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NEW YORK, SATURDAY, MAY 4, 1907.

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.

ACCELERATING RATE OF GROWTH OF OUR COMMERCE.

In a general way we all understand that the growth of commerce in the United States is proceeding at an accelerating rate; but it takes the actual figures, as published from time to time in the government documents, to impress upon us just how marvelous this growth has become. A volume recently issued by the Department of Commerce and Labor gives us a bird's eye view of the increase of foreign trade, as shown by the total imports and exports annually from 1790 to 1907. The magnitude of our commerce is shown by the fact that its total value for the 117 years under consideration reaches the stupendous sum of 80 billions of dollars, of which 37½ billions represent the value of imports and 42½ billions the value of exports. The most striking fact about these figures next to their magnitude is, that the greater part of this commerce is to be credited to the last two decades; for of the 42½ billion dollars' worth of merchandise exported since 1790, 21½ billions or over one-half is credited to the twenty years beginning with 1887, and 14 billions to the ten years beginning with 1897. Here, in this last statement, is something that may well give us pause; for it takes these carefully-compiled government statistics to render it credible, that one-third of the total exports for a period of 117 years is due to the commercial expansion of the last ten years. Of the 37½ billions representing the aggregate imports since 1790, about one-half came in during the twenty-two years beginning with 1885.

THE COMMERCIAL SUPREMACY OF NEW YORK.

Apropos of the rapid growth of our commerce, it will be gratifying to the residents of New York to learn that this city easily maintains its commercial pre-eminence. A summarization of the business of the past year by ports of entry and departure, shows that New York continues to handle about two-thirds of the entire foreign commerce of the United States. Next in importance comes Boston with 7 per cent, followed by New Orleans with 6 per cent, Galveston 5½ per cent, Philadelphia 5 per cent, Baltimore 4¾ per cent, San Francisco with not quite 3 per cent, Savannah 2¼ per cent, Puget Sound 2 per cent, and Buffalo and Detroit each with a little over 1 per cent, the above percentages having reference to a total foreign commerce of \$2,970,000,000. If we consider the exports only, the percentage list of the total exportations, by ports, shows New York to be first with 35 per cent to its credit. The general currents of the export trade are shown by the figures of the exports arranged by principal sections of the country; according to which, Atlantic coast ports are credited with 61 per cent, Gulf ports 21 per cent, northern border and lake ports 10 per cent, Pacific coast ports 6 per cent, and Mexican border ports 2 per cent. The Bureau of Statistics is to be congratulated on the new and more scientific classification of the year's commerce which was adopted by the Department last year, and receives its first publication in the present volume. All articles are now subjected to a twofold classification to show, first, the condition in which they enter commerce; whether raw or manufactured, and, if the latter, whether partially manufactured or wholly manufactured; and second, whether intended for food or to meet other necessities of life. This classification makes it possible to trace the development of domestic industry in each group of articles, and ascertain what changes are occurring in the position of the United States, as regards its ability on the one hand to supply its own requirements for food or manufactures, and on the other to sell in foreign markets domestic products in competition with those of other countries.

HEALTH CONDITIONS AT PANAMA.

The last monthly report of the Sanitary Department at Panama, which has been doing such successful work under Col. Gorgas, shows that health conditions continue steadily to improve, both in the laboring force and the civil population. The two causes of highest mortality among the working force were pneumonia, which was responsible for twenty-six deaths, and malarial fever, from which fifteen deaths occurred. In the total working force of 5,554 white Americans there were but two deaths during the month, one from fever and the other from consumption; although the consumption case cannot be charged to conditions at the Isthmus, seeing that the patient was well advanced in that disease when he arrived from the United States, and worked only a few days before being entered upon the sick reports. The present conditions would give a rate of mortality for the American whites of 4.2 per thousand per year, which, if we bear in mind how pestilential was the condition of the canal zone when the present Sanitary Department took charge, must certainly be considered to be a most creditable result. The average sick rate also continues to fall; for whereas in August last there was an average of 42 per thousand constantly sick, in January of this year the figure had fallen to 26 per thousand, and in February to 24 per thousand. There were three cases of smallpox during the month; but two of these were taken off incoming ships by the Quarantine Department, and only one originated on the Isthmus. In the latter case all the usual precautions of disinfecting and isolation were observed, and no further cases occurred. There has been no case of yellow fever on the Isthmus since May of 1906. It is evident from this report that, when the Department claims for the canal zone health conditions that compare favorably with those in the more southerly States of the Union, it is making a statement which is well within the truth.

FULL ELECTRIC SERVICE ON THE NEW YORK CENTRAL.

Complete electric service over the zone extending between the Grand Central station and Highbridge on the main line was instituted on April 23, when, for the first time, the Twentieth Century, the Empire State Express, and other noted trains were hauled through the Park Avenue tunnel by electric locomotives. For several months the local and suburban trains of the company have been under electric operation, part of them under the multiple-unit system, and the rest hauled by the new 95-ton locomotives. The change from electric to steam locomotives is made at Highbridge in four or five minutes; but the company expect ultimately to reduce this time to two minutes. The party of officials which went out to Highbridge was treated, incidentally, to a display of the great hauling power of the new equipment, when one of these locomotives picked up a disabled steam locomotive, with its freight train of fifty-six cars, and hauled it to the yard with comparative ease.

THE PRESIDENT'S INLAND WATERWAYS COMMISSION.

The appointment by President Roosevelt of an Inland Waterways Commission was a step of far greater importance and wider scope than is generally supposed. The Commission is the outcome of the earnest work done by the advocates of improved navigation for the Mississippi Valley, and the work of the Commission will be concerned particularly with inland navigation. This last is a question which is attracting widespread attention in Europe, where there is a marked revival of interest in the question of the rebuilding and development of inland canal systems. It has been suggested by one of our contemporaries that the scope of the Commission should be broadened so as to take in the whole question of the natural water resources of the United States, not merely in its relation to canals, but as it affects all of the many and important interests which depend directly or indirectly upon the natural sources of water supply. Among these may be mentioned, in addition to navigation, the development of water power, the extension of irrigation, the control of floods, and the prevention of the disastrous washing away of surface soil by uncontrolled rainfall. The work of the Commission should include such important questions as that of the conservation of the Adirondack water supply, which is now being made the subject of heated discussion at Albany. Its natural water supply constitutes one of the most valuable assets that a country possesses. The interests affected are so diverse, and in many cases so opposed, that the only satisfactory way to distribute its benefits equitably, and to the highest advantage of the many as against the few, would be to maintain all sources of water supply under State or Federal ownership and control.

NO BIDS FOR THE NEW SUBWAY.

The figures presented by the Interborough Company in the letter of their chairman, Mr. Shonts, to the Rapid Transit Commission, explaining why they

did not put in any bids for the construction and operation of the new subways, will come as a surprise to those people who believe that enormous profits are to be realized from any new subway lines that may be built in this city. The company state that the engineering advisers of the company, including Mr. William Barclay Parsons, who designed, and Mr. John D. Macdonald, who built the existing subways, have estimated that the new East Side subway on Lexington Avenue and the new West Side subway from 42d Street to the Battery, aggregating about thirty-nine miles of single track, would cost for construction and equipment \$88,000,000, as compared with a cost of only \$71,000,000 for the existing rapid transit lines, which comprise in all sixty-three miles of single track. In other words, the engineer and contractor who built the present subways at a cost of \$1,130,000 per mile, estimate that the cost of the new subways, if built according to the present specifications and requirements, would be \$2,250,000 per mile.

The reasons given for this increase in cost are, that it is partly due to the requirements of the present law, to the increase in the price of materials and labor, and to the fact that while fourteen miles of the present line is on elevated structure, all of the new line must be built underground. The principal increase in cost, however, is said to be due, first to the onerous provisions of the new contract and plans and specifications, leading to "unnecessary" increase in the cost of construction; second, the adding of the cost of all easements to the cost of the subway; third, the purchase of private property for station entrances; fourth, greatly increased responsibility for damages; fifth, an increase in the diameter of the tunnels; and sixth, the fact that the express and local tracks on Lexington Avenue are upon different levels, an arrangement which adds materially to the cost.

Mr. Shonts's letter states that for these reasons, as above given, if the company were to build the proposed extension in conformity with the Commission's plans, specifications, etc., and using the city's credit for the cost of construction, and assuming that the new lines receive all the traffic which they could carry, it would not be possible to make net earnings above operating and maintenance expenses, sinking fund payments and taxes, sufficient to pay the interest on the city's bonds and five per cent upon the additional capital invested.

The Interborough Company state, however, that they are prepared to build the upper East Side and lower West Side extensions, provided that the cost of construction can be brought within the city's borrowing capacity, and the terms of the contract are such that the company may reasonably expect the earnings from these additional subways to be sufficient to cover the interest and sinking fund upon the bonds of the city issued for their cost; a proper annual charge for depreciation; and interest upon the company's additional investments for which the city's bonds will not be issued.

This means that the Interborough Company are prepared to build the subways if they are permitted to do so in their own way and on their own terms. Hence it looks as though the question must now be faced, as to whether it is advisable for the city to build and operate the new subways with its own money and with its own staff.

QUARRYING GLACIER ICE.

In Switzerland, since the introduction of electric railways, a new and somewhat strange industry has been established in the Alpine districts, namely, the quarrying of glacier ice for distribution in the large cities. Certain of the Swiss communes or districts have been able to grant concessions of their glaciers for this purpose, and considerable sums have been expended in constructing ice slides or troughs, in which the blocks of ice, many of them being of large size, blasted out of the glacier are transported to the vicinity of the stations for conveyance, in carefully refrigerated vans or cars, to Lyons and other large cities remote from the Alps.

The method of blasting with black powder so as to avoid the discoloration and soiling of the ice, and the ability displayed by the engineers in erecting slides and in providing sufficient friction by means of curves to avoid excessive speed in the downward journey of the ice blocks, show considerable ingenuity and skill.

Glacier ice, which is perfectly pure and transparent, and which has many qualities which are greatly appreciated by the consumers, commands a higher value than that of the usual kind obtained from the lakes and ponds. A singular feature in connection with the preparation of the ice for the market is that it has been found necessary to store it for some days in special warehouses, built like our own ice houses, those with double walls with sawdust between them, in order to remove a coating of frosted or non-transparent ice that tends to form on the surface of the block as it leaves the glacier.