m.

Transportation News Notes

Wants More in Texarkana. — The Southwestern Gas & Electric Company, Texarkana, Ark., has announced that it will shortly apply for an increase in fare from 5 cents to 7 cents. The company operates in Texarkana, Ark., and Texarkana, Tex.

Two Killed in Head-On Wreck.—A head-on collision involving two of the cars of the Northampton (Mass.) Street Railway on April 15 resulted in the death of two persons and in the injury of several others. The motormen of both cars were killed.

Fare Increase Suspended.—The New Jersey Board of Public Utility Commissioners recently suspended a rate schedule of the Jersey Central Traction Company, Keyport, under which the company proposed to raise its rate in each zone from 7 cents to 10 cents.

Six-Cent Fares Continued.—The Illinois Public Utilities Commission has issued an order continuing in effect until May 30 next the 7-cent fare now being charged by the Quincy Railway. The 6-cent fare charged by the Evanston Railway is also continued in effect until May 30.

Asks Higher Token Rate.—The Lincoln (Neb.) Traction Company has applied to the State Railway Commission for permission to raise the price of tokens from four for 25 cents to three for 20 cents. The commission some time ago authorized the company to charge a cash rate of 7 cents for a period of six months.

May Raise Grand Rapids Rate.—The Grand Rapids (Mich.) Railway has intimated that it will shortly make application for a higher fare, owing to increase in operating expenses. The company operated at a loss of $17,425 in March, bringing the deficit for the first three months of the present year to $37,016, as against $1,427 for the corresponding period in 1919.

Ten Cents on Maine Road.—The Atlantic Shore Railway, Sanford, Me., has filed with the State Public Utilities Commission a tariff, effective May 5, under which it proposes to raise its fare from 8 cents to 10 cents in each zone. The ticket rate will be increased from seven tickets for 50 cents to ten for 90 cents. The rate between Sanford and Springvale will remain unchanged.

Parallel Parking in Akron.—An ordinance providing for parallel parking of all vehicles on all streets and limiting the duration of parking to one hour on the downtown streets has been adopted by the City Council of Akron, Ohio. This measure will provide an effective relief to the passage of electric cars through the downtown district, and by thus speeding up the service will provide better transportation facilities.

Three-Cent Line in Need.—An increase in fare from 3 cents to 4 cents is asked by the Van Brunt Street & Erie Basin Railroad, Brooklyn, N. Y., in an application filed recently with the Public Service Commission for the First District. The road proposes to install the new rate on May 6. The company operates 3 miles of line. An application for a 4-cent fare was denied by the commission several months ago.

Connecticut Zone Order Appealed.—The Connecticut Company on April 29 presented a formal appeal to Judge Hinman in the Superior Court from the recent decision of the Public Utilities Commission with respect to the modification of the system of zone fares in use on its lines. It is said that the company is preparing to comply on May 9 with the commission's order. The case of the railway against the commission may not come to trial until some time in the fall.

Refuses to Enjoin Commission.—The Supreme Court of Florida on April 18

denied the application of the city of Pensacola for a writ of prohibition to restrain the State Railroad Commission from taking jurisdiction of the application of the Pensacola Electric Company for an increase in fare to 7 cents. The court some time ago, in the case of the Jacksonville Traction Company, ruled that the commission had power to fix rates of fare, municipal franchise provisions limiting the fare notwithstanding.

Additional Zone Authorized. — The Ohio Valley Electric Railway, Huntington, W. Va., has received permission from the Interstate Commerce Commission to install an additional 5-cent fare zone on its line between Huntington and Ceredo, W. Va. The price of a round-trip ticket between Huntington and Ceredo has been fixed at 25 cents, and between Huntington and Camden Park at 15 cents. The new rates went into effect on April 15.

Fares Up on Penn Line.—The Chambersburg, Greencastle & Waynesboro Street Railway, Waynesboro, Pa., has filed with the State Public Service Commission a new schedule of rates, effective May 12, and increasing existing rates. Coupon books will be sold at the existing rate of $1, but the number of tickets therein is decreased from eighteen tickets to sixteen. The zone rate is increased from 6 cents to 7 cents and the round-trip ticket between Pen-Mar and Blue Ridge is withdrawn.

Asks Lines' Co-operation.—The Connecticut Public Utilities Commission has asked the street railways and steam roads of that State to co-operate in the transportation of seeds, nursery stock, fertilizer and agricultural implements and supplies of all kinds. The commission points out that the necessity for agricultural production was never more imperative than at the present time, and that every reasonable assistance should be given to insure maximum results.

Bus Line Starts in Wilmington.—The People's Bus Line, Wilmington, Del., has begun the operation of motor buses in competition with the line of the Wilmington & Philadelphia Traction Company, between the Pennsylvania station and Thirtieth and Washington Streets. The fare is 5 cents, while the trolley fare is 7 cents, or four tickets for 25 cents. A number of the carmen of the Wilmington & Philadelphia Traction Company recently protested to the Wilmington Streets & Sewer Department against the bus competition, asserting that delays incident to it interfered with car schedules.

Would Raise Halifax Fares.—A bill has been introduced in the Nova Scotia House of Assembly which, if enacted, will permit the Nova Scotia Tramway & Power Company, Ltd., Halifax, to raise its cash fare to 7 cents. The measure calls for the sale of four tickets for 25 cents and sixteen for 90 cents. The bill provides that the company shall not be required to use a paving material more expensive than that which the city uses on its portion of the work. Another provision of the bill is that after July 1, 1921, the Board of Public Utilities shall have jurisdiction over the rates to be charged by the company. At present this is solely the prerogative of the Legislature.

Eight-Cent Fare Petition Filed.—Formal application has been made to the Georgia Railroad Commission by the Georgia Railway & Power Company, Atlanta, for an increase in fare from 6 cents to 8 cents. The commission has set June 1 for a hearing on the company's petition. The company also seeks an increase of approximately 30 per cent in gas rates and of 20 per cent in lighting and power rates. The petition points out that no dividends have been paid by the company on any class of stock since August, 1914, and that accumulated dividends owed on preferred stock now total 24½ per cent. or $2,000,000. The company's payroll for the current year will, it is estimated, exceed that for 1919 by $450,000.

Asks 7 Cents in Denver.—Application for a 7-cent car fare has been made to the City Council of Denver, Col., by the Denver Tramway through initiated petitions bearing the signatures of 4,700 residents. Under the charter 2,548 signatures were necessary. The petitions were attached to an initiated ordinance that seeks to take the place of the present 6-cent fare ordinance. Under the charter the Council must either pass the initiated measure within thirty days or refer it to the people at the election in May, 1921. The company has made application for an increase in fare to meet the recent advance in wages, from 48 cents to 58 cents an hour, granted the 1,100 members of the carmen's union by an arbitration board.

Wants Commission Enjoined. — The Charleston-Isle of Palms Traction Company, Charleston, S. C., has brought suit in the Federal District Court to annul the order of the South Carolina Railroad Commission refusing the company permission to establish a zone-fare system on its line. The court has set May 5 for a hearing of the case. The commission allowed the company to charge a straight fare of 3 cents a mile and a minimum fare of 5 cents between stations. However, when the company attempted to put into effect the zone system it was prohibited by an order of the commission, on the ground that the fares charged would be in excess of 3 cents a mile, which is the amount set in the statutes of the State for railway passenger fares. The company alleges that the order of the commission was confiscatory, and for that reason is in contravention to the Constitution of the United States.

Long Island Increase Approved.—The Public Service Commission for the Second District has issued an order authorizing the New York & North Shore Traction Company, Roslyn, N. Y., to increase its fare from 5 cents to 7 cents in each zone, with an 8-cent fare in each of the two zones between Mineola and Hicksville, where the fare is now 6 cents. The commission's order is effective on five days' notice. The Public Service Commission for the First District last August authorized the road to increase its rates on its line within the corporate limits of New York City. On Feb. 2 last the Board of Supervisors of Nassau County, through which the company operates, adopted a resolution modifying the road's franchises so as to permit the fare increase which has now been sanctioned by the Second District Public Service Commission. Owing to blocking of the line by snow and ice the road suspended operation on March 1.

Wider Powers for Ohio Commission. —The powers of the Ohio Public Utilities Commission are materially augmented by the terms of the Robinson law, which became effective on April 16. Under the new statute, when a public service corporation wishes to make an increase in its service schedules, a copy of the new rates must be filed with the commission at least thirty days prior to the effective date. Should protest be made the new schedule may be suspended pending investigations and hearings. However, the schedule may be put into effect if the company furnishes a satisfactory bond or undertaking, guaranteeing the refund of the additional charge in case the rates are found unjustified. Patrons or consumers must be given notice through advertisements of the intention of the company to increase its rates. This is to be done by placing advertisements in one newspaper at the seat of each county where the rates apply or one newspaper of general circulation covering the entire territory affected.

Congestion Due to Narrow Streets.—Narrow streets are given as a leading cause of congestion in the business district of Los Angeles, Cal., in a report recently issued by George B. Anderson, recently appointed manager of service of the Los Angeles Railway. Mr. Anderson has been making a study of traffic conditions in Los Angeles and other cities for several months past. His report indicates that, with possibly one exception, Los Angeles probably suffers more from congestion than any other city in the country. The report points out that in an area twenty-three blocks square only 22.5 per cent of the space lies between the curbs which parallel the streets. The sidewalks take up but 11.9 per cent of the space and alleys and private streets 2.5 per cent, while business blocks occupy 63.1 per cent of the area. Mr. Anderson points out that Portland gives over 34.41 per cent, Seattle 32.20 per cent and San Diego 40.6 per cent of the streets in the business district to roadways, while Los Angeles gives only 22.5 per cent of the area to thoroughfares. A drastic "no parking" ordinance was recently put in effect in Los Angeles.

Personal Mention

Promotion for Mr. Boyce

Superintendent of Beaver Valley Lines Made General Manager—A Pioneer in Public Relations Work

William H. Boyce, superintendent of the Beaver Valley Traction Company, New Brighton, Pa., has been promoted to the position of general manager of the company. Mr. Boyce has also been made general manager of the Pittsburgh & Beaver Street Railway. Together the two systems operate more than 50 miles of railway line and serve Beaver Falls, New Brighton and other towns in the Beaver Valley of Pennsylvania.

Mr. Boyce has made a substantial place for himself in the electric railway field as one of its most progressive operators. He has been very successful in his relations with labor and in his general public relations work. This is so far true that his advice is sought on civic and other problems. His courtesy and accident prevention campaigns in particular have attracted attention and been the subject of review in this paper.

W. H. BOYCE

Long ago publicity became a regular feature on the Beaver Valley line. There is also a service bureau to handle all complaints, service suggestions and accident prevention measures. This bureau was established early in 1919, but long before that time Mr. Boyce laid the foundation for its conduct by his policy of frankness and his expressed willingness to accept suggestions about the company from outside sources. He is serving this year as a member of the committee on merchandising transportation of the American Electric Railway Association.

Mr. Boyce entered electric railway work in 1902 as a trainman with the Terre Haute Traction & Light Company, Terre Haute, Ind. In 1903 he went to Dallas, Tex., as superintendent of the meter department of the Dallas Electric Light & Power Company. He was later made assistant superintendent of the company, but shortly thereafter was transferred to Sherman, Tex., where he served for several months as superintendent of the Sherman Gas & Electric Company. In 1906 he returned North, and for the next three years served as assistant superintendent of transportation of the Pittsburgh Railways. He resigned from this position in 1909 to become superintendent of the Beaver Valley Traction Company and the Pittsburgh & Beaver Street Railway.

W. E. Wood, New Houston Manager

W. E. Wood has resigned as general manager of the Galveston (Tex.) Electric Company to become general manager of the Houston Electric Company and the Galveston-Houston Electric Railway, with headquarters in Houston, Tex. Both the Galveston Electric Company and the Houston Electric Company, as well as the Galveston-Houston interurban road, are Stone & Webster properties. Mr. Wood succeeds E. L. Milliken, who has been transferred to the Boston office of Stone & Webster. Mr. Wood will divide his time between Galveston and Houston for the present.

Mr. Wood has been in charge of the Galveston property since September, 1918. He has been connected with the Stone & Webster organization since his graduation from the Georgia Institute of Technology in 1907. He spent the year following his graduation in the home office of Stone & Webster, in Boston, Mass., and was then transferred to the Jacksonville (Fla.) Traction Company, where he worked in several departments as a student. In 1912 he was made superintendent of the Jacksonville system, continuing to serve in that capacity until 1916, when he was transferred to Houston as general superintendent of the system there. He was subsequently appointed manager of the El Paso Electric Company and, still later, manager of the Galveston Electric Company.

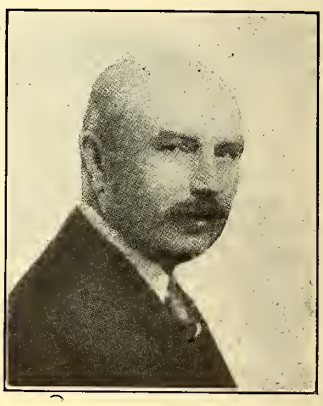
E. L. Milliken, manager of the Houston (Tex.) Electric Company, has been transferred to the home office of Stone & Webster, Boston, Mass. Mr. Milliken was appointed manager of the Houston system in the fall of 1919. Prior to that time he was manager of the Houghton County Traction Company, Houghton, Mich. A biography of Mr. Milliken was published in the ELECTRIC RAILWAY JOURNAL for Nov. 8, 1919.

W. M. Casey in Buffalo

Joins International Railway as General Superintendent—Formerly in Washington and Denver

William M. Casey, whose appointment as general superintendent of the International Railway, Buffalo, N. Y., was briefly noted in last week's issue, goes to Buffalo from Washington, D. C., where for the past year and a half he has held the position of superintendent of transportation of the Washington Railway & Electric Company. Mr. Casey assumes the position with the International left vacant by the resignation of J. O. Weigel, noted in last week's issue.

Mr. Casey was born in Ireland in 1870. Coming to the United States with his parents at an early age, he lived for several years in Lawrence, Mass., where he received his schooling. In 1888 he went West and enlisted in the United States Army, then engaged in putting down insurrections of the Indian tribes. Promoted to the rank of sergeant, he served with distinction in several campaigns, receiving an honorable discharge in 1891. In the following year he entered the employ of the Denver City Cable Company as a motorman. He was promoted to carhouse foreman in 1893, serving in that capacity until 1902, when he was advanced to the position of division superintendent of the Denver Tramway. Seven years later he was again promoted, being made trainmaster in charge of traffic and discipline and later general superintendent of transportation.



W. M. CASEY

He resigned his connection with the Denver system in 1916 to join the staff of John A. Beeler, traffic expert, then engaged on a survey of the electric railway lines in Washington, D. C. During his association with Mr. Beeler, Mr. Casey had an opportunity to broaden his knowledge of transportation subjects. In 1918 he was appointed superintendent of transportation of the Washington Railway & Electric Company, and served in that capacity until his appointment at Buffalo.

More Chicago Changes Announced

Rolling Stock Maintenance Department, Chicago Surface Lines, Reorganized—Several Promotions Announced

For the purpose of securing increased efficiency the personnel of the rolling stock maintenance department of the Chicago (Ill.) Surface Lines has been reorganized. H. H. Adams, superintendent of shops and equipment, has announced the following appointments: Donald McGill to be assistant superintendent of shops and equipment, in charge of the South Side shops and the South Division carhouses. Thomas H. Shaughnessy to be assistant superintendent of shops and equipment, in charge of the West Side shops and the North and West Division carhouses. Howard Alton to be general foreman of the South Side shops and the South Division carhouses. Benjamin Phillips to be general foreman of the North and West Division carhouses. E. J. Sigwalt to be chief clerk, shops and equipment department, with headquarters at the West Side shops. Harold Page to be chief clerk of the South Side shops and the South Division carhouses.

DONALD McGILL has been with the Chicago City Railway and the Chicago Surface Lines for more than twenty-five years. Entering the employ of the lines on March 29, 1895, as a car wireman, he progressed through the positions of foreman of car wiring and foreman of the armature department to that of general foreman. Later he became superintendent of the Vincennes shops, now known as the South shops of the Chicago Surface Lines. Mr. McGill was born at Knoxville, Ill., on May 12, 1872. He received his education at Kearney, Neb. He then spent two years in power house work with the Kearney Light & Power Company. For two years thereafter he was employed by the Harter Construction Company, Chicago, electrical contractors, where he had charge of the electrical installation work in various plants, including some of the World's Fair buildings.

Thomas H. Shaughnessy began his career in the electric railway field in the mechanical department of the City & Suburban Railway, Baltimore, Md. After serving this company for nearly two years he became a carhouse foreman and later mechanical inspector for the Philadelphia Rapid Transit Company, continuing in these positions from 1894 to 1908. From 1908 to 1912 he was general foreman of carhouses under the receiver of the Metropolitan Street Railway, New York City. He then left New York to become master mechanic of the Essex Division, Public Service Railway of New Jersey, remaining in this position for more than a year. Going to Chicago in June, 1913, he became general foreman of the West Side shops of the Chicago Railways. He continued in this position until his recent promotion to assistant superintendent of shops and equipment with jurisdiction over carhouses and the general maintenance of cars.

Howard Alton was born in Wheeling, W. Va., in 1872. He began his railway experience with the Milwaukee Electric Railway & Light Company, working in the armature room for about one year. In 1894 he started work for the Chicago City Railway, bonding the track in connection with the electrification of the Halsted Street line. Shortly thereafter he was placed in charge of night repair work at the Sixty-ninth Street carhouse, and later was made foreman of the carhouse at Sixty-first and State Streets. In 1901 he was promoted to the position of assistant master mechanic in charge of all carhouses of the City Railway. Six years later he went to Galesburg, Ill., as general superintendent of the People's Traction Company. Remaining in this position about two years, he returned to the Chicago City Railway in 1909 to accept the position of general foreman of the Vincennes shops, which position he has held until receiving his present promotion.

Benjamin Phillips assumes the position of general foreman of the North and West Side carhouses, reporting to Mr. Shaughnessy, after eighteen years' service with the North and West Side railway lines of Chicago. He entered the employ of the Union Traction Company in 1902 as a workman in the mechanical department. He was promoted in 1907 to the position of foreman of the Devon Avenue carhouse. In 1911 he was made general foreman of the North and West Side carhouses of the Chicago Railways. Upon the consolidation of the surface railways in 1914 he was made assistant general foreman of the North, West and South Side carhouses, continuing in this capacity up to the present time. Mr. Phillips was born in Pennsylvania in 1877. He gained his first railway experience as a motorman with the Scranton Railway. He spent six years in this work, then joining the Union Traction Company.

E. J. Sigwalt has served the Chicago Railways and its successor, the Chicago Surface Lines, as a clerk in the shops and equipment department since 1912. Prior to that he was an inspector at the railways shops for the Board of Supervising Engineers, Chicago Traction, this work dating back to 1909. He also served the Twin City General Electric Company, Ironwood, Mich., for one year as an electrician.

Harold Page was born at St. Cloud, Minn., in 1893. He entered railway work with the Chicago City Railway in 1912. His first work was in connection with the efficiency and time studies made of various shop operations at the Vincennes shops. In 1916 he left the company for a few months, but returned to take charge of this time study and efficiency work, continuing in this capacity until his present assignment as chief clerk of the South shops and South Division carhouses.

E. J. Mehren to Investigate European Conditions

E. J. Mehren, editor of *Engineering News-Record*, controlled by the McGraw-Hill Company, publishers of the ELECTRIC RAILWAY JOURNAL, sailed for Europe on the *Adriatic*, April 24. He will study conditions in the civil engineering field in England, France and Germany and will be abroad until the latter part of August. Mr. Mehren has also been appointed special agent for the United States Bureau of Public Roads, and will secure certain information while abroad for that organization.

C. R. Lewis, superintendent of the Wichita Railroad & Light Company, Wichita, Kan., has resigned.

E. H. Rowell has succeeded **H. W. Patten** as superintendent of the Topeka (Kan.) Railway. Mr. Rowell was formerly claim agent of the company.

E. L. Lewis, for a number of years general superintendent of the Los Angeles (Cal.) Railway, has been made assistant to the general manager.

H. W. Patten, superintendent of the Topeka (Kan.) Railway, has been appointed superintendent of the Wichita Railroad & Light Company, Wichita, Kan., to succeed C. R. Lewis.

J. E. Watkins has succeeded W. H. MacAloney as superintendent of rolling stock of the Winnipeg (Man.) Electric Railway. Mr. Watkins was formerly connected with the British Columbia Electric Railway, Vancouver, B. C.

Frank Van Vranken, assistant superintendent of the Los Angeles (Cal.) Railway, has been advanced to the position of general superintendent. Mr. Van Vranken succeeds E. L. Lewis, who becomes assistant to the general manager.

Robert P. Woods, city member of the board of control of the Kansas City (Mo.) Railways, has been elected vice-president and general manager of the Kansas City, Clay County & St. Joseph Railway, succeeding J. R. Harrigan, who died recently.

J. B. Mack, formerly publicity manager for the municipal electric railway at Calgary, Alberta, has become associated with the New Brunswick Power Company, St. John, N. B., of which Thomas H. McCauley, formerly of Calgary, is now general manager.

George B. Anderson, who for some time past has been in charge of the bureau of public relations of the Los Angeles (Cal.) Railway, has been appointed manager of service of the company. In his new capacity Mr. Anderson will direct the training and disciplining of the system's employees.

Manufactures and the Markets

DISCUSSIONS OF MARKET AND TRADE CONDITIONS FOR THE MANUFACTURER, SALESMAN AND PURCHASING AGENT

ROLLING STOCK PURCHASES BUSINESS ANNOUNCEMENTS

Electric Sheet Mills to Book Orders

One Mill Now Accepting Business and Others Are Expected to Follow During May

Producers of electric sheets have not in general opened their books for third-quarter or second-half year buying. The one producer who did open his books about the middle of April is reported to have based his prices on those suggested in the Industrial Board schedule. Prospective output is being allotted to the company's regular customers. It is expected that the other electrical sheet producers will open for the next quarter and half year some time between the tenth of May and the end of the month. As far as can be learned it is thought that the prices will be no higher than those ruling for the present term. The feeling is that prices are sufficiently high as they are and that a feeling of relief would follow a halt in the upward movement of steel products.

Mills can do no more than to apportion out their sheets as they did earlier in the year. There is little more capacity available now than formerly, although one mill expects a bigger output about September. No bigger volume of ordering is expected. The demand is about that which existed over the earlier part of the year, and that demand was not satisfied, so a greater demand certainly cannot be filled. What new customers in the field will do for sheets it is hard to predict. Probably a good part of their demand can be satisfied through the jobbing interests at a rate higher than that of the producers. The regular customers will be pretty well cared for, however. Recent shipments have been badly held up by the railroad strikes. Some mills will not be able to clean up on their second-quarter deliveries until along in August because of curtailed production, shortage of raw materials and stoppage in freight movement.

New Westinghouse Company

The recent organization of the Westinghouse Union Battery Company in Pittsburgh marks an important new entry in the field of storage battery manufacture. The new company will produce storage batteries for train lighting and railway signals, starting and lighting, trucks, tractors, motor boats, airplanes and for home lighting systems.

A. L. Humphrey, president of the Westinghouse Airbrake Company, is chairman of the board of directors; D. F. Crawford, vice-president and general manager of the Locomotive Stoker Company is president, and T. R. Cook, formerly chief engineer and general production manager of the Willard Storage Battery Company, is vice-president and general manager; T. S. Grubbs, vice-president of the Union Switch & Signal Company, is also vice-president and secretary of the new organization.

The company is now occupying three floors of the Union Switch & Signal Company's factory at Pittsburgh. The initial production will be from 1,200 to 1,500 batteries a day and the employees to start with will number about 500. The present working quarters will be occupied instead of building a new factory at once, in order to lose no time in getting into production. The company is prepared to build a factory of from two to three times its present capacity on adjoining property.

Three Hundred Cars for Jersey

Two Hundred One-Man Cars and 100 Trailers Included in Order Just Placed—New Snow Equipment Also

The Public Service Railway, Newark, N. J., has placed orders for 300 new cars. Of these 200 will be of the one-man safety type and 100 will be trailers. The trailers were reported as being placed in last week's issue of the ELECTRIC RAILWAY JOURNAL. The safety cars will be 30 ft. in length and will seat thirty-four persons each, while the trailers will be 50 ft. in length with a seating capacity of sixty. Similar trailer cars are in use in Cleveland, Detroit and Pittsburgh.

The cars will be built by the Osgood-Bradley Car Company, Worcester, Mass. The builders have promised to deliver the first 100 of the safety cars in June and July and the remaining 100 during October and November. Deliveries of the large trailers are promised between Nov. 1 and Jan. 1. Orders have also been placed with the same company for additional snow-fighting equipment, consisting of fifteen single-truck steel sweepers and fifteen double-truck snowplows. The installation of the safety cars will mark a departure on the Public Service system.

The trailer cars will also be an innovation on the Public Service property. They are intended primarily for extra heavy lines in the Essex and Hudson divisions, where the demands of the large industrial sections present a serious rush-hour problem. The trailers will be of the center-entrance and exit type and with the regular motor equipped cars will form two-car trains. When the trailers are used the carrying capacity of each transportation unit will be more than double.

During the past winter the snow-fighting equipment of the company was severely taxed in keeping the lines open, and the importance to the public of preventing interruptions to service during heavy snows has prompted the company to add to its fleet of sweepers and plows. The new sweepers will be of the Public Service standard high-speed type with motor-driven brooms and the plows will be driven by four motors of 50 hp. each, the plows and wings being capable of clearing 16-ft. width of roadway in a single operation. This equipment will be ready for next winter.

Trolley and Bell Cord Active

Deliveries Quoted from One to Two Months—Prices Firm at $1.13 to $1.25 Per Pound in Coil Lots

Demand for trolley and bell cord is at present healthy, with manufacturers working hard to keep in sight of orders and with firm prices ruling. Deliveries in June and July are being quoted on moderate-sized orders. As a rule, manufacturers are in better shape to care for this business than to meet the demand for their allied products used in the building trade. Orders so far in 1920 are running perceptibly ahead of the corresponding period of last year.

Raw material has been held back from delivery to the factories by railroad embargoes, but conditions here are not as bad as in some other lines, owing to the substantial stocks of cotton maintained in the bell and trolley cord plants. "Fictitious" factory stocks of finished cord were accumulated during the railroad tie-up, but these are now rapidly moving by express shipments, and soon there will be virtually no factory stocks. Normal requirements of the railways, however, are being met reasonably well and regular purchases by transportation companies are helping to stabilize the market for these staple products. A definite tendency can be seen to substitute braided cotton cord for leather bell cord, the claim being that not only is the first cost lower in the case of cot-

ton but that increased life is obtained from its use.

Prices have been steady since Feb. 1, and in manufacturing circles it is said that an effort is being made to prevent any further increase. Shortage of labor handicaps production and if labor could be secured for braiding cord at night the output of some mills could probably be increased 25 per cent.

Trolley cord is now selling to the railways in coil lots at about $1.13 per pound, mahogany bell cord quoting $1.25 and drab bell cord $1.18.

Manufacturers are concentrating effort upon the higher grades of product, and it is said on good authority that the profit on these grades is relatively lower than was the case when the cheaper grades were being pushed harder. The outlook is for steady business rather than for a greatly accelerated volume of trade in this well-settled branch of the industry.

Brushholder Orders Improving

Sales of brushholders, controller handles, controller fingers and other small parts, such as fittings, are improving gradually. There is a continuous demand for rebushed controller handles, fingers, etc., but the volume of sales in some of the items is not up to what it should be.

Business done on the whole is slightly less than it was last year. However, at least one manufacturer has not advanced prices and, according to reports, is doing quite well.

Stocks are plentiful and all orders for controller handles, brushholders and small controller repair parts can be filled promptly.

Rolling Stock

Philadelphia Rapid Transit Company, Philadelphia, Pa., has exercised its option with the J. G. Brill Company to purchase 100 steel elevated cars for the Frankford elevated lines, as a result of an agreement between the City Council and officials of the railway.

Public Service Railway, Newark, N. J., noted in the April 24 issue as having placed an order with the Osgood-Bradley Company for 100 trailers, has purchased 200 safety cars from the same company. In addition, fifteen single-truck steel sweepers and fifteen double-truck snowplows have been ordered.

Tampa (Fla.) Electric Railway, noted in the Feb. 21 issue of the ELECTRIC RAILWAY JOURNAL as having placed an order for eight safety cars, has specified the following details on this equipment:

Number of cars	8
Builders	The J. G. Brill Co.
Type	Birney safety
Total capacity	70
Length over all	28 ft. ½ in.
Truck wheelbase	8 ft.
Rail to trolley base	12 ft. 6 in.
Width over all	8 ft.
Body	Semi-steel
Interior trim	Mahogany, light
Roof	Arch
Air brakes	Safety Car Devices Co.
Armature bearings	Ball
Axles, diameter	3¾ in.
*Bumpers	
Car signal system	Faraday
Car trimmings	Bronze
Conduits and junction boxes,	National code.
Control	K-63, double end
Compressor	West D H 16
Couplers, 1½ in x 36 in. flat end for	1½ in. rim
Curtain fixtures	Side wnidows and vestibule
Material	Fabrikoid or Pantasote
Designation signs	Hunter
Door operating mechanism	Safety Car Services Co.
Fare boxes	Center platform
Wheelguards	Six bar, H. B. lifeguard
Gears and pinions	Pressed steel
Governor hand brakes	West S 6 A Norway iron
Heater equipment, not specified	
Headlight	Golden Glow S. M.-95
*Journal bearings	
*Journal boxes	
*Lightning arresters	
Motors	2-West, 506-AM-2
Paint	Varnish, light mahogany
Registers	Stone & Webster standard
Sanders	Air, furnished by builder
Sash fixtures, not specified	
Seats	Heywood Bros, 57-SF steel mahogany
Seating material	Rattan, 16 in. x 32 in. cushions
Slack adjuster, not specified	
*Springs	
Step treads	½ in. x 10 in.
Trolley catchers or retrievers	Ideal
Trolley base	1½ in. x 16 in. x 16 in.
*Trolley wheels or shoes	
Trucks	Brill 29 E-1
Ventilators	Utility standard
Wheels (type and size)	Southern Wheel Company, standard
Special devices, etc., 24 in. dia.,	2½ in. tread; 1 in. flange; ⅝ in. deep

*In general no new departure from American Electric Railway Association standards.

Track and Roadway

Kenmore, N. Y.—Louis P. A. Eberhardt of Kenmore proposes the formation of a company to finance the construction of a double-track electric line along the Buffalo city line between Delaware Avenue and the River road, a distance of two miles. The line would connect the village of Kenmore with the new Niagara River industrial district.

Montreal, (Que.) Tramways.—Engineers representing the city of Montreal and the Montreal Tramways are making a survey of the route of a proposed electric railway line over Mount Royal from Shakespeare Road to Mount Royal Avenue.

Abilene (Tex.) Street Railway.—The track and equipment of the Abilene Street Railway will be repaired at a cost of $60,000.

NEW YORK METAL MARKET PRICES

	April 1, 1920	May 1, 1920
Copper, ingots, cents per lb	18.50	19.25
Copper wire base, cents per lb	22.25	23.00
Lead, cents per lb	9.25	9.25
Nickel, cents per lb	45.00	45.00
Spelter, cents per lb	8.70	8.45
Tin, cents per lb	63.75	61.50
Aluminum, 98 to 99 per cent, cents per lb	33.00	33.00

OLD METAL PRICES—NEW YORK

Heavy copper, cents per lb	16.50 to 17.00	16.50 to 16.75
Light copper, cents per lb	14.25 to 14.50	14.00 to 14.50
Heavy brass, cents per lb	9.75 to 10.25	10.25 to 10.50
Zinc, cents per lb	5.00 to 5.25	5.00 to 5.25
Yellow brass, cents per lb	9.00 to 9.25	9.00 to 9.50
Lead, heavy, cents per lb	7.75 to 7.87	7.25 to 7.75
Steel car axles, Chicago, per net ton	35.00 to 36.00	33.00 to 34.00
Old carwheels, Chicago, per gross ton	39.00 to 40.00	36.00 to 37.50
Steel rails (scrap), Chicago, per gross ton	30.50 to 31.00	29.00 to 30.00
Steel rails (relaying), Chicago, gross ton	34.00 to 35.00	31.50 to 32.50
Machine shop turnings, Chicago, net ton	16.50 to 17.50	12.50 to 13.00

ELECTRIC RAILWAY MATERIAL PRICES

Rubber-covered wire base, New York, cents per lb	30.00	28.00 to 30.00
Waterproofed wire (100 lb. lots), cents per lb	30.00	28.00
T rails (A.S.C.E. standard), per gross ton	55.00 to 57.00	55.00 to 57.00
T rails (A. S. C. E. standard), 20 to 500 ton lots, per gross ton	55.00 to 57.00	55.00 to 57.00
T rails (A. S. C. E. standard), 500 ton lots, per gross ton*	45.00 to 47.00	45.00 to 47.00
T rail, high (Shanghai), cents per lb	3.00	3.00
Rails, girder (grooved), cents per lb	3.00	3.00
Wire nails, Pittsburgh, cents per lb	4.00	4.00 to 4.50
Railroad spikes, drive, Pittsburgh base, cents per lb	3.35 to 3.85	3.00 to 5.00
Railroad spikes, screw, Pittsburgh base, cents per lb	7.50 to 9.00	7.50 to 9.00
Tie plates (flat type), cents per lb	3.00 to 4.00	3.00 to 4.00
Tie plates (brace type), cents per lb	3.00 to 4.00	3.00 to 4.00

ELECTRIC RAILWAY MATERIAL PRICES

	April 1, 1920	May 1, 1920
Tie rods, Pittsburgh base, cents per lb	3.50 to 4.25	3.00 to 4.00
Fish plates, cents per lb	3.50 to 4.25	3.00 to 4.00
Angle plates, cents per lb	.....	2.45 to 4.00
Angle bars, cents per lb	4.50 to 6.50	4.50 to 6.50
Rail bolts and nuts, Pittsburgh base, cents per lb	3.00 to 5.00	3.75 to 4.00
Steel bars, Pittsburgh, cents per lb	5.00 to 8.00	5.00 to 8.00
Sheet iron, black (24 gage), Pittsburgh, cents per lb	6.27 to 8.27	6.00 to 8.00
Sheet iron, galvanized (24 gage), Pittsburgh, cents per lb	4.60	4.60
Galvanized barbed wire, Pittsburgh, cents per lb	4.20	4.20
Galvanized wire, ordinary, Pittsburgh, cents per lb	77%	77%
Car window glass (single strength), first three brackets, A quality, New York, discount†	77%	77%
Car window glass (single strength), first three brackets, B quality, New York, discount	79%	79%
Car window glass (double strength, all sizes AA quality), New York, discount	24 to 29	24 to 29
Waste, wool (according to grade), cents per lb	18	18
Waste, cotton (100 lb. bale), cents per lb	.....	.....
Asphalt, hot (150 tons minimum), per ton delivered	32.00	32.00
Asphalt, cold (150 tons minimum, pkgs. weighed in), per ton	30.00	30.00
Asphalt filler, per ton	2.80	2.80
Cement (carload lots), New York, per bbl	2.00	2.00
Cement (carload lots), Chicago, per bbl	1.77	1.90
Linseed oil (raw, 5 bbl. lots), New York, per gal	1.79	1.92
Linseed oil (boiled, 5 bbl. lots), New York, per gal	15½	15½
White lead (100 lb. keg), New York, cents per lb	2.16 to 2.36	3.00 and upward
Turpentine (bbl. lots), New York, cents per gal		

* U. S. Steel Corp.
† These prices are f.o.b. works, with boxing charges extra

Central Texas Electric Railway, Waco, Tex.—The Central Texas Electric Railway, which proposes to build an electric interurban line from Waco to Temple, a distance of forty-five miles, has awarded the contract for the construction of the first unit of the line to the Central Texas Engineering & Construction Company, Waco. The work will be done on a cost-plus plan, the interurban company furnishing all materials. The first unit of the line will extend from Waco to Robinson, a distance of 6½ miles. Motor cars will be used on this unit until electric power can be provided. C. A. Ryfle is president of the company.

Power Houses, Shops and Buildings

Decatur Railway & Light Company, Decatur, Ill.—The Decatur Railway & Light Company has under construction a 33,000-volt transmission line between Decatur and Riverton, Ill.

Bloomington & Normal Railway & Light Company, Bloomington, Ill.—The Illinois Public Utilities Commission has issued an order granting the Bloomington & Normal Railway & Light Company a certificate of convenience and necessity for the construction of an 11,000-volt transmission line between Osco and Lynn.

Boston, (Mass.) Elevated Railway.—The Boston Elevated Railway plans to install a large terminal yard at Forest Hills. The cost of construction is estimated at $1,000,000. Edward Dana, general manager of the company, has applied to the State Department of Public Utilities for approval of the undertaking. The company seeks authority to purchase a large tract of land near Hyde Park as a site for the project.

Interborough Rapid Transit Company, New York, N. Y.—Transit Construction Commissioner John H. Delaney of the Public Service Commission has opened bids for the construction of a new steel inspection shed at the 100th Street yard of the Interborough Rapid Transit Company. Bids were as follows: Bethlehem Steel Bridge Company, $129,470; Terry & Tench Company, Inc., $135,960; Bainbridge Construction Company, $142,560; Bigelow & Nicholls, $134,640, and McClintic-Marshall Company, $144,100.

Central Texas Electric Railway, Waco, Tex.—The Central Texas Electric Railway, which proposes to build an interurban line from Waco to Temple, Tex., will shortly begin work on a power station at Waco. C. A. Ryfle, Waco, is president of the company.

Trade Notes

American Steel & Wire Company, New York, N. Y., has transferred Charles R. Sturtevant of Worcester, educational director, to Cleveland, Ohio.

Crouse-Hinds Company, Syracuse, N. Y., manufacturer of condulets, is planning to build an addition, 70 ft. x 260 ft., to its foundry.

R. D. Nuttall Company, Pittsburgh, Pa., has appointed L. H. Klein general sales manager. W. H. Phillips has been made manager of equipment.

Bryant Marsh Division, National Lamp Works of the General Electric Company, Chicago, Ill., will occupy its new offices at 623-33 South Wabash Ave., Chicago, after May 1.

Standard Electric Welding Company, Philadelphia, Pa., has removed its plant from Emerald and Firth Sts. to 1939-41 East Sergeant St. The company is planning to install new electric welding apparatus.

J. H. White has been appointed manager for Cuba for the Westinghouse Electric International Company, with headquarters in the Royal Bank of Canada Building, Havana.

Wayne Oil Tank & Pump Company, Fort Wayne, Ind., is bringing out some new oil filters for turbines and engines and a complete oil-burning equipment for use under boilers.

Roller-Smith Company, New York, N. Y., announces the removal of its Cleveland office from the Williamson Building to the Vickers Building, Sixty-fifth St. and Euclid Ave. J. E. Wood, district manager, will continue in charge of this office.

Osgood-Bradley Car Company, West Boylston St., Worcester, Mass., manufacturer of electric cars, etc., is planning to build a three-story addition to its plant, to cost with equipment about $300,000.

Lincoln Electric Company, Cleveland, Ohio, is building an addition to its factory which will increase its manufacturing floor space by about 70 per cent. The new building will be used to increase the production of alternating-current motors and arc welders.

Western Electric Company, Inc., New York, N. Y., has established an office at 233 Harris Ave., Providence, R. I., in charge of N. I. Allen. The Rhode Island trade will be given special attention from this headquarters.

The Canadian Line Materials, Ltd., of Hamilton, Ont., has been incorporated by Thomas H. Barnard, John L. Counsell, Ralph R. Bruce and others. The company is capitalized at $200,000 and proposes to manufacture electric transmission and electric railroad line materials, etc.

National Conduit & Cable Company, Inc., Hastings-on-Hudson, N. Y., has during the past year made extensive improvements to its mills, having entirely remodeled and enlarged its cable mill. New equipment has been installed throughout, with a greatly enlarged capacity, to meet the ever-increasing demands for cable, etc.

Illinois Testing Laboratories, Inc., Chicago, Ill., electrical engineers, have moved into new and larger quarters at 430 South Green St. This change was made necessary on account of increasing business. It is proposed to increase the scope of the work, particularly along the lines of developing new apparatus and doing an increased amount of testing and engineering work.

Harrison Safety Boiler Works, Philadelphia, Pa., formerly conducted as a copartnership by Joseph S. Lovering Wharton, William S. Hallowell and John C. Jones, has been incorporated as the H S B W—Cochrane Corporation, with the following officers: President, Mr. Wharton; vice-president and general manager, Mr. Jones; secretary and treasurer, Mr. Hallowell; general sales manager, Horace E. Sibson; general works manager, Axel B. Wallem.

Link-Belt Company, Chicago, Ill., is expanding its works in Chicago, Indianapolis, Philadelphia, Seattle and Toronto. New manufacturing facilities have been added to the several plants and the personnel of both the factories and sales offices has been increased. The company announces its purchase of the Fairmount foundry, at Philadelphia. A new administration building is also under construction at the Philadelphia plant, a similar building is to be erected at Chicago and a new warehouse is under construction at Seattle. A. C. Johnson, formerly chief engineer of the Chicago works, has been elected a vice-president of the company and resident general manager at Chicago. He succeeds Prentiss L. Coonley, who recently resigned to become president of the Isko Manufacturing Company.

New Advertising Literature

General Electric Company, Schenectady, N. Y.: Bulletin No. 48,020, on reversing planer motors.

Star Fuse Company, New York, N. Y.: A folder listing and illustrating its fuses under it most recent prices.

Standard Underground Cable Company, Pittsburgh, Pa.: Bulletin No. 500-T, a forty-page illustrated booklet on "Standard Rubber Insulated Wire," for all purposes.

Root Spring Scraper Company, Kalamazoo, Mich.: A pamphlet, "Evidence," containing a list of railways now using this company's scraper. A spring scraper for safety cars or any city car is shown.

Condensite Company of America, Bloomfield, N. J.: A booklet, entitled "Condensite," for engineers, designers and purchasers, in which it describes the properties of condensite, shows how it is molded, how to design it and how to specify it.

All-Steel-Equip. Company, Aurora, Ill., manufacturer of electrical boxes and specialties, etc.: A new price sheet, No. E-25, on its outlet box covers, showing the addition to its line of the several "approved" covers, and also the addition of covers to take the P. & S. sign receptacle. Previous covers were unapproved, while now all covers are made in the approved style.