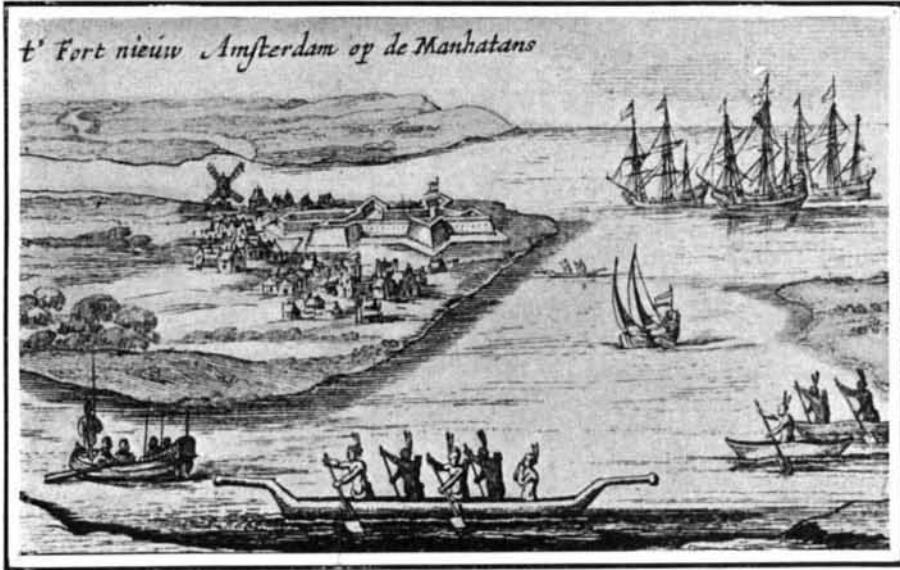


**THREE HUNDRED YEARS OF  
NEW YORK.**

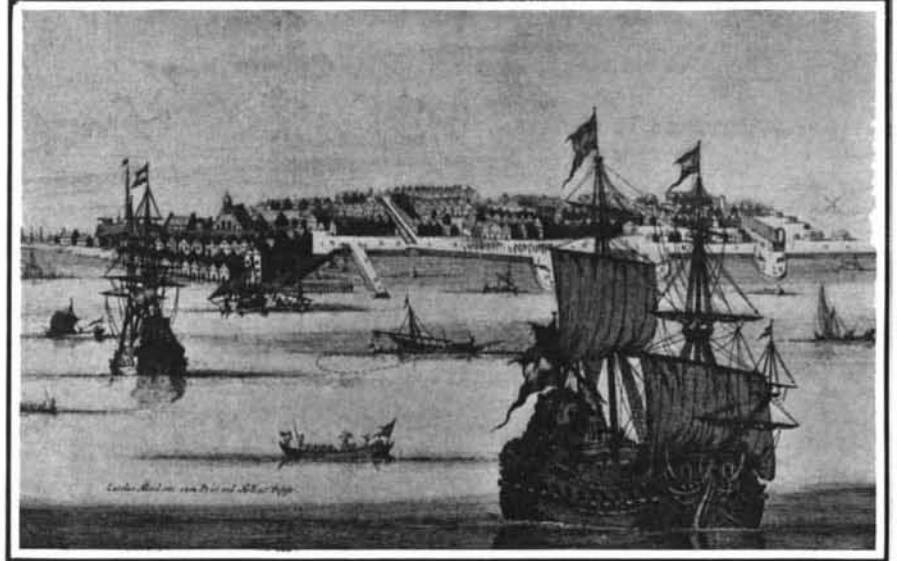
When Henry Hudson approached the opening of the upper bay he did not at first know that he was near-

we present herewith. This is the earliest known view of New York, and the little book in which it was published is of the greatest rarity. To obtain a correct idea of the topography, it is necessary to view the plan in a mirror, as it is reversed. It was probably obtained with the aid of a camera obscura from some point on the Long Island shore and was never restored to its proper position.

There does not appear to have been any attempt to found a substantial colony until 1621, when the Dutch West India Company came into existence. It was admirably organized and they established a strongly garrisoned colony which was the nucleus of a colonial government which was in control of a vast territory which stretched from Virginia to New England. The municipality itself, however, was of almost micro-



**EARLIEST KNOWN PRINT OF NEW YORK CITY ENTITLED: "FORT NIEUW AMSTERDAM OP DE MANHATANS," PUBLISHED IN 1651.— POPULATION ABOUT 300.**



**NEW YORK IN 1673.**  
Buildings have been erected within the fortified enclosure; streets have been laid out leading to wharves. The population in 1664 had grown to 1,500 and in 1686 it was 4,937.

ing the river which was afterward to bear his name. He believed that it was an arm of the sea, in fact, that it was the northwest passage to India, that *Ignis Fatuus* of so many of the old navigators. He lay in the lower bay for more than a week before he anchored in New York Harbor proper. He found the neighborhood well peopled by Indians who lived in villages of fairly regular construction. They were mild and inoffensive, as savages go, and they were quite willing to trade their tobacco and pelts for the beads and knives of the white men.

Hudson at last discovered that he was at the estuary of a great river, up which he sailed, consuming three weeks, until he reached the head of navigation at Albany. Early in October, Hudson turned the prow of the "Half Moon" homeward, bringing the news of a discovery which was of the greatest possible interest among the Dutch merchants. A number of trading and exploring expeditions started out and made the trip with considerable profit to themselves.

It was at last decided to establish permanent posts at the head of the river and at New York. The main fort was built near the mouth of the Mohawk River, and a few trading huts were built at the south end of Manhattan Island, and it is from this small beginning that we are enabled to trace the industrial beginning of the city of New York.

A monopoly of the fur trade was given to the New Netherlands Company, which erected a trading post at New York. The monopoly, which was a valuable one, was extended from year to year, until 1621, when the Great West India Company was chartered. It was under its auspices that the first real and permanent settlement in New York was made.

The city of New York has been very fortunate in the preservation of the early records of its settlement. The early history of Rome, London, and even Paris, is lost in obscurity, while other cities, such as Berlin and St. Petersburg, have no history of any importance, and still look painfully new and as though they were planned with the aid of the T-square and drawing pen. From these records we learn that the original block house with its palisades gave way to Fort Amsterdam, around which clustered the small cabins of the first settlers. Some idea of the early appearance of the settlement is obtained from a view in Hartgers' "Beschrijvinghe" van Virginia," a copy of which

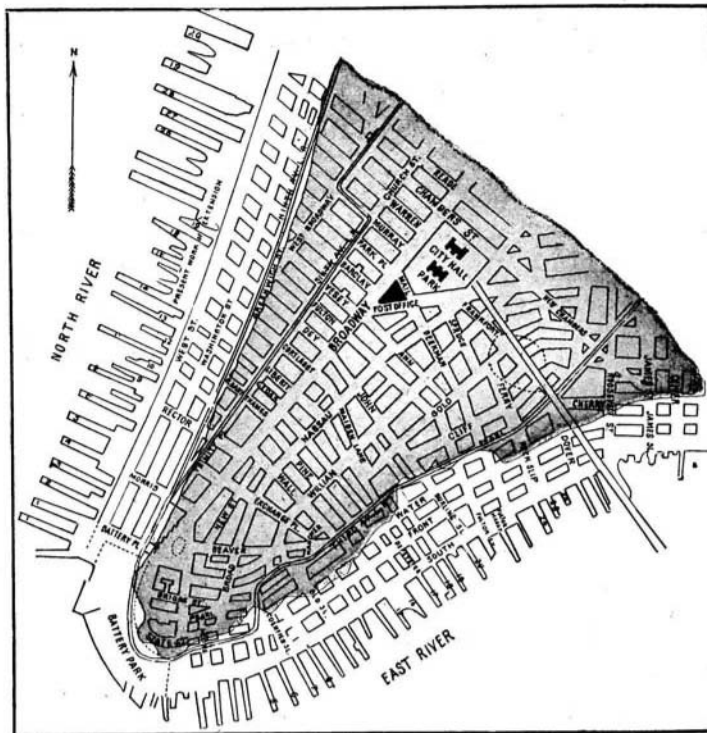
Although the print is on a small scale, it gives considerable detail, the number of buildings shown being about thirty or thirty-five. In the fort were situated the Governor's house, the chapel, barracks for the soldiers, magazines, and other necessary buildings.

scopic proportions, for in 1628 we find that the inhabitants numbered only 270, but the fort was constantly increased in strength until it became a fortress of no mean magnitude for the size of the place. In 1626, Peter Minuit purchased the whole of Manhattan Island for trinkets, the aggregate value of which was \$24. It would perhaps be interesting to figure up how much the interest at 6 per cent, compounded at regular intervals, would be on the \$24 for the period since the purchase.

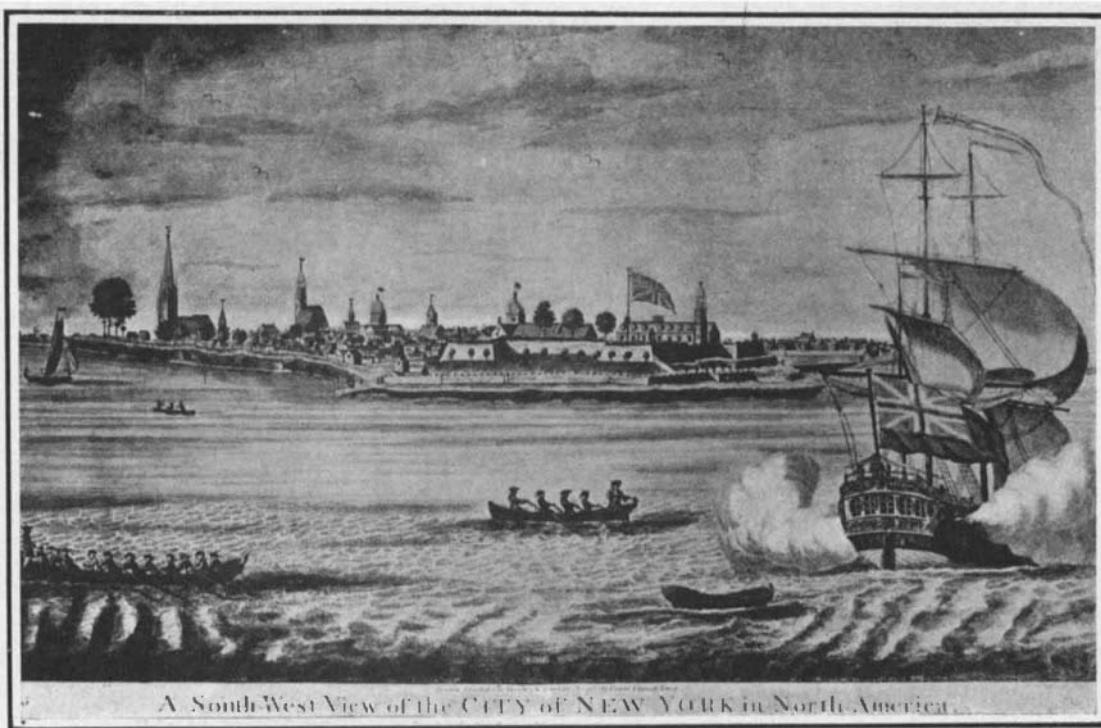
In 1653, when a foray of New Englanders was expected, a stockade or palisade was erected across the island from east to west, thus fortifying the outskirts of the inclosure. This was at the point where we now have a teeming center of finance—Wall Street. Strange to say, this wall prevented the natural expansion of the city for over half a century and always tended to create that congestion which still remains so overwhelmingly strong. Every old and important city in Europe has been cramped within a stone girdle of fortifications, and long after the necessity for this has vanished the habit of congestion remains.

The present crowded tangle of streets at the southern termination of Manhattan Island is entirely attributable to the customs of the Dutch dwellers. There was little attempt made to lay out broad or convenient streets. The foot-paths and lanes became the future streets, and no better example can be adduced than this, that the early pre-arrangement of the south never obtained in northern lands. One of the earliest streets was nearly parallel with the present Pearl Street and the other with Broadway, while "Dock" Street led to the shipping quays.

After a long and rather interesting occupancy by the Dutch, the flag of Great Britain was raised on September 8, 1664, and Fort Amsterdam forthwith became Fort James. There was little or no dislike of the conquerors, who made a peaceful invasion without striking a blow. England's policy was not so liberal in those days as in her present handling of colonial matters. Still, however, the Dutch hardly knew that the form of government was being changed, so that now the isolated trading post became a national colonial dependency. Under the old régime there was no home pride among the commercial owners, but the new conditions put a different aspect on the situation, and



**MAP SHOWING INCREASE OF CITY AREA ALONG THE WATER FRONT OF LOWER NEW YORK. THE ORIGINAL CITY IS SHADED.**



**NEW YORK UNDER BRITISH DOMINION JUST BEFORE THE REVOLUTION.**

Among the landmarks are Trinity Church, the old Dutch Church, and Fort George. The population in 1771 was 21,863.

the inhabitants began to grow fond of their new surroundings and government.

In 1783, when New York was evacuated by the British troops, the condition of the city was most deplorable. The streets, which had been paved and partly graded before the war, had been suffered to lapse into idle wastes again. The wharves had rotted, and all the public and many of the private buildings had fallen into a state of semi-ruin. The population had decreased and the city was practically wrecked. Under the inspiration of the new government the inhabitants revived the city within three years, so that the former population was regained and commerce quickly returned.

We have before noted the crookedness of the streets in

ments, the results would have been far different. They were allowed four years in which to prepare their plans and fix posts at suitable points. In 1811, they made their reports and their maps were filed, which created the city from Houston Street to Washington Heights substantially as it exists to-day. Without doubt their labors were most arduous, as a survey involving the placing of "1,549 marble monumental stones and 98 iron bolts" proves. The commissioners had the opportunity to create a most beautiful city instead of the commonplace utilitarian arrangement from which the citizens are now suffering. These worthy men left undone the things which they should have done, and did the things which they should not have done. They decided that the beautiful forest growths should be

thought that a space should be set aside sufficient for a reservoir. They also felt the need for a space for military exercises, so that the "Parade Ground," which extended from Twenty-third to Thirty-fourth Streets, and from Fourth to Seventh Avenues, was provided. We have the remains of the "Parade Ground" in Madison Square, and the whole space includes some of the choicest business locations in the entire city. Union Square was a union of the many roads which centered at that point for the transfer of traffic, and may be regarded as a "geographical accident." They provided streets which reached as far as 155th Street northward, reaching from the Hudson to the East and Harlem Rivers. The plan of New York, as we find it to-day, is stupidly commonplace, and it has cost

was opened in 1806. A number of scientific and literary societies were founded in New York at the beginning of the nineteenth century.

Before the days of the steamship and the railroad, was the era of the fast "clipper," like those which ran from Baltimore and which were famous for their great size and speed. So fast were they that for many years after steamers were built they maintained a nearly equal fight against their more formidable rivals. Fast vessels made the trip to England in fourteen days. It seems extraordinary that the United States, that during the first half of the nineteenth century brought the art of shipbuilding to such a high plane, should be so neglectful of her ocean commerce in the last half of the century. The more recent events



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THREE HUNDRED YEARS LATER—THE SKYLINE OF THE HUDSON RIVER SHORE FROM CITY HALL TO THE BATTERY WITH THE SINGER BUILDING OUTSTRIPPING ALL IN HEIGHT.

the lower part of the city, especially below the stockade at Wall Street. At the beginning of the nineteenth century nearly all of Manhattan Island, down as far as Fourteenth Street, was practically a virgin territory which could be treated in any way which seemed conducive to the public good. It was thought to be wise to make a plan which would be so comprehensive that the growth of the city would be provided for for a couple of centuries or more, so that an act of the Assembly was passed on April 13, 1807, and a commission of well-intentioned but blundering men was appointed—men who were of great importance for the time—as "Commissioners of Streets and Roads in the City of New York." They were given much power, and had they not been so mediocre in their attain-

cut down, that the hills should be leveled, streams were bridged over and filled in, and upon the plan thus produced they decided that the city should be built with the aid of the T-square and triangle. As Mr. Janvier says, "The commissioners, in their stolid way, unquestionably gave their very best thought to the work confided to their indiscretion; they even, by their own showing, rose to the height of considering the claims of what they believed to be the beautiful before they decided upon giving place to the useful alone." In regard to parks, these excellently dull gentlemen had their own views. They thought that the large arms of the sea which embraced Manhattan Island furnished all the variety required. They would not stipulate for a space to be devoted to parks, although they

millions to give even a semblance of variety to the work of these worthy gentlemen. Among the mistakes which the commissioners made was to provide one-third less to the square mile for longitudinal streets than they did for cross streets. They did not seem to realize that they were dealing with a long and narrow island whereon the traffic would always be in a longitudinal direction, but we are now feeling the stern necessity for increased facilities for north and south travel.

In 1805, the free school system was founded. Prior to that time schooling was largely a matter of private enterprise. Each church had its own school and there were also numerous private schools kept by teachers who were remunerated for their services. The first public school

connected with New York city are outlined in the chronology which follows, and which has been especially compiled for this issue:

When we look at the impressive picture of the sky line from the City Hall to the Battery there is one point which is of surpassing interest—how was it possible to secure enough ground to permit of the erection of such vast structures?—as we know that the original territory comprised in this part of Manhattan Island in the days of Peter Minuit was not so great. When Manhattan Island was first purchased from the Indians, there was doubtless little thought that it would ever be necessary to increase the area of the seemingly large island. From the beginning, however, we find examples of made land, of docks being

built, of ponds being filled up, and a general tendency to increase the superficial area. In former times the island was very much narrower than at the present time, although the general shape was the same. The old maps show the lower part of the island extending in width barely from Broadway to the present Pearl Street.

Since olden times, filling has gone on along the city edge for generation after generation, until many blocks have been added, and the island has been increased by the addition of area on its outer periphery, precisely in the place where the addition counts the most. Originally, the junction of Pearl Street and Maiden Lane marked the entrance of a wide canal, and another wide canal ran up Broad Street, beginning at Front Street and extending nearly to Wall Street. These facts indicate the narrow limits of the old city.

The rapid currents of the Hudson and East Rivers, especially the latter, had to be guarded against, and as early as 1654 it was resolved to drive planks into the shore, and to make uniform sheet piles between Broad Street and the City Hall, for the lower part of the city, and many other ordinances touching on the subject of the water front were passed.

The map gives us a good idea of the enlargement of the city area. It is only within modern times that the limit of enlargement has been fixed, and bulkhead and wharfhead lines located to determine the extent to which filling and dock building operations may be carried out. The map in the shaded portions shows the original limits of the lower end of the island, while in outline are given the additions up to the present time. Along the water front on this ground which has been reclaimed from the rivers, are built many lofty and heavy structures which are very noticeable in our view of the skyline of New York.

#### THE POPULATION OF NEW YORK AT VARIOUS PERIODS.

1628. Under Dutch rule.....	270
1656. " " " .....	1,000
1664. British Dominion.....	1,500
1703. " " " .....	4,375
1731. " " " .....	8,622
1749. " " " .....	13,294
1771. " " " .....	21,863
1790. United States government.....	30,022
1800. " " " .....	60,489
1810. " " " .....	96,873
1820. " " " .....	123,706
1840. " " " .....	312,710
1860. " " " .....	805,658
1880. " " " .....	1,206,299
1890. " " " .....	1,515,301
1900. Greater New York.....	3,437,202
1905. " " " .....	4,013,781
1910. Estimated .....	4,810,000

#### EVENTS IN THE HISTORY OF NEW YORK ARRANGED CHRONOLOGICALLY.

1609. The arrival of Henry Hudson on the "Half Moon."
1613. A trading-post was established on Manhattan Island by Dutch merchants.
1621. The Dutch West India Company was chartered.
1626. Peter Minuit buys Manhattan Island of the Indians for \$24.
1635. Fort Amsterdam completed.
1652. The first city charter granted.
1653. A palisade was built along "Wall" Street.
1656. First city survey.
1658. The streets were paved with stone and guarded by watchmen.
1664. The Dutch dominion surrenders to English rule.
1693. Printing press set up by William Bradford.
1696. Building of first Trinity Church.
1697. Streets were lighted.
1699. City Hall built in Wall Street.
1707. Broadway was paved from Bowling Green to Trinity Church.
1725. New York Gazette established by William Bradford.
1730. Stage line to Philadelphia opened.
1731. Fire department was organized.
1763. Jersey City ferry was established.
1766. St. Paul's Church was built.
1774. The Hoboken ferry was established.
1776. Battle of Harlem Heights. Washington occupies New York.
1783. Washington bids farewell to his officers.
1789. Meeting of the First Congress. New York was the federal capital. Washington was inaugurated.
1790. First laying of sidewalks.
1807. First voyage of the "Clermont." St. John's chapel built.
1811. The Commissioners of Streets and Roads in the city of New York finished laying out the present city.
1812. City Hall finished.
1814. Steam ferryboats were put in operation.
1817. Erie Canal was begun, and first line of packet ships established.

1819. The first ocean steamship "Savannah" was built.
1825. Gas was introduced, and Erie Canal was completed.
1833. The New York Sun was founded.
1835. Founding of the New York Herald.
1836. The Erie Railroad was begun.
1841. The New York Tribune was founded.
1842. Old Croton Aqueduct was opened.
1845. SCIENTIFIC AMERICAN was established.
1846. Electric telegraph line was opened between New York and Philadelphia.
1848. Founding of Collins Line of steamships.
1851. New York Times founded.
1853. World's Fair.
1856. The site of Central Park purchased.
1857. Cooper Institute founded.
1858. Opening of Atlantic cable.
1860. New York World founded.
1862. Building of the "Monitor."
1870. Old Brooklyn Bridge begun.
1873. The city crosses the Harlem.
1877. Founding of the American Museum of Natural History.
1880. Completion of elevated railway system.
1883. First East River bridge opened.
1898. Greater New York created by annexation.
1901. Unveiling of the Fulton monument in Trinity churchyard.
1903. Opening of Williamsburg Bridge.
1904. Subway opened.
1908. Opening of the Brooklyn tunnel. Opening of the Hudson and Manhattan Railway tunnel, northern tubes.
1909. Opening of Queensborough Bridge. Opening of the southern tubes, Hudson and Manhattan tunnels. Opening of the Pennsylvania tunnels. Completion of the Metropolitan Life Insurance Building. Rapid approach to completion of great Pennsylvania and New York Central terminals in New York city. Hudson-Fulton Celebration.

#### Aeroplane Flights During the Hudson-Fulton Celebration.

For the first time since the invention of the aeroplane New York will be given an opportunity to witness sensational flights by the leaders in aviation. These flights will be made by Wilbur H. Wright and Glenn H. Curtiss with their respective biplane machines. Up to the time of our going to press, Mr. Wright had not stated just what feats he would try to accomplish after he has made his initial flights during the present week above Governor's Island. Sheds have been erected upon the island for the machines of both aviators. Mr. Curtiss, who arrived from Italy last Monday after having won the Brescia Grand Prix 31-mile race in 49 minutes, 23 1/5 seconds, has signed a contract to fly up the Hudson from Governor's Island to Grant's Tomb and back, and Wilbur Wright will doubtless make fully as remarkable flights, above the waters of the lower bay. In one of these Mr. Wright will probably remain an hour or more in the air. Mr. Charles F. Willard, who, as mentioned in our last issue, has been making flights above Lake Ontario, will perhaps make flights with the Aeronautic Society's Curtiss biplane. There is also a possibility that a new monoplane, built by a member of the Society, may make flights. An elaborate system of signaling has been arranged, whereby the people will be quickly notified when flights are to be made.

#### America Boiled Down.

In the year of our Lord nineteen hundred and nine, we find the United States the most progressive country of the world. Its growth has been more than remarkable, and one who wants to boast of his country need only secure a copy of the "Statistical Abstract," a document issued each year by the Department of Commerce and Labor.

This particular publication, originated some thirty years ago in the Bureau of Statistics under the direction of John Sherman, then Secretary of the Treasury, and which in its first issue was a thin pamphlet, has grown to be now an unwieldy volume crammed from cover to cover with masses of figures. At a glance such a document would seem very dry for summer reading, but after one has delved into it, the comparison in the growth or decrease of everything is fascinating.

To-day the population of the United States is in round numbers 88,000,000. Last fall 14,887,133 individuals lined up at the polls to cast a vote for a Presidential nominee. And the last figures obtainable show that six thousand four hundred and sixty-six millions of letters and postal cards were sent through the mails. The table does not state whether the greater quantity of this fabulous number were post cards or not. At any rate, the quantity is two-thirds as much as the combined postal business of Great Britain, Germany, France, and Austria-Hungary, and twice as great as any one of them, notwithstanding the fact

that France has the reputation of being one of the greatest letter-writing countries. The people, however, had a great many things to say quickly; and becoming fidgety over the "slowness" of the mail facilities, used slightly over one hundred million telegraph blanks, in order to relieve their nerve tension and get quick results.

Of the 88,000,000 of population, practically one-third are domiciled in the thirteen original States, another third in the States created from the territory ceded to the common union by those States, and the remaining third in the area added by purchase or annexation.

It is interesting to observe that our total continental area, including Alaska, is about equal to that of all Europe; that while the area ceded to the thirteen original States by the peace treaty of 1783 was 828,000 square miles, their present area is but 326,000 square miles, forming in part or in whole thirteen other States, while the remaining twenty-four States and Territories were created from territory added by purchase.

Uncle Sam has some resources left. There is just 754,000,000 acres of land still left in his keeping, though it may be mentioned that all of it is not very desirable. Almost half of this acreage is in Alaska, and much of it in the Rockies. He also has other resources besides vacant lands. In his charge there are 52,827 water wheels to be kept turning, but there is plenty of power for that purpose, for he is credited with having 5,360,000 horse-power from streams with which to keep them moving.

The estimated coal supply of the country is 3,125,708,000,000 tons, and during the last year almost a half a billion tons were mined. The iron-ore supply of the United States is nearly five billions of tons, 52,000,000 tons being the amount mined for the last year reported. The wealth of the country in 1850, according to the figures available, was \$7,000,000,000, speaking in round numbers; in 1890 it was \$65,000,000,000, and the last figures show it to have jumped to \$107,500,000,000. The last report shows that the wealth production of farms amounted to \$7,412,000,000, alone more than the wealth of the country half a century ago.

There has been a steady decrease in the negro population since the year 1810, the percentage in that year being 19.03. In 1850 it was 15.68 per cent of the total population; in 1860, 14.12 per cent, and so on. Last year the percentage was 11.59.

Out of his \$107,500,000,000, Uncle Sam spent during the last year just \$197,000,000 for school teachers. The United States imported one and a half billions of dollars' worth of products, according to the latest figures, but half that amount was raw material for manufacturing. The exports amounted to nearly two billions of dollars, about forty per cent of which represented manufactured goods.

This mass of boiled-down information presents a picture of conditions in the United States which is extremely interesting, not merely to the economist and student, but to those interested in the growth of the country.

#### The Current Supplement.

The current SUPPLEMENT, No. 1760, opens with an excellent illustrated article on a German automobile fire engine, which has been adopted by the German city of Frankfort-on-the-Main. The recent improvements in the internal-combustion engine are reviewed by H. E. Wimperis. Among the economies practised in machine shops, foundries, and metal-working establishments of various kinds, few are more suggestive than the use of magnetic separators. The principal applications of these, as thus far developed, will be found excellently outlined in an article entitled "Magnetic Separators for Various Uses." Prof. A. F. Ganz's admirable summary of recent electrical progress in the artificial lighting field is concluded. Efforts have been made from time to time in the past to produce the Egyptian types of cotton in America. The latest of these efforts is described by Charles Richards Dodge. Ernest Rutherford's brilliant paper entitled "Visualizing the Atom" is concluded. Though Nature evidently meant the vertebrates to be a tooth-bearing race, her design has by no means been rigidly adhered to, as many creatures of very different orders have been permitted, so to speak, to adopt various substitutes therefor. Mr. W. P. Pycraft interestingly describes these various substitutes. Dr. D. T. Macdugal's paper on "Aridity and Evolution" is concluded.

Prime Minister Asquith recently announced in the House of Commons that the British government would recommend a Parliament grant of \$100,000 to Lieut. E. H. Shackleton, in order to defray the expense of his recent expedition. If the appropriation is made, Lieut. Shackleton will be out of debt. When he returned from his expedition, he found that he owed \$215,000. With the assistance of his friends he succeeded in earning all but \$70,000, which last sum he hoped to earn by writing, and by lecturing in the United States.