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The Editor is always glad to receive for examination illustrated articles on subjects of timely interest. If the photographs are sharp, the articles short, and the facts authentic, the contributions will receive special attention. Accepted articles will be paid for at regular space rates.

THE SHIPPING TRUST AND HIGHER RATES

Irrespective of the attitude of the American people toward trusts in general, there is no doubt that the announcement of the formation of the Shipping Trust was received in this country with a distinct feeling of pride and satisfaction. It was felt that the acquisition of various lines purchased by the trust, by which the American merchant marine was augmented by several hundred thousand tons, tended to place it in a position of pre-eminence such as it has not enjoyed since the decadence of shipbuilding in this country following the outbreak of the War of the Rebellion. The movement was looked upon to a great extent as a peaceful victory, made possible by the existing prosperous material conditions in this country. The news of the formation of the trust was received in Great Britain with a feeling which well-nigh approached consternation and led to immediate Parliamentary investigation. This feeling was a perfectly natural one. The possibility that several large fleets of steamers might without warning be transferred from one flag to another was certainly food for much thought and reflection; and even after it became understood that foreign-built ships could not, under our present navigation laws, fly the Stars and Stripes, it was feared that national pride might bring about legislation tending to make such an event possible. It was appreciated, and with reason, that the possible loss to the British Naval Reserve of such magnificent steamers as the "Oceanic," "Teutonic," "Majestic," "Minneapolis," "Minnehaha," and other of the larger ships of the various lines would be distinctly detrimental to England's position as a sea power. This feeling has, of course, been greatly allayed by a better understanding of the laws of this country, which, unless some action antagonistic to the trust should be taken by Parliament, would not admit of any change being brought about in the status of the vessels in question. Those intimately acquainted with shipping interests of both countries have somewhat wondered how it would be possible for the trust to pay dividends upon the enormous capitalization of the company. Very few details in regard to the existing status of affairs, however, have been given to the public; but it is pretty generally understood in shipping circles that the trust has been established for the purpose of making certain combinations with the transcontinental railroad lines, by which freight may be transported over land and sea on advantageous terms. Such a development is in the ordinary course of events and in entire harmony with the spirit of the times, and it is easy to see that great advantages may be derived from such a combination.

The feeling of gratification over the acquisition of these foreign properties, however, is somewhat mitigated by the discovery that simultaneously with the formation of the trust, passenger rates have been substantially advanced. This indeed will be unwelcome news. The rates previously exacted on the better class of transatlantic liners had, it would seem, almost reached the limit of possibility. It will be a matter, therefore, of unpleasant surprise to Americans traveling in Europe to find upon engaging their return passage to America that the rates on some of the steamers controlled by the trust have been advanced from 20 per cent to 35 per cent. It is difficult to foresee what the result of this policy will eventually be. It is problematical whether this increase of rates will not produce a feeling of prejudice against the lines controlled by the trust, and will not perhaps stimulate the establishment of other independent lines offering more popular and alluring rates to the traveling public. It will be an interesting matter to watch what the outcome of the movement will be. The American people form a great traveling public, a large majority of which husband their resources, and carefully consider what the expense of a transatlantic trip would be before starting on a voyage to the other side. Any serious increase in the expense of crossing the ocean may have a material effect in modifying such plans either by discouraging foreign travel or by di-

verting such custom to other lines not controlled by the trust.

The attitude of the English press has certainly undergone a great change within the last few weeks. The Shipping World, of London, actually welcomes the entry of Americans into the trade. In a recent editorial it goes on to set forth its views as follows:

"There is a vast amount that we can learn from them. It may be worth while to quote a few instances. Take the case of grain. In America 20-ton freight cars bring the produce into, say, Boston. It goes into elevators by machinery, and is passed into the central warehouse, and thence by mechanical conveyors direct into the ship's hold. Compare this with the system at, say, Bristol, where it is actually discharged by hand, or at Liverpool, where, although it is elevated onto the quay or into warehouse, it is busheled and portered by hand, carted to railway depot, and loaded into 5-ton trucks by hand. The railway companies still indulge in a timeworn fairy tale about 20-ton freight cars being impossible owing to the construction of the sidings, but they forget to explain how Pullman cars are dealt with on these same tracks. The case of coal affords a further instructive illustration. The American designs 5000-ton steam colliers, has them built on the Tyne, tips coal into them at the coaling port, discharges it by grabs onto a wharf, whence it falls into holds or bunkers, and all at a cost of 2s. a ton! Liverpool brings it round from South Wales by 500-ton coasters, often discharges it by hand into lighters, and loads it into bunkers by hand at a cost of 7s. 6d. to 10s. a ton. America builds floating wharves or piers at a cost of thousands, Liverpool spends millions in masonry. America charges so much a day for lying at a wharf. Liverpool for an hour or a month charges 1s. 4d. a ton for her masonry enclaves. Such instances could be multiplied almost indefinitely."

The advanced methods employed in America as set forth in the foregoing describe the conditions as they existed before the trust was formed. There is no reason to believe but that the immense capital controlled by the trust will enable it still further to extend and improve the mechanical conditions as they exist. There is no doubt, however, that any effort to increase the rates in freight or fares will be deeply resented, and the popularity of the enterprise, upon which so much of its prosperity relies, will depend largely upon the policy pursued by the trust with reference to these matters.

THE NEED FOR FIREPROOF ELECTRIC CARS.

A few weeks ago Mr. George Westinghouse wrote a letter to one of our leading daily papers, in which he warned the public against the dangers from fire to which electric cars, particularly on elevated and subway systems, are exposed. If we remember rightly, reference was made to the disaster to the Liverpool Elevated Railroad, in which a whole train was quickly consumed at a point in the line where the road passed from an elevated into a subway structure. It was only by the sheerest good luck that any of the inmates of the train escaped, as the fire, once started, swept through the train with great rapidity. The letter referred to was written at a time when the question of the electrifying of the New York Central Railroad and New Haven lines in this city was under active discussion, and it was intended as a warning against the too hasty assumption that by the substitution of electricity for steam in the operation of railroads, the dangers from fire and other causes would be completely eliminated.

Since the appearance of the letter, which, on account of the distinguished position in the electrical world occupied by Mr. Westinghouse, created something of a sensation, there have been several practical illustrations of the force of the warnings given. On street railway cars there has been something of an epidemic of burnt-out fuses, which, being improperly safeguarded, have set fire to the cars with more or less serious results; and it was only within two weeks that on the Manhattan Elevated Railroad a three-car train caught fire and was completely and quickly consumed. This last accident, although fortunately not attended with any personal injuries or loss of life, for the reason that the train was not in active service, is a much more serious accident than the burning of a street car, for the reason that the chances of escape for the passengers on a street car are favorable, whereas the breaking out of fire on an electric train on the Elevated Road is liable to result in a positively awful catastrophe. Should such a fire occur between stations on a single-track structure, and be accompanied by a complete disablement of the motive power, so that the train were halted between stations, the passengers would be shut up in a veritable fire-trap. The end doors of the train being locked, and the platforms overhanging the edges of the elevated structure as they do, it will be seen that the only chance of escape would be the doubtful expedient of leaping to the street below. If the dangers due to isolation of the train would be great on an elevated road, they would be even greater in a subway tunnel, particularly if it should happen to be a single-track tube; for in this case there would be the added horrors of asphyxiation by the extremely heavy fumes which would be given off by the burning insulation and the heavily varnished woodwork of the car.

By taking every precaution known to modern engineering, it would be possible in the construction of the cars, both as regards the car itself and its electric equipment, to reduce the danger of fire to a point at which it would cease to be a cause of anxiety. In the first place, most careful attention should be given in the construction of the electrical equipment to the question of insulation. The fact that in Europe engineers have been using a 3000-volt current directly on the cars shows that it should not be a difficult matter to so insulate the low-tension direct current which is in use in this country, that fire from a burnt-out fuse or from short-circuiting would be a practical impossibility. A further insurance against fire, not less effective than the first, would be the construction of cars either entirely of metal, or of the best variety of fireproof wood. Of course there are a hundred-and-one kinds of so-called fireproof wood on the market, and many of these are of extremely poor quality, the fireproofing in several cases being only temporary, and rapidly passing off on exposure to the weather. There are some fireproof woods, however, that are worthy of the name, woods that lend themselves to manipulation by woodworking tools, that will take a very fair finish, and varnish well. The combination of the very highest type of insulation with metal or wood fireproofed cars would, we feel perfectly safe in stating, completely eliminate the danger of fire from the electric trains, which within the next three or four years will be running in vast numbers throughout the city and in its suburban service.

That there was nothing over-alarmist about the letter of Mr. Westinghouse, recent events have proved. Unless the methods of car and train construction suggested be complied with, we fear that it will not be many months before another tragedy involving loss of life will be added to the many which have occurred with alarming frequency of late in this city. These methods can be adopted at a cost which will not be in any sense prohibitive; and as we are satisfied that great corporations like the Manhattan Elevated, the New York Central, and the construction company which hopes within a couple of years to open our great subway system, are desirous of making railroad travel perfectly safe, we confidently believe that now, while the question of equipment is under consideration, they will see to it that suggestions of such obvious utility as those indicated above will be incorporated in their rolling stock.

NEW CUBAN PATENT AND TRADE-MARK LAW.

Still another change has been made in the Cuban patent and trade-mark laws, and the Cuban Republic has now an independent patent and trade-mark system.

It will be remembered that when Cuba was a Spanish possession there were two methods by which an invention or trade-mark could be protected in Cuba. The usual procedure was to secure a Spanish patent and have it extended to the Spanish colonies, including Cuba, by registrations in the Spanish colonial office. It was, however, also possible to secure a Cuban patent which was independent of the Spanish patent; though, of course, the property in inventions which were protected in Cuba by Spanish patents, which had been extended to the colonies, could not be affected by the subsequent issue of Cuban patents; neither could inventions which had become public property in Cuba be protected by the issue of a Cuban patent, for the idea in the issue of a patent is always the grant of rights in return for the disclosure of the invention and not the grant of rights without consideration, or the impairment of the rights of the public to an invention which has become public property. This was the situation in Cuba at the close of the Spanish-American war. Under the administration of the United States War Department provision was made for the extension of Spanish and United States patents to Cuba, but it was no longer possible to secure the extension of Spanish patents by merely complying with the provisions of the Spanish law under which the registrations were made in the Spanish colonial office. The United States War Department circulars, which had the effect of law, provided for the protection of inventions in Cuba by the filing of certified copies of United States or Spanish patents in the office of the Governor-General of Cuba. It will be seen, however, that the provisions for the grant of independent Cuban patents were not revoked and that it was still possible to secure patents and register trade-marks in Cuba which were not founded on the grant of a patent or the registration of a trade-mark in another country. This was the law up to June 20, 1902, for the laws of the United States War Department remained in force until they were revoked by the Cuban government. The Cuban authorities have, however, now revoked the laws permitting the extension of United States patents and trade-marks, and it is now necessary to file independent Cuban applications under the Cuban law, which in substance has existed during the Spanish possession and the United States occupation.

The property in patents and trade-marks which were registered in Cuba under the administration of the United States War Department will undoubtedly