

in force on some of our large railroads. There are certain cases where the same little station is loaded down with one number by the freight department, a second number by the passenger department, and a third by the transportation department; and it is quite possible that on some roads the accounting department may give a fourth number to the same point. Of course at large stations, where separate clerks can be detailed to look after the freight business and the other departments, the multitude of numbers may make no great difference, but at places where the agent has to do all his own clerical work this must lead to confusion, and we have always thought it specially hard in the case of the passenger conductor, who has to make up his report to the car accountant with one set of numbers and his report of tickets and passengers with another set of numbers. It is probably too much to expect any official important enough to handle both the traffic and transportation departments to condescend to such a small detail as the numbering of stations, but if this could be accomplished, it would save the poor conductors and agents a great deal of trouble. And it would save a good deal on bills for printing as well, for when there are three sets of numbers there must be three printed lists of stations where one list would do as well if not better.

On most railroads the first attempt at numbering stations has been to begin at one end of the line and number the stations, 1, 2, 3, etc., in regular order. After this has been successfully accomplished and a new station is established at some point not provided with a number, say between 24 and 25, it is then necessary to find a new number for this station. In some cases the official assigning the numbers has added a fraction, so that the new station is numbered 24½ and if a new station is put in between 24 and 24½ he is reduced to the necessity of calling this station 24¼, using, it is to be noted, four characters, two of which must be of half the size of the others. The more general plan is, however, in such cases to assign a suffix letter and call the new station 24A. The next step is usually to renumber the road, leaving gaps between the numbers for possible additions, but there are very few men in an office who can predict where stations will be put in along the road, so that this system has usually been found unsatisfactory, and on many roads these plans have been abandoned and the mileage distance from the terminal has been adopted as the number of the station. Thus station 15 would be whatever station is 15 miles from the terminal. This is especially prevalent in car accountants' offices, where the number of miles run by the car is counted from these abbreviations, and the convenience of having the abbreviation represent the distance from the terminal is obvious. Here, again, comes the difficulty that there may be two stations within one mile of each other and this has been met, as before, either by the addition of fractions, which are not desirable because they are hard to make and indistinct after being made, or by the use of suffix letters which need not be so objectionable as under the older systems. Some railroads, however have partially avoided the use of suffix letters by recognizing the fact that more than one station may be in charge of one agent and using the numbers to distinguish the jurisdiction of the agent instead of the actual siding. As many agents cover a lineal distance of more than one mile this necessitates the use of very few suffix letters. On some lines the suffix letter M is always used to designate mines and on coal roads would seem to be of decided convenience in tracing. So far we have spoken of only main lines.

The first systems of numbering did not attempt to show by the number the branch upon which the station was situated, but the sidings on the branches were numbered as was found convenient. Experiments in the line of locating the point by means of the number have, however, been tried with success. In some cases the branch line is shown by the first figure of the number and in other cases it is shown by the prefix letter. Of course the use of the prefix letter is preferable on large systems, as this provides for 26 branches, while the attaching of significance to the first digit of the number only provides for 10 branches. When it comes to branches of branches the question is more complicated, but on one system at least this has been met by doubling the prefix letters. Under this system a simple number, such as 200 indicates a station on the main line 200 miles from the originating point, a number like T10 would indicate a point on the "T" branch 10 miles from the junction point, and a number such as TS15 would indicate a point on the "S" branch of the "T" branch 15 miles from some recognized junction point. It is hard to see how abbreviations can go further than this.

It is interesting in view of the present tendency toward the use of numerals and initials in abbreviation to note that the Pullman Palace Car Co. still names its cars, and has discontinued the use of numbers altogether. Up to a comparatively recent date many of this company's cars had numbers as well as names, but the numbers are rapidly diminishing. It is possible that a passenger in a Pullman car can remember the name "Tryfosa" more easily than he can 316—if that were the number on the car—and it is possible that when a telegram is "bulled" it is easier to decipher a name than a number, but with the outlandish names which the Pullman Company is now choosing for its cars, it really

seems as if the ordinary conductor would have more difficulty in getting the name right than he would in getting the number right. Moreover, we have grave fears for the interest of literature, history and society, for Pullman cars are built faster than appropriate, euphonious names, historically correct, socially interesting and aristocratically satisfactory can be discovered. The invention of new names will have to be begun before long, and then the whole country will be overrun with cars spreading Chicago standards of art and literature.

The "Manufacturers' Railway Company," of St. Louis, which claims to own 1,000 freight cars, and is supposed to own a railroad several hundred feet long, has sent out a request for annual passes, which, according to the *Pathfinder Guide*, contains the names of a President, First Vice-President, Second Vice-President, Traffic Manager, two traveling auditors, car tracer and eight general agents. This equals one pass to each 67 cars. The names of these officers strongly suggest that their business is making (or drinking) beer. The *Pathfinder* also prints a circular from the New York Central, Hudson River & Port Orange Road, from which it appears that the President, the General Manager and the Traveling Agent of that road, which is over 3,000 ft. long, will be glad to give annual passes in exchange for similar courtesies. It does not appear what or how many roads receive these modest and polite invitations, but we venture to say that they come only to roads which reach either an important business centre or a pleasant summer resort. To give all roads an equal show would be a great waste of pasteboard. And yet it is palpably unjust, not to say cruel, for these selfish provincials to offer their favors to the officers of big roads, well able to pay their fare, and take no notice of the Sebasticook & Moosehead, the Owensboro, Falls of Rough, etc., and other companies, with which, for real merit, these upstart side tracks are not to be compared. As set forth from time to time in the *Pathfinder*, this matter has a very funny aspect, and every one appreciates such nice little morsels of light reading; but the St. Louis brewery and the Port Orange paper mill both have large dealings, of a legitimate character, with the railroads; and the documents, on second thought, do not seem to be so entirely fraudulent after all. Very likely some freight agent who desired to make a secret reduction in rates in order to get some shipments of beer was the first to suggest to the brewery this simple way of accomplishing the object indirectly; and some people will wonder how many traffic solicitors would decline to take advantage of this easy method of favoring a large shipper if the opportunity offered. We fear that the greater burden of fraud rests upon the railroad companies, after all, in some cases.

A very good quality of justice was dealt out by the Supreme Court of Virginia in the case reported in the 13th paragraph of our Railroad Law column to-day. It is amazing how a fog can be changed from light to heavy or heavy to light according as a lawyer desires to convince a jury that white is black or black is white. Those who present these admittedly fallacious arguments, for the sake of impressing the jurymen, must feel ashamed of themselves when they see the judge's clear statement of their true value. In this case the fog argument was probably presented before the other side brought out the facts about the slow order. It is quite likely that this was an instance of the value of the Standard Code of train rules. The rule quoted is very clearly worded and doubtless an effective bit of evidence; whereas a clumsy phrase—and this rule used to be almost universally framed in clumsy terms or else was neglected altogether—would have been likely to influence the court as well as the jury against the road. An engineer's suit also received eminently fair though seemingly severe treatment in the Pennsylvania Supreme Court (the 17th case). In this case the company was undoubtedly chargeable with some blame, but the engineer who fell asleep on his engine was justly forbidden to throw upon the company any part of the burden which the result placed upon him. The road had to bear the money loss and therefore did not get off unpunished. Both sides neglected duty and both suffered.

The very small minority of left-handed railroads in the United States has been reduced by the desertion of the Illinois Central, which went over to the majority the first of the year. It is said that one argument for retaining the left-hand system has been that most of the suburban stations on the Illinois Central near Chicago are west of the tracks. But it appears that with the increasing number of new stations and the approach of the time when over and under passages must be provided at both old and new stations, it was deemed best to take the bull by the horns. In placing the elevated tracks near the World's Fair Grounds room enough has been left between the suburban tracks, for platforms, and steps leading from the intermediate platforms to the depressed streets at the crossings have been provided. The change will favor the Cleveland, Cincinnati, Chicago & St. Louis and the Michigan Central, whose trains have heretofore had to change from the right-hand system to the left-hand on entering the Illinois Central tracks. At present but one track remains at the old level between Forty-seventh and Seventy-first streets, and this is used by outbound suburban trains.

NEW PUBLICATIONS.

Buildings and Structures of American Railroads. By Walter G. Berg, C. E., Principal Assistant Engineer, Lehigh Valley Railroad. 500 pages, quarto, with many illustrations and index. New York: John Wiley & Sons, 1883. \$7.50.

In 1880 and 1881 there appeared in the *Railroad Gazette* a series of papers by Mr. Berg under the title of "Buildings and Structures of American Railroads," and it was announced that they were advance material from a book to be published later. Those articles were abridgements of, or extracts from, the first 16 chapters of the volume which now appears, and to our readers they will already have given an excellent notion of the character and plan of the book. Even those chapters, however, are much fuller in their final shape than as they were presented in the *Railroad Gazette*, and many others are added, there being in all 22 chapters, besides 30 pages of specifications. Over 500 different buildings and structures are described, shown in the illustrations or referred to, and there are nearly 700 illustrations in the text. The descriptions cover all railroad structures above the track level; that is, they cover everything but bridges, culverts, cattle guards and highway crossings, even including ash pits. Special chapters are given to such relatively unimportant structures as watchman's shanties and section tool-houses, and the subjects range from these up to terminal passenger depots, this last chapter being the longest in the book. The buildings treated are shown and described in much detail, dimensions and quantities of materials being given in most cases, and the cost wherever it was practicable.

Mr. Berg's scheme has not been merely to compile, which he has done with admirable discretion and industry, but also to develop the theory or philosophy of each class of structures as he has taken them up, and to state the conditions governing variations of type. Consequently, there is not only description, but a good deal of discussion in the volume; and while doubtless many of Mr. Berg's readers will not agree with him in all of his theories, but they will respect his courage in stating what he thinks, and they will often be stimulated to inject a little more theory into their own designs. Altogether the volume is not only a monument of industry, but an epitome of the experience and acquired knowledge of years of practice.

World's Fair Electrical Engineering.—The first number of this magazine has appeared, and gives excellent promise for future issues. The size of the trimmed page is 6 in. x 9 in., and there are 56 pages of reading matter. The leading articles in this issue are as follows: The Underground Work; The Power Plant; The Electricity Building; The Electrical Exhibits, and Alternating Current Apparatus. In addition to these there are several short articles on various topics connected with the Exposition; a brief review of some of the leading articles in the electrical journals; a synoptical index of current electrical literature; new publications; and electrical patents. The magazine is well illustrated, and is printed on excellent paper. We trust that Mr. De Land will meet with the success to which his excellent work in the field of electrical journalism entitles him.

TRADE CATALOGUES.

Calendars are the resort at this time of the year of two classes of tradesmen, the progressive and the conservative. The latter appear to like a calendar because it does not require the expenditure of much brain power to get up a business card in that form, and the former regard this as the best means of showing their originality. Besides being the beginning of a new year, the present season demands a special reference to Columbus, of course. The prettiest novelty we have received in this line is the calendar of the varnish manufacturers Valentine & Co. Their calendar, which is for the whole year, is printed on a celluloid sheet which is sewed to the outside of a leather pocket book or card case. The Columbian features of this souvenir are neat and historically instructive. The Ajax Metal Co. also makes use of celluloid, sending out a calendar of the "perpetual" style. We admire its beauty, but we are prejudiced in favor of the old-fashioned arrangement of the days of the week, and therefore shall place this on a parlor table or in some other place where it will not be used. The Falls Hollow Staybolt Co. sends out a lithograph of an English girl, with a French headress, done by a German artist. The Marion Steam Shovel Co. has drawn upon all the colors of the rainbow, and at the same time evinces a practical mind by placing an illustrated advertisement between each two month-pages. The full-page illustrations show the company's steam shovels, ballast unloaders, etc., in an effective and picturesque manner. We must remind the author of this document, however, that the flagman who is ostensibly protecting the gravel train at work on the main track has not gone out far enough to make his flagging worth much. No doubt the artist will justify himself by the claim that this picture was taken from life. This we can readily admit, but an advertisement of this kind is not bound to be true to real life. It ought rather to set forth the ideal perfection. The Butler Draw Bar Attachment Co.'s calendar is an example of high art, whether of Omaha or Santa Fe we are unable to decide. It starts off in January with a portrait of Columbus, which is not only austere but indicative of an inexpressibly