

caused one or more fatal injuries, namely, Westerly, R. I.; Odell, Ill.; Brooklyn, N. Y. (two); Alliance, Ohio; La Crosse, Wis., and Charleston, Ill. The last mentioned, occurring on the 30th, was a butting collision causing the death of 14 passengers. This was reported in the *Railroad Gazette* of September 6 and 13.

#### Uniform Classification—Significant Testimony.

The proposal to establish one uniform classification of commodities for all freight tariffs in the United States, which has been before the country for 15 or 20 years, has been favored by the Interstate Commerce Commission and by various state railroad commissions and has been constantly opposed by railroad men; by all railroad men, we believe, who are fully conversant with the subject, except those who have deemed it their duty to try to comply with the wishes of the advocates of the change in spite of the difficulties of the task. At last, however, we have a strong voice on the conservative side from a state railroad commissioner, Mr. Mayfield of Texas. Mr. Mayfield has had long experience and his epitome of this matter is a forcible one. It is in a letter to O. P. Gothlin, member of the Ohio Railroad Commission. He says:

"In my judgment, uniform classification is little short of an illusion; it is absolutely impracticable and altogether unwise. Classification is but a process of rate making, and uniform classification, to be of substantial value, must be followed by uniform rate making, which at once demonstrates the utter absurdity of the whole scheme.

"Such a thing as uniform classification cannot be maintained within the limits of even a state, much less the Union. For example, take the conditions that prevail in the state of Texas, where rates on state commerce are prescribed absolutely by agents of the government, and uniformity in all respects is looked after with especial care.

"The railroad commission of Texas has prescribed a classification of its own, and the fact remains that not exceeding 15 per cent. of the commerce of this state is governed by this classification, and I dare say the same general conditions prevail in the territory of Official, Southern and Western classifications.

"Within this state we have upwards of 40 separate commodity tariffs, and most of these separate tariffs embrace innumerable commodities, and the whole of them means nothing more nor less than a classification different from that prescribed in the Standard Classification.

"There are many factors to be considered in rate making, and an important one is the character and density of a commodity for which a rate is prescribed. These conditions shift and differ as you shift and change from one section of the country to another, and rates must be prescribed taking into consideration those shifting conditions; and, therefore, I repeat that the scheme in my opinion is visionary and absolutely impracticable."

The school which the Pennsylvania Railroad has established for the training of telegraph operators and station agents at Bedford, Pa., was opened on Monday last, September 16. The manager is Mr. J. F. Cessna. It is estimated that the Pennsylvania will need 700 additional operators to comply with the federal eight-hour law which goes into effect next March. Students are to be taught not only the work of the telegraph office, including the rules for handling dispatchers' orders, but also the general duties of station agent, including practice in keeping station agents' accounts. It is expected that the course will require from six to eight months, and "immediately upon its completion graduates will be provided with salaried positions." A nominal charge of \$2 a month is made for tuition. The company advertises for students between the ages of 17 and 25 possessing good health and a fair knowledge of English, mathematics and geography; "men of ability, energy, decision and action." As the *Railroad Gazette* is constantly setting forth in all departments of railroading the highest ideals that it knows of, it will be ungracious to question the judgment of that officer of the Pennsylvania who seeks men like General Sherman or Bismarck or Gladstone to fill the position of telegraph operator; but unless he pays a good deal higher wages than prevail on most railroads he will probably have to put up with men possessing perhaps one, two or three of the four virtues which he names. Men of 25 who possess any of them in a marked degree will be found to be now getting from \$75 to \$100 a month, and they don't have to work alone out in the woods. Candidates 17 years old may possess the first two or three, at least potentially; but to possess all may be a disadvantage. It may be better if the young men do not develop the third and fourth until after they have been trained awhile. Possibly this neighborly criticism applies only to the press agent, however. The main idea of the school is highly commendable. It is unbusinesslike to depend for recruits on self-taught operators, acquiring their knowledge in the offices of all kinds of station agents; and this notwithstanding the fact that innumerable high railroad officers began their careers in that way; and it is worse

than unbusinesslike to let a labor union rule in the matter of apprentices.

When one says that history repeats itself he usually refers to events, more or less alike, which have occurred a few hundreds or thousands of years apart; but History, like all the rest of us, now lives a fast life; hence we read of "experiments" with hoops for delivering orders to moving trains (on the Pennsylvania Railroad) which "began late in 1906." It is about 20 years, if memory serves, since the successful use of hoops in this way in India was reported in the *Railroad Gazette*. Several American railroads adopted the practice some years since, however; so perhaps "History" is not particularly interested. The Pennsylvania has introduced a modification: a holder for holding up two hoops, one for each of the two engines of a double-header. Each of the 57 block offices on the Middle Division is supplied with three holders and 50 hoops. As the Pennsylvania has an enterprising signal department, the reader may be inclined to surprise at this evidence of progress in a method of train management which has to do with old-fashioned practice—practice which does not have much use for signals. An explanation, or partial explanation, may be found in the fact that the Middle Division is the one least advanced in signaling. There being no heavy and frequent passenger service on the division, the company's investments in automatic signals and short block sections have been allotted to other divisions. On the New York Division and other well-signaled sections the strictly modern method of conveying running instructions to enginemen wholly by fixed signals is in vogue to some extent; and the use of tissue-paper orders, to be handled by greasy hands and read by dim lights, is correspondingly lessened. The hoop is a highly useful device (though it has done little for the pockets of American exploiters of railroad appliances); but we may hope some time to get beyond it.

The French papers are criticising the poor results that were obtained by the state in the operation of its railroads for the year 1906 in comparison with those obtained by the private companies. According to the report that has been issued, the net gain for the five great companies was as follows: The Nord, 8,500,000 fr.; Est, 8,000,000 fr.; Paris, Lyons & Mediterranean, 8,500,000 fr.; Orleans, 1,600,000 fr., and the Ouest, 1,700,000 fr., while the state system falls behind with a net loss of 300,000 fr. It is estimated that had the state system increased in the same proportion as the other roads it would have shown a net gain of 846,000 fr., whereas in reality it fell 1,346,000 fr. below this figure. From which it is argued that the state management is not equal to that of the private companies.

#### Chicago, Milwaukee & St. Paul.

Official mention is at last made in an annual report of the Pacific coast extension, but even now the undertaking is not described in any detail. The official map published with the report just issued makes no note of the new line, the only direct mention of which is as follows by President Earling:

"Companies organized under the laws of South Dakota, Montana, Idaho and Washington have undertaken and are now engaged in the construction of a line of railroad from the Missouri river to Seattle, Tacoma and other Puget Sound points. It has long been apparent that an outlet to the Pacific Coast would be of great benefit to the property of your company, and accordingly your company has advanced, and is now from time to time advancing, sums of money to aid those companies in the construction of this line. Each of the companies is progressing satisfactorily with its work, and it is expected that the entire line will be completed during the year 1909. In the opinion of the directors, large and important benefits will result to your company and also to the western companies through the interchange of the constantly increasing traffic between the Great Lakes and the Pacific Coast."

However, as was the case a year ago, there are indirect references to the new project much more definite and striking. Two years ago there was no item of "advances to other railroad companies" on the St. Paul's balance sheet. Last year this item appeared with about \$9,500,000 so advanced. On June 30, 1907, it had increased to \$32,339,271, which may be roughly taken as the cost of the new extension up to the present time. There has at the same time been a large increase in the stock of material and fuel on hand, as shown on the balance sheet. The value of this was \$2,700,000 in 1905, \$4,900,000 in 1906 and almost \$6,000,000 on June 30, 1907, the increases probably representing stocks accumulated for use on the new line. The map shown herewith, including the Pacific extension, is one recently issued by the passenger department. The line should be in operation as far as Butte, Mont., some time in the first half of 1908. An article describing progress on the western end of the extension is published on another page of this issue; a similar article appeared in the *Railroad Gazette* of July 19, 1907. The country through which the western part of the extension is to pass was described in the issue of September 21, 1906.

Roswell Miller, chairman of the board, has been quoted as follows in regard to the Pacific extension:

"The line will be 150 miles shorter from Chicago to Seattle than the

Northern Pacific, and about 80 miles shorter than the Great Northern. Over the mountains the grades will be from 1% per cent. to 1 1/2 per cent. compensated. The Northern Pacific grades are in all cases 2% per cent., and many of them are not compensated, and therefore average as high as 2 1/2 per cent. Aside from the mountain grades, the St. Paul will have a much lower grade than the Northern Pacific, and the mountain grades are so bunched that they will not impede traffic. The extension is compelled by physical conditions to run along the Northern Pacific for a considerable distance, and to cross it several times. This, however, does not apply to much territory which produces a large business and therefore the competition will not be severe. The estimated cost of the extension will be \$40,000 a mile for the main line, which includes equipment, and \$30,000 a mile for branches. This contemplates a strictly first-class road in all respects."

While the fact of the Pacific extension is at last officially recognized in an annual report, the means by which the bulk of the new capital necessary for its construction is being raised—in itself the most important single event in the history of the St. Paul for the past year—is not even hinted at, except as the balance sheet shows a liability of \$24,690,000, representing subscriptions to capital stock. The only new stock issue which is directly mentioned is that of \$25,000,000 common stock made last fall. This amount of new stock had been authorized by the shareholders on October 4, 1902, following a threatened break with the Union Pacific over the division of through rates to the coast. Since that time it had remained in the treasury unissued, suggestive always of the possibility of an extension of the St. Paul to the coast. Twenty-five million dollars, however, is only a small part of the money which will be necessary before the St. Paul has its own through line from Chicago to Puget Sound. Consequently, late in December, there was offered to stock-

holders at par a total of about \$100,000,000 new stock, \$66,000,000 preferred and \$33,000,000 common. This stock was to be paid for in instalments over three years, the last payment to be made on March 1, 1909. None of this new stock, therefore, has as yet actually been issued.

holders at par a total of about \$100,000,000 new stock, \$66,000,000 preferred and \$33,000,000 common. This stock was to be paid for in instalments over three years, the last payment to be made on March 1, 1909. None of this new stock, therefore, has as yet actually been issued.

Gross earnings for the year were larger than ever before, over \$65,000,000. This is an increase of \$5,000,000 over 1906. Operating expenses, however, increased even more, leaving net earnings of \$22,095,012, against \$22,933,539 in 1906. This is good proof of the constantly increasing cost of operation due to more traffic than means for handling it, higher wages, and higher cost of all kinds of supplies; facts which affected railroad operation all over the country in the late fiscal year.

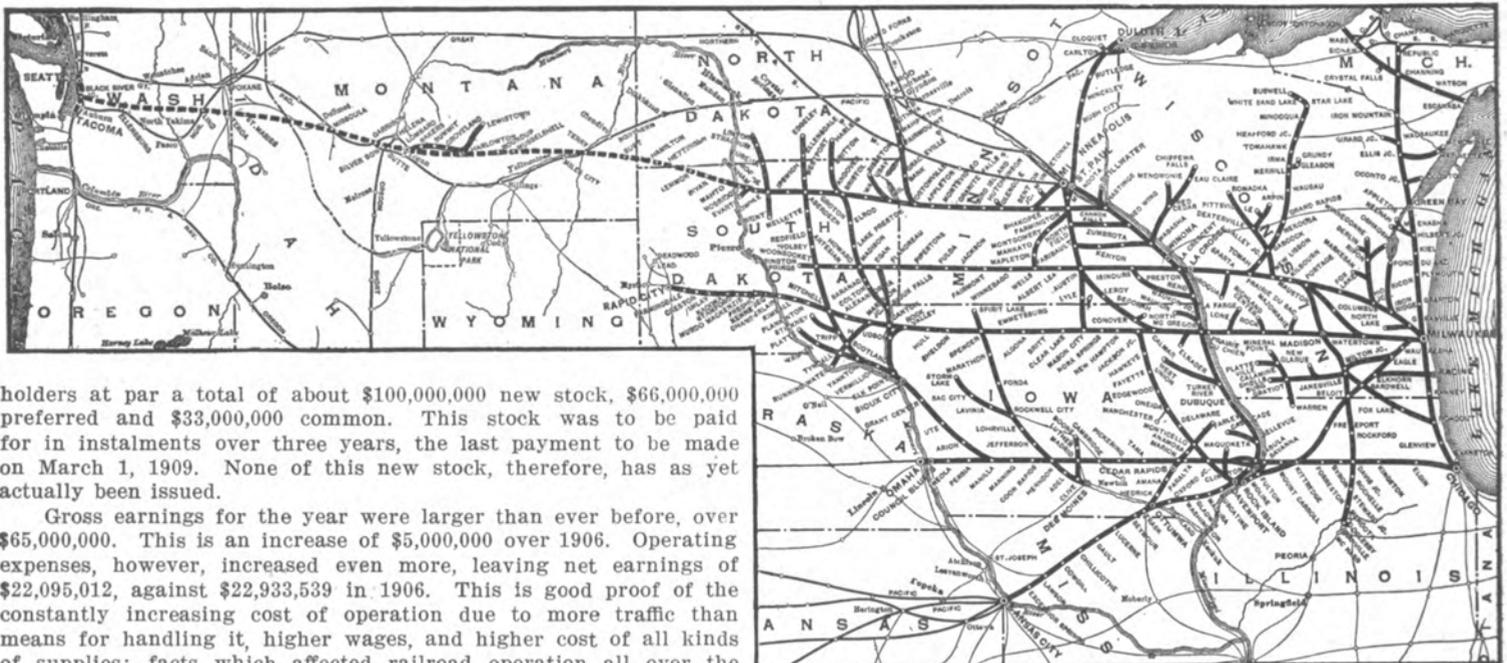
Freight earnings and revenue freight ton miles each increased about 10 per cent. The principal increases in tonnage were as follows: Flour and other mill products, 168,125 tons; wheat, 71,869 tons; fruit and vegetables, 53,114 tons; bituminous coal, 158,110 tons; iron and other ores, 565,054 tons; stone, sand, etc., 130,704 tons; lumber, lath and shingles, 100,989 tons; petroleum and other oils, 72,252 tons; castings and machinery, 92,154 tons; commodities not specified, 463,159 tons. The only decreases in tonnage were in barley; oats; corn; sash, doors, blinds and other forest products; lime, cement and plaster. Although there was an increase of 6 per cent. in the tonnage of agricultural products as a whole, these comprised a slightly smaller percentage of the total than in the previous year. The St. Paul's traffic, in fact, is so diversified that the company's dependence is not on any one particular product. With the development of the central West the road has become more than a granger line and carries large quantities of manufactures, coal, lumber and general merchandise. The Pacific extension should open up large new traffic areas which will not only furnish large quantities of raw products to be shipped eastbound, but will demand in return the manufactures of other products of the East and central West; in both directions the St. Paul will get a long through haul.

Less was spent on maintenance of way than in the preceding year. Less rails and ties were laid, and less was spent on ordinary roadway maintenance. Per mile of road, maintenance of way cost \$827, against \$856 in 1906. The St. Paul has long been noticeable among the railroads of the country because it spends so little per mile on keeping up its line. The particular reason for this is that it has so large a proportion of branch-line mileage. Taken as a whole,

it is a local road with most of its mileage on the prairies, where the cost of track maintenance is at a minimum. With completion of the Pacific extension and the establishment of this as the St. Paul's one dominating through route, the cost of roadway maintenance per mile operated will tend to increase. At present the amount spent appears to be about the minimum with which the property can be kept in proper condition.

Maintenance of equipment stands at \$8,600,000, against \$5,600,000 in 1906, an increase of \$3,000,000, or over 50 per cent. This large increase appears to have been mainly due to the charging of \$3,346,610 to operating expenses for replacement of equipment, against \$694,646 in 1906 and \$682,389 in 1905 similarly charged. The increase in the total expenditures last year on this account is perhaps most strikingly shown in the item "maintenance of equipment per revenue train-mile," which increased from 19.27 cents to 27.99 cents. The increase is also shown when the account is analyzed into its separate units. The cost per locomotive was \$2,548, against \$1,454 in 1906; \$775 per passenger car, against \$663 in 1906, and \$102 per freight car, against \$46 in 1906. The marked increase in the locomotive and freight car items suggests that these classes of equipment have been maintained at a minimum or below during recent years, as well as the tremendous traffic handled during the year. The St. Paul builds more of its locomotives and cars than any other railroad. Improvements to its Milwaukee shops, costing \$652,000, have been made during the year, and at present these shops can turn out 10 locomotives a month and 28 freight cars a day.

Conducting transportation shows an increase of \$3,083,088, or 15 per cent. There were large increases under various heads. The



Chicago, Milwaukee & St. Paul.

item, engine and roundhouse men, which increased \$232,000 in 1906, was larger by \$561,000 last year. Fuel and other supplies for locomotives increased \$283,000 in 1906 and \$877,000 in 1907. Train service and supplies increased \$156,000 in 1906 and \$364,725 in 1907. Switchmen, flagmen and watchmen, after rising by \$183,000 a year previous, increased \$269,000 last year. Station service and supplies increased \$260,000 in 1906 and \$324,000 in 1907. Use of cars and locomotives increased, \$125,000 in 1906 and \$152,000 in 1907. This last item shows an increase of nearly 300 per cent. in two years and probably represents the pressing into service of foreign cars to relieve the extreme car shortages.

The St. Paul's new line from Chamberlain, S. Dak., on the Missouri river, to Rapid City, 219 miles, is finished and nearly ready for operation. The Chicago & North-Western, starting from the Missouri river at Pierre, S. Dak., has also been pushing a line to the principal city of the Black Hills district, and the two roads reached their destination at about the same time this summer, thus adding another to the many points at which the St. Paul and North-Western are keen competitors.

Considerable second-track work has been done during the year, as well as reduction of grades at various points on the line. Large improvements of this sort are still necessary to put the existing lines which will be used as the eastern end of the through line to Puget Sound in shape for heavy through traffic. Aside from such general improvements, it is not probable that the St. Paul, with the tremendous project of the Pacific extension on its hands, will undertake any large amount of new building in other directions.

It was, in fact, announced last spring that some \$9,000,000 worth of new extensions and improvements had been indefinitely postponed. In order to carry the new stock issues at the present dividend rates it will be necessary for the Pacific extension to make a strong showing from the first, for the existing lines cannot bear the whole burden alone. It is entirely probable that the extension will do this, in spite of the fact that it is being built at the highest cost of labor and materials ever known. Yet if the earlier transcontinentals were built at a cost nearly as low in some cases as one-half what the St. Paul is paying, they ran through long stretches of country which for years were barren of traffic. To-day enterprise and development in the Northwest are at a maximum. The new country which the St. Paul opens up should be rich in traffic from the start. Such business will be in addition to the developed and profitable through traffic to and from Puget Sound.

The principal results of the last two years' operation are summed up in the following table:

	1907.	1906.
Mileage worked .....	7,049	6,961
Passenger earnings .....	\$12,102,196	\$11,123,545
Freight earnings .....	44,115,059	40,187,710
Gross earnings .....	60,548,554	55,423,053
Maint. way and structures .....	5,830,968	5,955,432
Maint. of equipment .....	8,589,757	5,598,046
Conducting transportation .....	22,782,468	19,699,381
Operating expenses .....	38,453,542	32,489,514
Net earnings .....	22,095,012	22,933,539
Betterments and improvements .....	1,415,747	4,704,556
Net income .....	13,988,644	13,323,231
Surplus for the year .....	5,072,463	7,009,896

## CONTRIBUTIONS

### Shippers' Organizations to Bargain for Rates.

New York, Sept. 3, 1907.

TO THE EDITOR OF THE RAILROAD GAZETTE:

The *Journal of Commerce*, quoting a statement made by Mr. Plant, of the Southern Railway, in the suit against that company by the state of North Carolina, to the effect that "there should be a mutual understanding between the railroads and the public and an equitable arrangement as to rates," says: "This is a new position for railroad men to take, but it is eminently judicious in purpose. Heretofore railroad managers have claimed the right to fix rates for themselves and with sole regard for the interests of the railroads, adjusting them in such a way as to secure the largest return that the conditions of traffic will admit of. State railroad commissions, on the other hand, have been apt to be arbitrary and to assume that rates should be made as low as the traffic will bear without being discontinued by bankruptcy of the roads. If the business is to go on successfully regulation and operation must be brought into amicable relations. Those responsible for the management of railroads must arrange their schedules of rates, but this should be done with the fullest publicity and a complete disclosure of the conditions supposed to justify them."

The editor of the *Journal of Commerce* is right in declaring that the public ought to be represented; yet he ignores the fact, even while referring to it, that the public is represented already—by the state railroad commissions. What is the reason for this? The editor, like the rest of us, evidently is painfully aware that most of the state commissions are of doubtful value to the public. And the trouble is not because the commissions are not devoted to the public. They certainly aim with zeal to stand up for the public as against the railroads—although ostensibly they are independent bodies, of judicial temper, devoted to justice whether justice be for or against the railroads. No; the weakness of the commissions is due to their ignorance and their mistaken political zeal.

Mr. Plant's suggestion should not fall to the ground however, notwithstanding this blind and one-sided attitude of the present representatives of the public. The public which deals with the railroads—that is to say, the shippers—might well appoint representatives of its own. Probably the most satisfactory arrangement for carrying on negotiations between railroads and shippers that has ever been tried was that established through the traffic bureaus, such as were quite popular in St. Louis and certain other cities some 15 years ago, and which still continue to give efficient service in some places. It is only repeating an elementary truth to say that the "authority" who deals with the railroads on behalf of shippers, should, first, know accurately and in detail the needs and desires of the people whom he represents, and, secondly, should be enthusiastically devoted to the interests of these people. The average state railroad commissioner is enthusiastically devoted to those voters or the representatives of those voters who, he believes, will rule at the next election. It might be well even to go so far as to have boards of trade incorporated, and perhaps given some semblance of authority. That would be better than to continue our present farcical arrangements. Even in such a situation as that of the present year in Kansas where the railroads and the state commissioners reached a compromise on freight rates, there still

seems to be a sad lack of harmonious purpose. The need of the day is a railroad commission of strong business men. Farmers, politicians and country lawyers should be kept in the rear.

I want to say a word also for the railroads. The *Journal of Commerce* in proposing that the freight traffic manager, in fixing his rates, shall make "complete disclosure" of the conditions on which he bases his decisions is quite superficial. This is an idea that can never be put in practice. To even approximate a full understanding between the railroad and the public as to the reasons for a 10 per cent. increase in the rate on an important commodity, it would be necessary to hold a six days' public debate. Only by prolonged discussion would it be possible to settle the difference between the freight agent's estimate of the conditions and the estimate supported by the other side.

The only feasible way to make freight rates, in most cases, is by bargaining. The railroads must be allowed—at least in the beginning—to proceed on the theory of what the traffic will bear. The soundness of this theory is not shaken by the fact that it has often been abused by shortsighted traffic managers. It is proper for the public to see that the traffic manager does not punish traffic by charging it what it will not bear; but restraint of an overzealous freight agent is far different from cutting his head off. Anyone who tries to reverse the true theory of rate making only stultifies himself. "Complete disclosure" of conditions is a good goal at which to aim, and shippers may rightfully be on their guard constantly against unnecessary concealment by the railroads; but the theorist must deal with conditions as he finds them. Even state operated railroads are obliged to ride rough shod over his theories.

PROFESSOR.

### Safety at Crossings Without Whistling.

Philadelphia, Pa., Sept. 16, 1907.

TO THE EDITOR OF THE RAILROAD GAZETTE:

I have just read with interest your editorial of last week on the Noise Nuisance. Many sensitive railroad men as well as thousands of sensitive passengers will endorse your denunciation of the loud whistle and the careless engineman. You might well have gone more fully into particulars. One of the most useless functions of the locomotive whistle is the regular enforcement of the rule regarding whistling for highway crossings, where such crossings are guarded by a flagman and in many cases by both flagman and gates. This unnecessary practice is observable in many places; and it appears to be kept up in spite of the fact—not in ignorance of it—that at hundreds of crossings in this country and Europe a saner practice prevails. On the New York, New Haven & Hartford many years ago an order was issued that where crossings were provided with attendants, the whistle need not be sounded. The attendants probably in most cases had in their cabins electric bells warning them of the approach of trains. On the Boston & Albany as much as 30 years ago, whistling was abandoned at crossings which were watched, as well as at many others also. At that time many of the gatemen's cabins had no electrical connection. An officer of the legal department of that road said in substance that the disuse of the whistle at these crossings had not increased the company's burden of expense either by adverse rulings of the judges in law suits, or by added severity in the awarding of damages by juries. The notion that every time a railroad relaxes its precautions at highway crossings even a hair's breadth, it incurs new dangers in the courts, is imaginary.

There are many highway grade crossings in England, a common American impression to the contrary notwithstanding; and the whistle nuisance has been done away with in that country long since, if, indeed, it ever existed to the barbarous extent which obtains in this country.

Why should not our ideas of whistling be reversed? Why not begin with the presumption that in ordinary circumstances whistles are not needed; that they should be used only by order or permission of municipal authorities? Why do cities and towns allow unrestrained use of locomotive steam whistles for calling in flagmen, for giving switching signals in large yards, and for other things of secondary importance, when hand bells or small mouth whistles or hand motions would answer just exactly as well? It is to be confessed that town officials are negligent in matters of this kind, perhaps as generally as are railroad superintendents, but in the universal apathy of railroad officers, it might be a good thing to stir up the municipal authorities.

G. F. M.

### A Few Phases of Railroad Science.

TO THE EDITOR OF THE RAILROAD GAZETTE:

There never was a time in the history of railroading when so many people were coming forward to explain why this difficulty existed, and how that trouble could be eliminated if only the other fellow would do so and so. Some of these are instructive, some amusing, and some are neither.

Why we are getting this flood of explanation is of course quite