

New York Statistics

Those who love statistics should enjoy a perfect revel in data concerning New York City contained in a recent report to the New York Chamber of Commerce. This compilation of figures notes that New York, the oldest incorporated of the 158 largest cities of the United States, has the largest area of any city on the continent, covering 326 3/4 square miles, as compared with 190 1/2 in Chicago and 129 1/2 in Philadelphia.

The land area of New York comprises 29,218 acres. What is known as the "Port of New York" has a total waterfront on rivers, bay, sound and ocean of 444 1/2 miles, equal to the distance between New York and Roanoke, Virginia.

The streets of New York have a mileage of nearly 3,740, which is exactly the distance between New York and London. There are 1995 miles of paved streets, which if placed in a connected line would reach from New York to Amarillo, Texas. The sheet and block asphalt paved streets aggregate 803 miles, equal to the distance between New York and Detroit. There are also 643 miles of macadam streets. The paved streets of New York in 1907 amounted in square yards to 20 per cent. of the area of all the paved streets in all the cities of the United States having more than 800,000 inhabitants. In that year over 40 per cent of the paved streets of New York were asphalted, to over 21 per cent. in Chicago.

Of the 1,125,142 passengers arriving in the United States from foreign countries in 1908, 843,597 landed at New York, or about 75 per cent. of the whole. In 1909, 741,414 alien immigrants and 157,864 alien cabin passengers were admitted at the port of New York.

The number of children of school age (between 5 and 18 years) in New York is 1,047,012, more than all the inhabitants of St. Louis and Buffalo combined.

Of the population as computed in the census of 1900, 37 per cent or 1,270,000, were foreign-born, making it perhaps the most cosmopolitan city in the world.

The harbor of New York is one of the largest in the world, and one of the very best in the world, and one of the very few which can be easily and cheaply adapted to the increasing size of ocean steamers and the enormous growth of international commerce. There are only three or four ports in the world that can receive boats of the size of the Mauretania. The ship channels are dredged to a depth of 40 feet from the city line on the North River to the deep water of the Atlantic Ocean. Of the 444 1/2 miles of waterfront 145 1/2 are in Manhattan and Bronx boroughs, and 65 miles are in actual commerce.

Of the piers on the waterfront 350,000 feet are owned by the city. From them it derived a revenue of \$3,554,069 in 1909, in addition to \$303,484 from leases for ferry purposes. The piers owned by private interests measure 1,220,000 feet. There are 840 wood piers and two stone piers.

The Congressional appropriations for the improvement of the New York harbor from 1880 to 1907 inclusive (from report of Chicago Harbor Commission) amounted to \$8,293,360. Per capita of population this amount is, with the exception of Chicago, the smallest made by Congress for any of the ports of the United States.

The port of New York covers a district larger than the political limits of the city of New York. It cannot be defined definitely by law, but the customs collection district of New York includes Hudson and Bergen counties in New Jersey for entry and many places along the Hudson River and Long Island Sound as points of delivery.

The Chicago Harbor Commission reported in 1909 that the value of goods in foreign commerce at New York was \$1,311,000,000, as compared with \$1,220,000,000 in London, \$1,300,000,000 in Liverpool, and \$1,303,000,000 in Hamburg. In 1909 there were ship arrivals at New York, of which 4,501 in the foreign trade and 6,258 in the coastwise trade.

Of the total foreign commerce of the United States in the fiscal year 1909 the share of New York was 47.41 per cent, or nearly one-half. Over 57 per cent of all the imports and nearly 40 per cent of all the exports of the country pass through New York. The total value of New York's foreign commerce in 1909 was \$1,521,966,000.

The New York Commerce Commission reported that in 1899 the domestic waterborne commerce of New York was valued at \$7,000,000,000 and was increasing at the rate of 5 per cent a year, which would seem a very moderate estimate, inasmuch as the traffic of the country is doubling every ten years; but even on this basis the total value of the domestic water-borne traffic of the port would now be considerably over \$10,500,000,000; and this total does not include a large aggregate of freight handled by the railroads, not figuring in the harbor traffic. This total alone amounts to considerably over one-third of the estimated inland trade of the United States. The census report of 1906 estimated the water-borne traffic, including foreign trade of the report, at 113,969,355 tons.

According to the census of 1905 there were in New York 20,839 manufacturing establishments, nearly one-tenth of the entire number in the United States; these had a capital of \$1,042,946,487, constituting over 8 per cent of the total industrial capital of the United States; they employ 464,716 wage-

earners, who with their families constituted over 50 per cent of the city's population; there is paid in wages \$248,128,250 a year to these workmen, a sum equal to the entire internal revenue receipts of the United States. The York City in 1905 was \$1,526,523,006, a sum almost exactly equal to the total foreign commerce of the port of New York in 1909, and amounting to 10.27 per cent. of the total value of manufactured products in the United States.

There are more manufacturing establishments, more manufacturing capital, and more value of manufactured products in New York City than in any other State in the Union except the State of Pennsylvania, and of course the State of New York, of which this city is a part.

New York's manufactures of men's and women's clothing alone, amounted in value of product to \$305,523,795, which is one-half of the total product of this trade in the United States.

York it was 36.6. The largest day's clearing in London in 1909 was on October 28, \$527,411,260, and in New York on November 3, \$736,461,548.

More than \$20,000,000,000 of the securities of the country, representing more than one-sixth of the wealth, are listed in the New York Stock Exchange, whose transactions, while in scope much less international than those of the London exchange, are believed to exceed in volume those of London. The New York Stock Exchange transactions amounted in 1909 to \$20,429,098,660 in value of stocks and bonds.

Statistics for the whole State (of which the city supplies all but a small part of the totals) show that while in 1909 New York State furnished 63 per cent of the bank clearings of the country, it suffered only 27 per cent of the defaulted liabilities of failing concerns.

In the last 20 years Greater New York has practically undergone a new creation. It has been transformed in every essential of a metropolitan city. It has been consolidated into a compact municipality, divided indeed into five boroughs but closely united under one responsible executive, the mayor, one financial officer, the comptroller and two legislative bodies, the board of estimate and apportionment, and the board of aldermen. The city has been virtually rebuilt with mammoth structures for commercial purposes, new and

Organizing An Orchestra

"That there is more in music than simply its charm to soothe the savage breast," that its study promotes education, refinement and sociability has occurred to more than one party of young folks planning their winter's amusement programme. Music is rated as a social safety valve, good at all times to cure the blues, and create an atmosphere of good fellowship, and as a relief for all sorts of boring entertainments," writes George E. Thomas in Popular Mechanics.

Recently, through the spread of literature on the subject and the cheapness of operatic scores and prints of famous vocal and instrumental compositions, the desire to be a musician has been kindled in hundreds of young men and women. One of the plans that has been adopted toward this end is the encouragement of musical organizations, whether in the form of choral societies or orchestras, and recently the experts have been spending much time in devising schemes for small orchestras.

"While the usual idea of an orchestra includes a large assortment of musical instruments, each played by a master, many of the

and instrumental compositions as soon as they are given a metropolitan hearing.

"As to the expense of equipping the orchestra, there is a wide range of possibilities. While it is very fine to have a genuine Stradivarius violin or a real Testori cello built on 'Strad' lines, a recent catalogue quoting the former at \$8,500 and the price of the latter being, perhaps, as little as \$1,000, the beginner can do nicely with much less expensive instruments. Violins of fair tone can be obtained for as little as \$3, and a better instrument can be bought for from \$6 to \$10. There is really no limit to the price that may be paid for this most flexible of all instruments. A cello costs more, the cheapest being quoted at \$15. An instrument of good tone can be bought for from \$20 to \$25. Mandolins are sold at \$5 and more, the cheaper price representing a fair instrument of standard make. The guitar costs about the same for a similar quality. The bottom prices of flutes are somewhat higher, a music house catalogue quoting its cheapest instruments of this class at \$8.50 and from that figure the price jumps to \$17.50 and goes as high as \$175. A good harp costs about as much as a piano and can be played by any piano player after a brief period of instruction and practice, according to the experts. Cornets can be had for from \$8 to as high as the purse can stand.

"For the four-piece orchestra of amateurs in a small town, all of whom are beginners in the musical art, a fund of \$37 would buy two violins, a cello and a flute; \$39 would buy a violin, a flute, a cello and a cornet; \$30.50 would buy a violin, a mandolin, a guitar and a flute, or \$28 could be invested in what is known as a mandolin quartette, which would include two mandolins, a violin and a guitar. There must also be a set of music racks and a good supply of music with instruction books, the cost of which must be measured entirely by the ambition of the musicians taken in conjunction with their financial capacity. With any of the instruments in the combinations named—and there are possibly a dozen or more combinations that might suggest themselves—most excellent results can be obtained, and not only will the education of the players be improved by their communion with the masters of music, but their friends will reap untold benefit from the concerts, and the treasury of the orchestra will soon be in condition to provide the members with better instruments and music."

THE MOLDS THAT MAKE GOOD CHEESE

Not every one knows that mold and bacteria are essential to good cheese.

Of those which are ripened by mold, there are two groups, one in which mold gathers on the outside, forming a distinct rind, the other in which it occurs in green streaks inside the cheese. Camembert and Brie are in the former class, while Roquefort is the best known of the latter.

In the ripening of Camembert it was long known that molds had some function. The French investigators, Roger and Maze, considered that this consisted in changing the reaction of the freshly made curd from acid to alkaline, after which bacteria completed the actual softening of the curd. It has been shown, however, by later investigation that a species of *Penicillium* (*P. camemberti* Thom), which has been found to be always present upon the cheese, secretes an enzyme capable of changing the hard, sour curd of the newly made cheese into the soft, ripe cheese, although without the characteristic flavor which seems to depend upon the action of *Oidium lactis* and various species of bacteria.

In the commercial handling of Camembert cheese this organism has been shown to develop best under the conditions found in the factories of Normandy. Success in the handling of this cheese seems to depend upon such a regulation of conditions as will permit just the right development of the *Camembert Penicillium*, of *Oidium*, and of the slime bacteria which also grow in the rind of the cheese. These conditions briefly are: (1) A fresh cheese should contain between 55 and 60 per cent of water, which is reduced during the ripening period of about four weeks to 48-50 per cent; (2) a relative humidity in the ripening-room of 85 to 92 per cent; (3) temperature between 50 and 58 degrees Fahrenheit. Within these limits a considerable variety of results can be secured by slight changes in one or the other conditions.

If the humidity is too high, bacteria and *Oidium* will completely overgrow and suppress the *Penicillium*; drop the humidity two to three per cent, and they can be nicely balanced; drop it again as much, and the *Penicillium* will completely cover the cheese and smother all other growth; drop the relative humidity still again, and *P. camemberti* loses its dominance and is more or less completely replaced by green species. Success is thus seen to depend upon accurately knowing the conditions best suited to the forms to be handled.

In Roquefort and cheeses of its class, the mold *Penicillium roqueforti* is carefully inoculated from bread cultures, which are propagated by the best of laboratory methods.

The cheese is made so that it contains channels, cracks, and air cavities throughout from the first. This permits the mold to begin growing as soon as the cheese is made. The cheese is much harder than Camembert—about forty per cent water. It also requires a longer time to ripen. The minimum ripening period is probably at least two months, while the time actually used is generally much longer.

A SIGNIFICANCE



"ONE HUNDRED THOUSAND NATIVE AMERICANS YEARLY MIGRATE TO CANADA"

The accompanying illustration from "Life," New York, tells its own story. "Life" has ever been rather ahead of its time in its acknowledgment of facts. That "Life" is one of the few non-hidebound American periodicals is perfectly apparent. Truly there is a difference between the story of the development of Canada and that of the great country to the south.

New York is the publishing center of the United States. The aggregate circulation of all newspapers and periodicals in the city in 1905 was 37,660,382. Of the total capital, \$289,518,524, engaged in publishing and printing in the United States \$81,305,013 was in this city, over 21 per cent. Of the total value of the product of publishing and printing in the United States over 23 per cent or \$116,877,574, was in this city. There were 893 publications of various issues published in more than 21 different languages, a striking proof of the cosmopolitan character of the city. There were 25 published daily and 50 every day except Sunday.

The banking power of the world is estimated at \$45,750,300,000, of which \$17,642,700,000 is in the United States and \$4,553,700,000 is in the city of New York. Nearly 10 per cent of the banking power of the world is thus centered in this city, a statement so remarkable that it would be beyond belief were it not for the fact that the United States has become the richest country of the globe, and that New York is the most important banking center of this rich country.

In 1908 the total stock of money in the United States was \$3,378,800,000, of which \$1,362,900,000, or 40.34 per cent was in the banks doing duty as reserve against the commercial and other deposits. Of this amount \$493,000,000 was in the banks of the city of New York, this being over 36 per cent of all the money in the banks, and over 14 per cent of all the money in the United States, whether in treasury, banks, or individual hands.

In 1909 the total bank clearings of the United States were \$105,608,879,423, of which \$103,588,738,320, or over 97 per cent were of the city of New York. The New York clearings were nearly three times as great as those of Chicago, Boston, Philadelphia, St. Louis and Pittsburgh combined, and nearly four times as great as those of the rest of the country outside of these large cities. The clearings of the London Clearing House in 1909 were \$65,868,922,000, or \$37,000,000 less than those of New York. There is probably a greater percentage of business done ex clearing house in London than in New York, but even allowing for this, the comparison is favorable to New York. The increase in clearings in London from 1908 to 1909 was only 11.5 per cent, while in New

York has two universities, seven colleges for men, two colleges for women, and one college for men and women—in all, 12 institutions of higher education, these having 1,306 instructors and a registration of 11,372 students. There are also four theological seminaries with 381 students, five law schools with 2,416 students, ten medical schools with a registration of 2,505, three art schools with 2,244 students, five music schools with a registration of 2,506, and one school of commerce, finance and accounts, with a registration of 809. The universities and colleges have properties and investments valued at \$2,144,033 and a yearly income of \$5,470,066. There are private academies in New York having 38 buildings and net property and investments valued at \$5,594,199 and having 514 instructors, and average day's attendance of 8,318 and yearly income of \$1,442,270.

The city paid for public-school education in 1909 the sum of \$36,319,624, of which \$5,245,871 was the proceeds of bond issues for school sites and buildings, \$31,073,753 being the total cost of maintenance during the year; of this the salaries of the supervising and teaching staff counted for \$22,055,821. New York paid for public schools in one year more than the assessed valuations of thirty-one different cities of the United States with populations ranging from 50,000 to 20,000.

There were 730,234 pupils taught in the regular day public schools of New York in 1909, the daily average attendance being 574,664, as compared with 649,136 in London. There were also 120,290 pupils enrolled in evening high and elementary schools, and in

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