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EDITORIAL ANNOUNCEMENTS.

Contributions.—*Subscribers and others will materially assist us in making our news accurate and complete if they will send us early information of events which take place under their observation, such as changes in railroad officers, organizations and changes of companies in their management, particulars as to the business of the letting, progress and completion of contracts for new works or important improvements of old ones, experiments in the construction of roads and machinery and railroads, and suggestions as to its improvement. Discussions of subjects pertaining to* ALL DEPARTMENTS *of railroad business by men practically acquainted with them are especially desired. Officers will oblige us by forwarding early copies of notices of meetings, elections, appointments, and especially annual reports, some notice of all of which will be published.*

Advertisement.—*We wish it distinctly understood that we will entertain no proposition to publish anything in this journal for pay,* EXCEPT IN THE ADVERTISING COLUMNS. *We give in our editorial columns* OUR OWN *opinions, and those only, and in our news columns present only such matter as we consider interesting, and important to our readers. Those who wish to recommend their inventions, machinery, supplies, financial schemes, etc., to our readers, can do so fully in our advertising columns, but it is useless to ask us to recommend them editorially, either for money or in consideration of advertising patronage.*

Last week the newspapers contained a very circumstantial statement to the effect that the Manhattan Railway Company had closed a contract with the Westinghouse Electric & Manufacturing Company for equipping its system for operation by electric motors. We have official information that no such contract has been made. It is quite possible, however, that a contract for electric motive power may be made within a year, and in that case the cars would be lighted and heated, as well as hauled by electricity. We judge that there is no question as to the final outcome, although this change may be delayed even more than a year, for it is a very expensive one and will involve the loss of a good deal of money invested in locomotives. This is the sort of service in which economy can be realized by electric haulage and the advantages of cleanliness, quietness and convenience are all on the side of the electric motor.

Gross earnings for May show continued improvement. The *Chronicle* makes the gain over May of last year 6.38 per cent., the aggregate being 39½ millions for 132 roads. *Bradstreet's* figures show a gain of 6.5 for 123 roads, with aggregate earnings of 38 millions. In April the gain was about 4½ per cent. For the five months it is nearly 2¼ per cent. The May comparison is made with a very bad month indeed. Last year the comparative loss in May was 17½ per cent. It was a month of coal strikes, floods and Coxey; and there is not much to brag about in showing a gain over such a month. A gain of 6½ per cent. is a great deal better than a loss, and may at least be taken as a confirming a hundred other signs of returning prosperity: but it ought to have been more. Information from many different sources leaves little doubt that rates were badly demoralized in many territories most of the month, so that the small increase in earnings is not a fair measure of the business done; and this fact largely destroys the value of returns of earnings as evidence when we are seeking to ascertain the real condition of business. The efforts to maintain stable and uniform rates are serious and honest, but certainly they are only moderately successful.

The twenty-seventh annual convention of the American Society of Civil Engineers assembled Tuesday evening of this week at Hotel Pemberton, Boston Harbor with great promise of a brilliant meeting. The attendance of members and their guests is unprecedented; late estimates placed it at about 500. The list of papers is good, and the programme of excursions is remarkably attractive, including Sunday at the White Mountains. The things of engineering interest to see in and about Boston are numerous and important, and the pamphlet issued by the local committee is an excellent example of applied intelligence. It gives all necessary information as to details of ways and means, and describes at considerable length Boston and its engineering works, with numerous illustrations and with a number of good maps, the whole making a pamphlet of 80 pages. No city in the country presents so much of interest to municipal engineers as Boston, and while it is not one of the great railroad centers, it contains a good deal that is interesting to railroad engineers also; and all who attend the convention are sure to have a delightful outing and an instructive experience.

Hauling Trains by Electricity.

Two articles which have recently appeared on the very interesting subject of the use of electric motors on railroads are in substantial agreement. One is by Mr. F. J. Sprague in the June number of the *Engineering Magazine;* the other is by Mr. H. G. Prout in the *Independent* of June 6.

The conditions under which the Pope is infallible are very strictly limited. His words have this attribute only when he is speaking as the head of the church, on matters of faith and morals, and from the chair of the Pope. We hold that the editor of the *Railroad Gazette* is inerrant only under similar strict conditions. When he makes excursions in profane or foreign vehicles, he may make mistakes, like any ordinary man, and then we decline to be responsible for him. Still we are disposed to indorse, in principle, if not in detail, the opinions expressed by him in the article before us.

Both writers agree on the fundamental principle. Mr. Prout says:

"When the work can be massed in a few heavy trains direct steam will be better. When the work must be done in small quantities, and very frequently, it will be advantageous to transmute the energy of the steam into electricity." Applying this general principle he concludes that the electric motor is destined to supplant the steam locomotive for elevated or underground city railroads; also that for surface railroads in cities it will take the place of the steam dummy, the horse, the mule and even the cable; and that it is destined to replace the steam locomotive for suburban service within a radius of something like 20 miles of the business centers of the great cities. For like reasons the electric motor will probably take the place of the steam locomotive for strictly interurban business; that is, between cities and large towns not too far apart, where frequency of service and convenience of access to cars are very important, and where the volume of business is large. Likewise for service in and about small towns where the track can be laid on streets and highways the electric motor seems to be destined to prevail.

For long distances, where, in order to get acceptable average speed between terminals, a high speed must be made between stops, a new element, hitherto unconsidered in building electric railroads, must come in. The railroad must be built on private right of way that can be fenced in and protected, and cannot be permitted to run on the open highway. The track and rolling stock must also be quite up to the standard of steam railroad practice. The tendency of recent legal decisions indicates that for service between towns railroads cannot be regarded as street railroads, but must acquire private right of way by purchase and condemnation. Considering these elements, the cost of establishing an electric railroad must be as great as that of the steam railroad, apart from any consideration of the cost of central stations and of loss of energy in transmission. Therefore, it seems highly improbable that the electric motor will drive out the steam locomotive from the great field of main line working.

Mr. Sprague lays down the general principle in these words: "When trains are operated in large units, with comparatively few units between terminal points, and these at considerable intervals, the steam locomotive will absolutely hold its own. When, however, these larger units are broken up the intervals of train dispatching can be shortened as much as is consistent with satisfactory operation and the number of units distributed over a line made correspondingly large. Then and then only will electricity be used on suburban lines and lines connecting important cities." Or, in other words, "electricity will take the place of the steam locomotive only in part, and then only when the number of units operated between terminal points is so large that the resulting economy will pay a reasonable interest on the combined cost of a central station system of conductors and a motor equipment, and the traffic existing is commensurate with the needs of such a system." Applying this principle Mr. Sprague concludes that the future of the electric railroad is not in the wholesale destruction of existing great systems; it is in the development of a field of its own. "It will fill that field to the practical exclusion of all other methods of transmitting energy. It will replace the locomotive on many suburban and branch lines; it will operate almost all street railway systems and elevated and underground roads; it will prove a valuable auxiliary to traffic systems; but it has not sounded the death knell of the locomotive any more than the dynamo has sounded that of the stationary steam engine." Mr. Sprague considers somewhat also the question of handling freight, and concludes that the 30, 40 or 50 car trains pulled by a single locomotive with a limited train crew presents an economical transportation of freight which no system of units on long distance transportation can hope to equal.

It is quite possible that some day in the distant future a set of conditions may arise which will call for the use of electric motors on main lines running comparatively long distances, as, for instance, between New York and Philadelphia. There may be a commercial demand for higher speeds than can be realized by steam locomotives. We have not yet reached the limit of speed that can be attained by a steam locomotive, but obviously the boiler and the firebox must set a physical limit somewhere. On the other hand, there is practically no limit to the amount of power that can be poured into a motor from a central station, and so the time may come when special high speed lines may be built between some of the great cities on which electric motors will be used. But in the *Independent* article the opinion is expressed that such a railroad could not live under existing conditions to-day; it would ruin its owners; but future generations may see it.

We shall not attempt now to give the arguments which lead up to the conclusions briefly stated above. It is simply a matter of collecting facts and figures and applying arithmetic, and such a process is pretty sure to demonstrate the soundness of the position taken by both writers. The subject is complicated and the only safe course for the engineer or the investor is to make a careful study of each case as it comes before him. But the one general principle that can be always applied, within limits, is laid down above.

The Proposed Block Signal Rules.

The St. Louis convention comes up once more, in a communication from a correspondent. He says:

I have read your report of the St. Louis meeting of the American Railway Association, in the issue of June 7, with your comments thereon. While the majority of the gentlemen present had evidently determined, before the reports were taken up, that nothing was to be gained by further discussion of the Train Rules, and while, therefore, the train rule committee, and members holding their views, will take little interest in your criticisms, it is only fair to say that your strictures upon the committee's work are well within the truth. Some of the best operating officers who were present at the convention will criticise you chiefly for the mildness of what you say. But the block signal rules, which you do not criticise, are really more important than the train rules. The latter have now been threshed over so many times that, much of the time, discussion of them runs into idle talk about non-essentials. The signal rules, however, touch upon a live question, for blocking signaling is now in a progressive state. Are we to infer from your report of this part of the meeting that the discussion did not bring out any useful information? The report of the committee, printed before the meeting, showed some rules which will certainly need amendment before any road will accept them; such, for instance, as 228.

We made our report of the block signal rules brief because the discussion upon them brought out little or nothing that would help one to form an opinion upon the value of the rules themselves. We postponed discussion of them because we had not had time to examine them carefully; and now it appears that they were "adopted" with a reservation, for the new edition of the standard code appears without them. This omission was proper, of course, for the Association ought to consider *all* of the rules for this department before finally settling upon those for one part of the signal code. Moreover, the discussion on this subject came at the close of the two days' meeting, when the members were not in the mood for thorough discussion, and the value of what was said is correspondingly diminished.

The rules themselves are subject to various criticisms. We do not know what ones our correspondent refers to, other than 228, but the two most obvious criticisms are general in their nature. First, as to the rule, acknowledged by the committee as binding, that this part of the code, like all the rest, should deal with principles and not precepts. This rule is followed in a very irregular way. Rule 204 (the second form suggested) reads:

204 (B). When notice is received of an approaching train the signalman will notify the signalman in advance, and ascertain if the block is clear and "red" displayed; if so, he will arrange with the signalman in advance to hold the block for ——, and admit the train to the block.

When the engine of a train has entered a block the signalman will report to the signalman in advance, and when the rear of a train has passed —— feet within the block, and he has seen the markers, the signalman shall display his signal at "danger" and report to the signalman in the rear.

The phrase "He will arrange," etc., states a principle where a precise formula would have been particularly appropriate. In other rules, No. 205 for instance, there is a direct precept, but an absence of a principle, the need of which is obvious.

Second, the rules for signalmen might be made much easier to teach (and to understand) by the use of a simple diagram, and the indications of the signals could be made ten times plainer by drawings. To insist on telling everything in words is an unnecessary adherence to tradition. This point is illustrated in the English signal rules, printed in current issues of the *Railroad Gazette*, where "the signal box from which the train has arrived," "the signalman at the box in advance," "the signal box from which the signal was received," and many other equally clumsy phrases are repeated scores of times, when "*A*," "*B*," and "*C*" would answer just as well if there were a drawing to explain them. The employee who cannot fully and quickly comprehend a diagram of tracks, explaining the relations of three signal cabins is not fit for any place where these rules are required.

While criticism of the rules in detail may be of little value at present, on account of the probability that they will come up again in the convention, two or three obvious points may be noted. Rule 228, referred to by our correspondent, is applicable on double track only. At the same time the note under Rule 204 indicates that the committee intended to provide for both single and double. No. 228* could be made applicable to either by filling the blank space, for use on single track, with, say, "one week" instead of "five minutes," and by adding a clause making exception for ruling trains; but when the construction of a standard code involves such a combination of modifications as this, the question arises whether making rules with blank spaces really accomplishes the object aimed at. In many cases it does not.

The second paragraph of Rule 204 will not be acceptable to roads where signals go to danger immediately after the engine has passed them, and the question as to best practice in this respect, which was discussed a little at the convention, ought to be thoroughly thrashed out. The criticisms of Mr. Fitch on this and other points deserve more attention than they received. Rule 202† suggests in a striking manner the absurdity of painting semaphore arms red. Perhaps, however, this wording will serve to show more clearly the desirability of using yellow or some other color that has no meaning. Again, it is not apparent what advantage there is in trying to make a single rule answer for both three-position and two-position semaphores. The two practices are not likely to be used at the same tower, or even on the same division. The first form of rule 204 (for double track only) permits A to send a train to B without first asking B. Why should he not ask, as is required in England? According to the rule, A assumes that, because the line was clear, say, two hours previously, it is clear now. This may not cause trouble once in a hundred years, but the English procedure tends to keep the discipline up to the mark.

We have noted points on which there are radical differences of opinion. Other differences might be mentioned which we do not consider so weighty, but which the roads using the block system would maintain with a good deal of tenacity. It seems likely, indeed, that the Pennsylvania, the Erie and the New York Central will each continue to prefer their own respective codes.

* 228. A train arriving at a block station where the signalman is absent or disabled, and orders cannot be obtained, shall wait —— minutes and may then proceed as under "caution," and the conductor must report the fact to the —— from the next block station.

†202. (a) "Red" is an indication that the block is *not clear*, and signifies *danger*.

(b) "——" is an indication that the block *is clear* and signifies *safety*.

(c) "——" is an indication that the block is *not clear*, and signifies *caution*.

Where a semaphore is used, the governing arm will be displayed to the right of the signal mast as seen from an approaching train, the indications being shown by positions as follows:

Horizontal is the equivalent of (a) as above.
Diagonal —— is the equivalent of (b) as above.
Diagonal —— is the equivalent of (c) as above.

A New Digest of Railroad Law.

Some years ago the legal world would hardly believe that there existed in one of the suburbs of New York city an establishment of such dimensions as to contain within itself not only the mechanical but much of the intellectual machinery necessary to issue the greatest law encyclopedia of modern times. And yet it is quite capable of demonstration that at Northport, Long Island, this stupendous work, already comprising 27 volumes, including topics from the law of "A" to the law of "Usury," is issuing from the publication house of Edward Thompson and his company. Before we have recovered from the surprise at such wonderful enterprise in such a modest village, we find Edward Thompson without commercial publication ancestry of any sort, so far as we are informed, announcing the inception of another great encyclopaedia of perhaps even larger usefulness, that of pleading and practice.

And here almost without any announcement at all we have before us from the same publisher two large volumes of a digest of railroad decisions, the second of which has but recently made its appearance. Mr. Thompson seems to be a pioneer in his undertakings, and in the methods of carrying them out. He appears to have organized an editorial staff of competent and trained legal minds, and to have them under fixed contracts for all their time, in proximity to the printing establishment.

The first railroad case was decided within the memory of men now living, say sixty years ago, but the first attempt at a railway digest, strange as it may seem, was not made before 1875, when Mr. John F. Lacey, of Iowa, issued the first volume of his admirable work. The second volume appeared in 1884. Mr. Lacey's excellent work, stopping in 1884, contained about 20,000 law points, while the work now before us, being published a little over ten years later, is said to contain about 75,000.

Thompson's first two volumes and, we presume, those to follow, have been prepared by Messrs. Stewart Rapalje and William Mack, the former of whom, at least, has been before the public for some years back as an industrious and discriminating law writer. The topics treated so far extend from "Abandonment" to "Cities," and cover over sixteen hundred large pages. So that so far as the space required in treatment is evidence, we may justly conclude that this work, when finished, will be the most complete and exhaustive hitherto published.

Of course mere bulkiness in a work of this kind is not its greatest value. When a man sits down to ascertain what the courts have decided about a certain thing, he wants to learn *all* that has been decided in a certain case as well as what has been decided by all the courts. A little learning, it has been well said, is a dangerous thing. These volumes are distinguished by clearness of statement and thoroughness of statement of the point decided. Clear statements are often incomplete, as, for instance, in sensational press dispatches summarizing important decisions, from which an untrained reader would infer about 300 times a year that the Balance of Justice had gone down so far on one side that its equilibrium could never be recovered.

And it is equally true that thoroughness or fullness of statement in digests of points decided is not necessarily clear. The maker of the syllabus may crowd into it every circumstance and detail in evidence essential and unessential to the point decided, and so completely cover up the idea as to lose it in a haystack of verbiage. This is a very common imperfection in digests and makes the work of consulting them threefold more toilsome than it ought to be. In the work before us these matters have received due consideration and the result is admirable.

As an instance of the satisfactory digest of a general rule we quote the syllabus, as gathered from a Texas case under the interesting sub-title, "Improper Remarks by Counsel," taken from this work: "The argument of counsel in addressing a jury should be confined to a discussion of acts in evidence, and when language is used relating to matters not in evidence, and of a character calculated to inflame and prejudice the minds of the jurors against the adverse party, the judgment will be reversed, especially in a case where the verdict seems excessive."

Glancing at the treatment of the various topics more particularly, we note with pleasure the satisfactory character of the work done. For example, under the head of "Agency," which is a most important topic in railroad law, we find, first, a number of cross-references to various parts of the work, more or less cognate, and then the subject divided very naturally into the four titles of "Appointment and How Proved," "Rights, Powers and Liabilities of Agents," "Rights, Duties and Liabilities of Principals," and "Public Agents." There are 119 sub-titles on this general subject. Take, again, the word "Animals." After cross-references, the subject of "Injuries to Animals" is divided into "Statutes," "Liability Irrespective of Company's Duty to Fence," "Liability as Dependent upon Company's Duty to Fence," "Contributory Negligence," "Procedure," and the "Effect of Operation of Road by Lessees, Receivers, etc." in connection with this subject. Here we have the enormous number of 652 sub-titles.

In spite of the fullness of the digest here, we have under the topic of "Carriage of Live Stock" 161 sub-titles, and, in addition to this, a special topic on "Cattle Guards," embracing 34 sub-titles. "Appeal and Error" is very thoroughly digested, while that of "Baggage" has 131 sub-divisions.

To appreciate the fullness of the work one must understand that a sub-title may cover a large number of points decided, and refer to a very much larger number of cases where the same principles are recognized or laid down. "Carriage of Merchandise" embraces 809 sub-titles, while "Carriage of Passengers" has 651. The treatment of these two subjects, if taken out of the digest, would each present the appearance of a volume of the average size and weight. The cross-references are unusually full and satisfactory, while the subdivision of the subjects is so logical and complete that no one would find any difficulty in getting speedily to the subject searched for. The treatment of "Bills of Lading," "Charges," "Charter" and "Injuries to Children" are particularly satisfactory and in keeping with the entire work.

The volumes are handsomely printed in good, clear type, and bound in a manner to suggest the durability of the missals of the middle ages. Judging from the two volumes already issued we have nothing but praise for the work. It will be useful to every one, whether lawyer or layman, who has occasion to inform himself upon any branch of railroad law upon which decisions are to be found. It is a great work and it is not likely to have a competitor for some time to come.

The Hon. E. Henry Lacombe, of New York City, a Judge of the United States Circuit Court, has written a letter to several of the city papers complaining of the New York Central's limit on local tickets, which makes such tickets good only until midnight of the day following their issue. It appears that the Judge's daughter bought a ticket, and, not noticing the limit, offered it at the Grand Central Station, New York City, after it had expired; and she had to go upstairs to the General Passenger Agent's office to get it redeemed. Judge Lacombe says that this rule is "a step backward; it decreases facilities of railroad travel and subjects the unfortunates who have to travel by this road to a new and unnecessary inconvenience. . . . The rules of that corporation may change, but its policy is unvarying—a policy so tersely expressed in the immortal words of one of its deceased autocrats—'the public be damned.'" The Judge's wrath seems to have risen to a high pitch; but he admits that the time limit was printed on the ticket and he does not deny that there were suitable notices in the waiting rooms telling of the adoption of the rule last January. We are sorry that Judge Lacombe does not read the *Railroad Gazette*. If he had done so he would have long since found out that many large roads have had this time-limit rule in force several years, and that hardly any complaints have been made about it. The reporters' gossip in this case brings out the point that a railroad needs to announce just what it will do, as well as do just what it announces. It appears that the ticket agent at New York would have redeemed this expired ticket if he had been asked to do so, special authority to do this having been granted after the notice about redemption was issued. But, the notice being silent on this point, and directing that complaints be addressed to the General Passenger Agent, the Judge's daughter climbed the stairs unnecessarily. The New York *Herald*, in trying to answer Judge Lacombe's question why the rule was adopted, says: "It is generally understood by persons familiar with the conduct of railroads that this rule was put into operation to prevent possible peculation on the part of conductors and agents. It is on a par with various other rules of railroad companies, which have no standing legally, but are of service in disputes with the general public who are ignorant of their rights in such premises." The *Herald's* railroad expert is a little off. In the first place the reference to the danger of cheating by agents in this matter is a slander upon that class. A conductor now and then is caught selling to scalper tickets that he has taken up, but we very rarely hear of a railroad ticket agent in collusion with a conductor; and it is only by collusion with a conductor that he can make money by selling tickets a second time. And as for the weakness of the rule in the eye of the law, the *Herald* reporter might ask himself why Judge Lacombe, an expert, anxious to annihilate the rule, does not say anything on this point.

In our issue of May 31 appeared the programme for excursions planned by the English railroads for the delegates to the International Congress which will soon assemble in London. We have received within a day or two a provisional programme of the proceedings of the Congress. On Wednesday, June 26, the ceremonial opening by the Prince of Wales will take place at the Imperial Institute, and in the evening a reception will be held at the Foreign Office by the Right Hon. James Bryce, M. P., President of the Board of Trade. The next five week days will be given up to excursions and to meetings. On the evening of Tuesday, July 2, the first banquet given by the Railway Companies' Association will take place at the Imperial Institute, to be followed by a reception. Wednesday and Thursday there will be meetings and excursions, and Thursday evening the second banquet given by the Railway Companies' Association will take place. Friday and Saturday there will be meetings, and Saturday afternoon there will be a reception by the Queen at Windsor Castle. To this the Queen has invited all the delegates. On Monday, July 8, there will be further meetings, and in the evening a banquet given by the Railway Companies' Association at Crystal Palace. Tuesday, the 9th, there will be other meetings and the closing ceremony will take place that afternoon. On Wednesday, the 10th, excursions will start for Scotland and other parts of the United Kingdom. Besides the receptions and banquets here announced the city companies, whose hospitality is famous, have invited a considerable number of delegates to dine on various days. In our issue of May 24 appeared a list of our railroads members of the Congress and of their