

THE CITY OF NEW YORK

DEPARTMENT OF PARKS

Report of the Year 1903

Gattinger

THE CITY OF NEW YORK,

DEPARTMENT OF PARKS.

REPORT FOR THE YEAR 1903.

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THE PARK BOARD :

WILLIAM R. WILLCOX, PRESIDENT,

Commissioner of Parks for the Boroughs of Manhattan and Richmond.

JOHN E. EUSTIS,

Commissioner of Parks for the Borough of The Bronx.

RICHARD YOUNG,

Commissioner of Parks for the Boroughs of Brooklyn and Queens.

GEORGE S. TERRY, Secretary.

SAMUEL PARSONS, JR., Landscape Architect.

DEPARTMENT OF PARKS.

The City of New York, Department of Parks, }
Arsenal, Central Park, December 31, 1903. }

Hon. SETH LOW, Mayor, The City of New York:

Sir—I am directed by the Park Board to transmit herewith the annual report of the Department, for the several borough divisions, for the year 1903.

Respectfully,

GEO. S. TERRY, Secretary, Park Board.

DEPARTMENT OF PARKS.

REPORT FOR THE YEAR 1903.

The Park Board.

William R. Willcox, President, Commissioner of Parks for the Boroughs of Manhattan and Richmond.

John E. Eustis, Commissioner of Parks for the Borough of The Bronx.

Richard Young, Commissioner of Parks for the Boroughs of Brooklyn and Queens.

George S. Terry, Secretary.

Samuel Parsons, Jr., Landscape Architect.

The Park Board.

The Park Board has held frequent meetings for the transaction of business which, under the provisions of the Charter, the Board, as such, controls. An unusually large number of contracts were entered into after the necessary advertising and other details incident to public letting. These contracts covered many important works of construction as well as the purchase of supplies for the several borough divisions.

New Rules and Regulations—The rules and regulations governing the general uses of the parks and parkways have for a number of years past been in a very unsatisfactory condition. Previous to the Charter of 1901 the Park Board had power to make ordinances for the government of parks and parkways. Such ordinances had been adopted from time to time, as the park territory increased in area and new conditions arose, until they were in the form of sets of rules, in some instances applying to particular parks or parkways, and adopted at various times from 1871 until 1901. They had been amended many times and applied to some of the parks and parkways only by indirection. This had caused inconsistencies and contradictions and it was found very difficult to procure convictions at court when arrests were made for violations.

Under the present Charter, park ordinances must be adopted by the Board of Aldermen, as well as the Park Board, and rules, codified and adopted in 1903, were forwarded to the Board of Aldermen for action but that Board failed to take the necessary action during 1903.

Tree-Planting Through Assessments Against Abutting Property.

Under the provisions of chapter 253 of the Laws of 1903, the Tree-Planting Act (chapter 453 of the Laws of 1902) was amended to permit the Park Board, after reasonable notice by advertisement of its action, and after a proper hearing, with the consent of the Board of Estimate and Apportionment, to cause trees to be planted in any street, the cost and expense of the work, in the first instance, to be paid from the Street Improvements Fund. Upon the completion of the work, the Park Board to certify to the Board of Assessors the total amount of expenses incurred, which expenses may then be assessed against the property benefited in the same manner as other assessments for local improvements.

The Board having received petitions for planting trees in several localities, the proceedings were duly advertised, hearings given and the findings transmitted to the Board of Estimate and Apportionment for the approval of that Board.

Death of Andrew H. Green.

At a meeting of the Board held November 19, 1903, the death of Honorable Andrew H. Green, for so many years connected with the Park Department, was announced. Mr. Green was one of the Commissioners appointed under the Act of April 17, 1857, creating the Board of Commissioners of the Central Park. He was elected President of the Park Board in 1858, and remained its President and Treasurer until September 15, 1859, when the office of Comptroller was created. From that date until May, 1870, Mr. Green was the only person holding that office. He directed the expenditure of over \$10,000,000 without a single judgment being obtained against the City in connection therewith. Upon the Park Commission, chiefly upon Mr. Green, were also imposed by the Legislature the additional tasks of widening and straightening Broadway, from Thirty-fourth street to Fifty-ninth street, and of laying out other parks and avenues in the upper part of the City, including the widening of Seventh and Lenox avenues to the Harlem river, and the laying out of streets and avenues in what was then a portion of Westchester County, but is now within the City limits. The planning of bridges and tunnels for the Harlem river and other important public improvements was also entrusted to the Commission.

Mr. Green first suggested the use of the Central Park by the school children, and was prominently connected with the establishment within the parks of the American Museum of Natural History, the Metropolitan Museum of Art, the New York

Botanical Garden, the New York Zoological Park and the Central Park Meteorological Observatory.

Messrs. Olmsted and Vaux were appointed Landscape Architects of the Central Park by the Board of which Mr. Green was a member, and he was closely associated with those gentlemen in the successful carrying out of their plans for the Central Park. Mr. Green was always an earnest advocate and supporter of all movements to increase and improve the park system and of the great institutions situated therein.

At its meeting on November 19, the Park Board adopted the following:

"Moved by the sad and untimely death on the 13th instant of the Honorable Andrew H. Green, the members of the Park Board of The City of New York desire to record this evidence of their appreciation of the high character of the man and the results of his long and useful career as a public official.

"Ever mindful of the name and fame of the City to which the best efforts of his life were devoted, to its institutions and, especially, to its parks, there can be no more endearing monument to his untiring energy and skill than the Central Park, which was acquired and largely developed under the guidance of his master hand.

"During the many years of his connection with the Park Board, serving as Commissioner, President and Comptroller, his discharge of duty was marked by great ability, unbending integrity and a zealous and watchful devotion to the City's interest.

"In recognition of our respect for his memory and our esteem for his work, we extend to the family of the deceased our sincere sympathy and condolence.

"It is ordered that a copy of this minute, suitably engrossed, be forwarded to the family."

Annual Report for 1902.

The Board was gratified with the reception by the public and the press of the report for 1902. Owing to the provisions of the Charter, the edition was a limited one and it was therefore impossible to send the bound report to many applicants. This want was met, to a degree, by having the text printed as a supplement to the "City Record," several hundred copies of which were distributed. Letters received stating the report would be of service in establishing park systems in other cities, were particularly gratifying.

The Commissioner's Report of the Work of the Department of Parks for the Boroughs of Manhattan and Richmond for the Year 1903.

Office of the Department of Parks,
Boroughs of Manhattan and Richmond,
The Arsenal, Central Park,
New York, December 31, 1903. }

Hon. SETH LOW, Mayor of The City of New York:

Dear Sir—In compliance with the provisions of the Charter, I send you herewith the report of work undertaken and accomplished in this Department for the year 1903.

Respectfully,

WILLIAM R. WILLCOX,
Commissioner of Parks, Boroughs of Manhattan and Richmond.

Report of the Commissioner of Parks for the Boroughs of Manhattan and Richmond.

The energies of this Department during 1903 have been devoted chiefly to carrying to completion the new features established in 1902 and extending the scope of the park work.

The playground work especially has made great progress, and many important improvements have been prosecuted to completion. The children's farm garden in De Witt Clinton Park was renewed on a larger scale than last year, and with even a greater degree of success. Lands newly acquired for park purposes were made available for temporary use, and work upon the laying out of formal parks, where appropriations were obtained, was pushed to as near completion as the unfortunate labor conditions would permit.

The very important cleaning of the Central Park lakes was accomplished to the satisfaction of the Department of Health, and much attention was given to improving the condition of the park drives and of the Harlem River Driveway.

All of these matters are reported upon below in detail.

The data given regarding the Central Park Obelisk is printed to meet a public demand for information regarding that interesting monument. The statistics regarding the acquisition and improvement of new parks and those regarding park areas and boundaries are also printed to supply the public requests for information.

Playgrounds and Gymnasia in the Parks.

The playgrounds and gymnasia in the parks have during the year been organized and operated upon a systematic basis. Mr. Charles B. Stover, to whose untiring efforts the establishment of playgrounds in the parks is largely due, volunteered his services in the laying out and maintenance of these popular features, and without compensation he has given a large amount of time and energy to this work.

During the season playgrounds were in operation in the following parks:

DeWitt Clinton Park, with one attendant.
 Hamilton Fish Park, with two attendants.
 Tompkins Square Park, with two attendants.
 East Seventeenth Street Park, with two attendants.
 William H. Seward Park, with two attendants.
 Corlears Hook Park, with one attendant.
 Battery Park, with two attendants.
 John Jay Park, with two attendants.
 East River Park, with one attendant.

Gymnasia were in operation as follows:

William H. Heward Park, with two attendants.
 DeWitt Clinton Park, with two attendants.
 Hamilton Fish Park, with three attendants.
 Tompkins Square Park, with two attendants.
 Corlears Hook Park, with one attendant.
 John Jay Park, with one attendant.
 East River Park, with one attendant.

Of the above, those in Tompkins Square, East Seventeenth Street, Corlears Hook, East River, Battery and Hudson parks, were constructed where no provision for such features was originally contemplated. It was found possible, however, to install these features without destroying the attractiveness of the parks, and in the case of Battery Park, where the bare space under the elevated railway structure was utilized, the establishment of the playground transformed a desolate strip into one where the bright faces of the little ones form an attractive picture and arouse the interest of all who visited this place.

In DeWitt Clinton and John Jay parks the playground features were installed temporarily, pending the adoption of a plan for the improvement of the park. It is the intention, however, to include playgrounds and gymnasia in the final lay-out of both of these parks.

The construction of Thomas Jefferson Park has been under way for a considerable part of the year, and in the spring of 1904 one of the most complete gymnasia and playgrounds in the country will be opened to the public. The plan adopted for this park was shown in the report for 1902, and the construction therein described. The 15 1-2 acres of land acquired affords an opportunity for the development of playground features on a larger scale than has been attempted elsewhere in the City, and the Thomas Jefferson Park Playground will be one of the most complete and practical in the country.

In William H. Seward Park, owing to the strikes, the pavilion was not completed until October 17, when the formal opening was held. These ceremonies were to in-

clude addresses, choruses by 2,500 school children, gymnastic exhibitions and a band concert. Notwithstanding the exceedingly inclement weather on October 17, a very large number of people attended the ceremonies and stood in the pouring rain while the programme was being carried out. Addresses were made by the Mayor, the Park Commissioner and Mr. Jacob A. Riis. An invocation was pronounced by Rabbi Philip Klein and the benediction by Bishop Henry C. Potter. An interesting band concert was also given. The weather conditions on the date set made it necessary to postpone the children's part of the programme until the following Saturday, October 24. The programme rendered on that date was very impressive, the choruses of patriotic airs rendered by the large number of school children assembled being particularly effective. Teams representing the gymnasia in the different parks participated in the gymnastic contest and the exhibition given aroused great enthusiasm. Columns of space were devoted by the press to describing this exhibition and the results that had been accomplished in the comparatively short time that instructions had been given.

It is estimated that nearly 20,000 persons were present in Seward Park on October 24, and this immense gathering of people was an indication both of the great need for a park and playground at this point and of the great interest the people of the neighborhood take in the work of the Department. Although the people were enthusiastic, they were orderly and well-behaved, and efficient policing prevented accidents of any kind.

The apparatus used in Seward Park was fully described in the 1902 report. It is similar to that used in indoor gymnasia, and is first-class and complete. It has been in constant use during the summer, and its utilization has demonstrated that the gymnasia are popular and practical. In the spaces set aside for the smaller children, hammock-swings and other apparatus have been installed, together with structures containing sand heaps. These places were used to their limit and during the heated terms of the summer proved to be godsend to the mothers of the tenement districts. It is believed that, without doubt, providing places where the children of the tenements could enjoy fresh air and healthful amusement assisted to a considerable degree in lowering the death rate of the City.

Children's Farm Gardens.

The children's farm, conducted as an experiment in DeWitt Clinton Park in 1902, and touched upon in the report for that year, proved such a great success that it was decided to continue the experiment in 1903 on a larger and more comprehensive basis.

The 1903 farm attracted attention from all parts of the country. The vegetables grown by the children were remarkable in size, quality and quantity. As a result

of the complete success of the experiment it has been decided to set aside a portion of DeWitt Clinton Park for a permanent farm garden.

This work from the beginning has been under the immediate supervision of Mrs. Henry Parsons, who has served without compensation, and to whose untiring efforts much of its success is due. As an indication of the attention this farm garden has attracted, and of its success from a sociological standpoint, one or two of the many letters received may be quoted:

"October 12, 1903.

"Dear Sir—As one interested in the subject of agriculture and its various branches in the British West Indies, permit me to express the very great pleasure it has afforded me to visit the many beautiful parks and gardens in The City of New York. Your people are indeed fortunate in having so many well-appointed places of public recreation and amusement, where they can be brought into close touch with the beauties of nature. I am also greatly interested to observe how very keenly people of all classes appreciate these privileges, and I feel sure the simple lessons taught there are having a wonderful effect for good on the lives of the people of this great City.

"Possibly the spot which appeals to me most strongly is the DeWitt Clinton Park, where I found in what may be considered a tough quarter of the City a children's farm, where, under the sympathetic supervision of Mrs. Parsons and her assistants, all was beauty, happiness and refinement. This spot, as I said, particularly appealed to me because it is one of the lines along which Sir Daniel Morris, the Chief of the Department of Agriculture in the West Indies (to whose staff I am attached), is at present engaged with great success in endeavoring to improve the agricultural and general conditions of these colonies. It would be too long here to give an outline of the various branches of our work. I may, however, just mention, as bearing on the subject of the DeWitt Clinton Park, that Sir Daniel years ago realized that the only way of raising the moral tone of the lower classes of agriculturists and inducing them to take a more intelligent interest in their work, was to get hold of the young folks and to mould those who are to be the men and women of the near future.

* * * * *

"Indeed, Sir Daniel Morris is doing everything to encourage the children to further effort, and what is most important, to show them that some one is really interested in their work—really cares for what they are doing.

"We find also that bringing the children into close touch with nature—nature teaching—has a wonderful effect in softening and refining their manners, and the teachers have assured me that their most refractory pupils, after once becoming interested in the school garden life seem to change their whole nature and turn out eventually the most satisfactory of pupils.

"This certainly seems to be the case at DeWitt Clinton Park. Never have I seen a more happy collection of little faces.

"Permit me to put forward as my excuse for writing you the very great pleasure it gave me to visit this park, and the thought that perhaps you might like to know what is being done in this direction in other parts of the world. * * * I shall always

look back with very pleasant memory on the afternoon I spent with Mrs. Parsons and her dear little charges at DeWitt Clinton Park.

"I am, dear sir,

"Yours faithfully,

"G. WHITFIELD SMITH,
"Imperial Department of Agriculture for the West Indies."

"Whitehall, N. Y., October 24, 1903.

"Dear Sir—Will you kindly accept the thanks of a country visitor to your great City for the pleasure he has received in reviewing one of its great sights, namely, the children's farm at Fifty-third street and Eleventh avenue. It is a great sight, in view of its immediate effect on the children of the neighborhood and its influence radiating far into the country. The kind and cheerful expressions of welcome shown by all the attendants were well worth imitation. It was in great contrast to the care-for-nobody look seen in the faces of the people in the busiest thoroughfares. * * * *

"The rare economy and taste shown in the use of the land devoted to the farm reflects great credit on all engaged on the premises. If it were copied in the country, where land is easily obtained, wealth and great happiness would follow.

"In this village a garden league has been organized in consequence of reading an item in a New York daily paper, describing the children's farm. Its members have cultivated vacant land, improved their home gardens, planted memorial trees, caused streets to be cleaned, and, in short, have stimulated improvement in many directions.

* * * * *

"Very respectfully,

"HENRY ROOT, M. D., Garden League."

To test the interest of the children and their parents, postal cards were sent to the one hundred and fifty young farmers of the previous season, and one hundred and twenty replies, asking that plots be again assigned to them, were received.

The children showed the greatest enthusiasm from the beginning and took an active part in the heavier work of clearing up the ground and preparing it for planting, and never during the season did their interest flag.

A small building was designated as the farmhouse, and in it young girls were taught household duties, a boy being assigned to the heavier chores. No less than two hundred and fifty girls assisted in this work; the house was equipped with a stove, cooking utensils, dishes, table linen and all that was necessary to teach the performance of housework in a neat and economical manner.

Among other people interested in this work were several visiting nurses, who claimed that children with lung troubles showed a steady improvement from the beginning of their work in the farm garden.

The farm garden was a plot 100 feet by 200 feet, divided into areas to accommodate two hundred and seventy-seven children. A flower bed was maintained in the centre and other beds of flowers for cutting were grown at appropriate points.

All of the flowers were thrifty and were grown successfully. The borders were planted with clover, rye, wheat, oats and buckwheat. The season extended from July 19 to November 1, and the number of children participating was one hundred and forty-one boys and one hundred and forty-five girls. The following table indicates the remarkable success attained:

Vegetables Grown in Children's Farm Garden, De Witt Clinton Park, Season of 1903.

Radishes, 30,526; beets, 1,745; beans, 350 quarts; peas, 140 pints; turnips, 942; cornstalks with ears, 903; lettuce, 3,006; spinach, 4,006 quarts; kale, 406; cabbage, 475; celery, 2 plots; endive, 6,632.

Packages of corn plants were sent to one hundred and thirty-four public schools for nature study.

In 1902 the adult visitors numbered 210.

In 1903 the adult visitors numbered 1,031.

These visitors represented places in New York, New Jersey, Connecticut, Maine, Pennsylvania, Colorado, Illinois, South Carolina, Massachusetts, Ohio, Tennessee, Maryland, Virginia, Oregon, Michigan, Washington, D. C., Vermont, North Carolina, Wisconsin, California, Missouri, Kentucky, Michigan, Naples (Italy), Cuba, Canada, England, Porto Rico and Jamaica.

Some eight hundred children, classes from the public schools, with their teachers, also visited the garden, and fifty Principals of schools were present. Representatives from many other educational institutions, settlements, churches and clubs also inspected the work. The gardens were described many times in the public prints and their educational value was set forth by lecturers with appropriate stereopticon views.

Cleaning the Central Park Lakes.

This important work, touched upon in the report for 1902, has been prosecuted on an extensive scale the present year. Early in 1902 representatives of the Health Department inspected these bodies of water and stated that conditions existed conducive to the breeding of disease germs and the malaria mosquito. The Park Department recognized the importance of remedying these conditions without delay and asked for an appropriation to undertake the cleaning of the lakes and the reconstruction of their borders. The work was placed under the direction of Professor E. B. Southwick, the Entomologist of the Department, and during the summer of 1903 the work of cleaning the different bodies of water was practically completed, and it is believed that with the completion of the small amount of work remaining to be done upon the pond at Fifty-ninth street and Fifth avenue, the entire lake system of the park will be free from contamination and in a healthy condition.

This important undertaking was commenced on May 16 at the Harlem Mere. As no appropriate tools were on hand, the Department was compelled to design and manufacture them, and in a few days they were put in successful operation. The first of these implements to be constructed were large rakes with long handles, which were placed on the bottom of the stream and fastened to the stern of a boat by means of a rope and crotch. The boat and rake were then hauled by horse power and a system of pulleys, the whole making a very powerful machine and bringing to shore a great quantity of pond weed at every draw. By a system of stakes set in the water at the starting point, the lake bottom was successfully raked from two to four times, bringing up the plant by its roots. In many places it grew to a length of 9 feet or over and so thickly that it was impossible to row a boat through it.

At the southwest end of the mere the Egyptian lotus had taken complete possession, and in and among these large plants nearly three feet of debris had collected. To remove the lotus roots a special machine, consisting of eight steel chisel-shaped knives, was constructed upon a frame of great strength, the knives fashioned so as to penetrate into the mud 14 inches. This also worked with pulleys and horse power, and the section was dredged several times and the roots and coarse material brought to the shore and removed.

The cat-tail flag also covered large areas of the mere and was so thick that boats could not penetrate, and every year it was extending and collecting drifting material. This was pulled up by hand and the steel-knife dredge was used to clean out the roots and the material collected about them.

Two other important implements were constructed, a mowing machine at work on the bottom of the lakes cutting off the pond weed and lotus in swaths, and large drifting rakes which were used to collect the material as it came to the top of the water. Two hundred and forty two-horse truck loads of weed were taken from this lake. The south end of the mere was filled with sunken brush, tree limbs and lumber, and many of the shrubs on the edge were filled with a decaying mass of leaves and harbored colonies of rats that burrowed into the banks where the water collected and made suitable breeding places for the malaria mosquito.

After this lake had been thoroughly cleaned its border was restored and gravel and cement applied for a width of 2 feet or more, as recommended by the Board of Health, and all overhanging herbage and brush were removed. The beaches were widened and smoothed—cemented—and the island was cleaned of all rubbish and its borders similarly treated. The water was raised 4 inches above its previous normal height and no finer lake can now be found anywhere. In cementing the borders gravel boats were used to reach places inaccessible from the land.

This same process was applied to the other bodies of water in the park. Rat holes and other mosquito breeding places were filled; logs and stumps that had been

collecting for years were removed, the water raised and the borders were graveled and cemented. In the stream flowing through the ramble a series of dams was built, adding life to the water and keeping it in a more wholesome condition.

Four hundred and thirteen loads of debris were removed from these waters.

Especial attention was given to the large lake at Seventy-seventh street and Eighth avenue. In the small arm known as the Water Fowl Preserve it was found that about 4 feet of manure and mud had collected, some of which was floating on the surface. As soon as the water was lowered and this material was subjected to the sun's rays it fermented and was exceedingly offensive. A large amount of gravel had washed in to this water from the bridle road, and at some points this material reached nearly to the surface. A system of runways was built and all of the decaying matter and debris was removed. The surface drainage pipes were repaired and the edges were given the necessary treatment to put them in a sanitary condition. The water in the lake proper was lowered some 16 inches to permit the men to work to the best advantage. Large sections of the borders were honeycombed with rat holes, and many stagnant pools and places suitable for the breeding of mosquitoes existed. At Seventy-seventh street and Eighth avenue the entire beach was rebuilt and widened from 2 to 4 feet, and a gradual slope extending 6 feet under water was constructed to permit the feeding of the water fowl with less danger to visitors. The margin of the lake was cemented and graveled and constructed so as to permit the fish to feed close to the edges. All overhanging brush, grass and weeds were removed and the bays and inlets cleaned of decaying vegetation and mud. The island in this lake was similarly treated, the low places being regraded and the borders placed in a fine condition. The skate house beach was reconstructed and widened, the shale recently removed from the East Drive being used with cement to make a hard, smooth surface. Thirty loads of debris were taken from this lake.

The Conservatory lake was dredged four times; thirty-three loads of material were removed from this small body of water.

The water in the Fifty-ninth street lake was lowered 18 inches, uncovering a great quantity of refuse, which was carried to the banks and removed. The borders were covered with grass, weeds, brush and decaying vegetable matter, which was duly removed and the margins treated in the same manner as the other lakes. Four hundred and eighty-one loads of debris were taken from this lake.

In cleaning the lakes and repairing the banks and borders 219 barrels of cement and 330 loads of gravel were used, and 2,001 loads of weed, mud and debris were removed. The total number of feet of borders cleaned, stoned and cemented aggregated 30,450, or 5½ miles.

Pruning and Renovating the Parks.

The work of renovating the parks on the lines suggested by the recommendations made by the Commission of Experts, published in full in the report for 1902, was begun during the year. In the spring many unhealthy and diseased shrubs were removed and normal specimens planted in their stead. A large amount of rich mould was used in the holes dug to receive the new plantations, the work being extended generally throughout the Central Park and being quite marked in its effect.

The Department endeavored to have the pruning in the spring more thorough than ever before. This work had been more or less neglected for many years with resultant damage to the plantations. In order to accomplish this, the pruning was placed under the charge of competent arboriculturists, the men under them being carefully selected, and being employed continually upon the same character of work. In former years, the planting, pruning and cultivating had been done in the different sections under the immediate direction of the Foremen in charge. Under this system uniformity was lacking and satisfactory results were not always obtained.

During the summer a carefully considered scheme of planting was taken up, including the renovation and replanting of the east border of Central Park, from One Hundred and Tenth street and Lenox avenue to the neighborhood of the Metropolitan Museum of Art. This work was carried on in connection with the new walk east of the East Drive and northward from Seventy-ninth street. In order to improve this region and to carry on the desired renovation, the half dead shrubs were carefully thinned out and a large quantity of mould (estimated at 10,000 yards) was distributed over the banks and borders of the drives and paths to the depth of 12 to 20 inches. New shrubs were then planted. In order to obviate a bare effect produced by the removal of the discarded plants, numbers of California privet bushes were transplanted from other portions of the park where the plantations were in many cases considered a great injury to a proper effect. The Gardeners were able to move the large plants of this species without danger, and their replanting was accomplished with great success.

This planting of large privet is intended to serve as a background for other shrubs which are to be graded down, and in this way to vary the monotonous effect that would be produced. In this work the surface of the ground was somewhat raised, and in many places the banking up of the soil helped still further to shut out the surrounding city.

In addition to the work above described the planting of new trees to fill vacancies in the other City parks and along the parkways was given much attention. In the spring one hundred and seventy-one trees were set out in Riverside Park; two hundred and sixty-eight in the down-town parks, and one hundred and ninety-nine upon the streets and avenues. Two hundred and fourteen new trees were set out in the Central Park, where great damage was done during the very severe storm of

September 16. Storms have done great damage to the Central Park trees the past two years, and it is only through a generous replanting that the appearance of the park can be preserved.

On Fifty-ninth street, between Fifth and Eighth avenues, elms of a high standard were planted and apparently these trees are in a thrifty condition. Tree guards of a new pattern were placed about them, and the ground was prepared with unique tree pits, permitting of irrigation, made necessary by the character of the subsoil at this place.

Elevated Railway Structure in Battery Park.

It was learned in 1902 that in 1899 notice had been served by the Department of Parks upon the Manhattan Railway Company to remove the elevated structure from Battery Park; that the City had been temporarily enjoined, the injunction, however, having been granted *pendente lite*; that the injunction had never been argued by the City, and that the railway company was operating in Battery Park apparently without any legal right so to do, and notwithstanding notice had been served upon it to vacate, pursuant to the terms of an agreement under which its structure had been placed in the park.

A careful investigation of the matter by the Corporation Counsel showed that the elevated railroad structure had been maintained in Battery Park since 1876 under a revocable permit, under the terms of which the company should vacate the park upon six months' notice so to do. Such a notice had been served upon the company in 1880 and again in 1899. In each instance, however, litigation resulted which had been adjourned, and no final action had been taken by the City authorities.

After many consultations with the Corporation Counsel, it was decided that good government required that some definite action should be taken in this connection. A joint letter was therefore written, giving a full history of the occupancy of the park by the railway company, and recommending that legislation be had that would enable proper municipal authorities to put the matter in a legal and business-like form.

Following is the letter referred to:

February 16, 1903.

Hon. SETH LOW, Mayor:

Sir—We desire to call your attention to the very unsatisfactory conditions, legal and physical, attaching to the elevated railroad structure in Battery Park.

Statutory Provisions.

Chapter 606 of the Laws of 1875, under which the elevated structure was constructed, provided in section 4 thereof that the Commissioners named in the act should have power to fix and determine the route of the railroad over "streets, ave-

nues and places or lands," except such as were contained in public parks. By subdivision 5 of section 26 of the act the use or occupancy of public parks or squares by railroads constructed under the act was prohibited.

Chapter 565 of the Laws of 1890 (the general railroad law) re-enacts these provisions in section 123.

The Rapid Transit Act, in section 32, provides that the Board of Rapid Transit Railroad Commissioners may, on the application of any railroad corporation "actually operating a railroad wholly or in part within the limits of the City," authorize it to extend its lines within the City, "or to acquire all terminal or other facilities necessary for the accommodation of the traveling public on any street or place, except the place now known as Battery Park," in which said railway shall be located. In this act, as amended in 1902 (chapter 584, Laws of 1902), the Board is to fix the locations and plans of construction of the railway authorized by it, the time within which it shall be constructed, the compensation to be made to the City, and such other terms, conditions and requirements as to the Rapid Transit Board appear just and proper. The annual rental to be paid to the City is to be readjusted at intervals not exceeding twenty-five years.

History of the Structure.

On September 2, 1875, the Rapid Transit Commissioners, appointed under chapter 606 of the Laws of 1875, designated the route beginning at the end of Greenwich street, over and across Battery place to the edge of the Battery and State street; thence along State street to Whitehall street, etc. Subsequently and in the same year the Rapid Transit Commissioners amended the location by providing for crossing the park at the corner of the Battery to a point nearly opposite Bridge street and thence along a line near the edge of the Battery and State street and across the corner of the Battery to the Staten Island ferry.

On February 10, 1876, the City, acting by the Department of Public Parks, entered into an agreement with the New York Elevated Railroad Company, under which it undertook to grant a right of way across the Battery; such right to be always subject to revocation by the City after six months' notice in writing. This license contained various provisions as to the character and use of the structure, which it is not necessary at the present time to refer to. It does not appear that the agreement was made in pursuance of any special authority conferred on the Park Department, and it may well be doubted whether this agreement had any validity to bind the City.

On July 3, 1878, an amended agreement was made between The City of New York, acting by the Park Department, and the New York Elevated Railroad Company. This agreement, after reciting the agreement of February 10, 1876, provides for an extended right of way along a somewhat *different* route; but with all the rights, privileges and powers contained in the foregoing agreement. Of course, if

the Park Department had no jurisdiction to make the former agreement, it had none to make the agreement of 1878.

On May 28, 1879, the New York Elevated Railroad Company made a lease of its property to the Manhattan Railway Company.

On June 11, 1880, the Park Commissioners gave notice to the New York Elevated Railroad Company, but not to the Manhattan Railroad Company, directing them to remove the structure at the expiration of six months. This notice was plainly ineffectual and insufficient.

On December 10, 1880, the Manhattan Railway Company began an action against the Park Commissioners and the City, asking for an injunction restraining the defendants from removing the railroad company's tracks from the Battery. An injunction was granted accordingly *ex parte*, by Mr. Justice Daniels. The motion to make it permanent was indefinitely adjourned. The City never answered.

Nine years afterwards, however, on November 16, 1889, the injunction was modified on the City's motion, so as to permit the service of a new and sufficient notice by the Park Department, and giving the City leave to proceed under such new notice. Nothing further has been done in that action since 1889.

In 1891, a petition was addressed to the Park Department, praying that the licenses of the Elevated Railroad to occupy Battery Park be revoked. Numerous hearings were held by the Commissioners at the time, and much testimony was taken, with the result that it was determined by the Commissioners that the public interest would not be served by a compliance with the prayer of the petitioners.

On February 17, 1899, the President of the Park Department directed a notice to the Manhattan Railway Company, reciting the licenses of February 10, 1876, and July 3, 1878, and revoking the right of way over the Battery after the expiration of six months from the date of service of the notice. Considerable correspondence ensued with the railway company, and the time within which to remove the structure was extended from time to time.

On June 18, 1900, the Manhattan Railway Company began a second action against the Park Commissioners and the City to enjoin the removal of the railway structure from Battery Park. An injunction was accordingly granted *pendente lite* by Mr. Justice Smyth. The City served an answer in that case; but no argument was ever had on the motion to continue the injunction, nor has anything further been done in the action. By stipulation with the Corporation Counsel, entered into November 20, 1900, the motion for an injunction was adjourned to a date to be agreed upon on twenty days' notice from either party. No such notice has ever been given, but the motion may be brought on for argument whenever desired.

Volume of Traffic.

The elevated railroad structure, it thus appears, has existed in Battery Park for a period of over a quarter of a century, and forms a connecting link between the

Sixth and Ninth avenue systems and the South Ferry, and also between these systems and the east side lines on Second and Third avenues. The Battery Park structure has been used by a very large number of persons at all times. If it were removed without substituting another structure to take the place, the removal would undoubtedly be a matter of the most serious inconvenience to the residents of South Brooklyn and Staten Island, as well as to many of those who live on the west side of Manhattan.

The following table gives the number of tickets sold at the South Ferry Station of the elevated railroads for the nine years ending December 31, 1902:

	East Side.	West Side.	Total.
1894.....	2,607,200	3,040,040	5,647,240
1895.....	2,619,008	2,917,400	5,563,408
1896.....	2,642,205	2,903,773	5,545,978
1897.....	2,534,296	3,093,540	5,627,838
1898.....	2,381,567	2,901,774	5,283,341
1899.....	2,498,043	2,907,188	5,405,231
1900.....	2,643,159	2,856,381	5,499,540
1901.....	2,581,121	2,789,500	5,370,621
1902.....	2,806,971	3,033,522	5,840,493

Presumably, the total number of passengers using the South Ferry Station is approximately double the foregoing figures.

Alternative Routes.

The question of alternative routes has been the subject of consideration at various times by the City's representatives. In order to connect the elevated railroad structure in Greenwich street with the South Ferry two courses are open.

First—To depress the tracks so as to pass under the surface of Battery Park, and

Second—To divert the tracks along Battery place and into State street or Whitehall street.

As to the depression of the tracks, we are advised that owing to the character of the soil, this would hardly be practicable even if it were not for the fact that the City has already entered upon the construction of its underground road in Battery Park.

As to the second plan, the engineering difficulties involved in making two very sharp curves are exceedingly serious. The legal difficulties are not less so. The Elevated Company has surrendered whatever rights it ever had in State street, and

since such surrender the United States Government has acquired title to the block of land bounded by Bowling Green and by State, Bridge and Whitehall streets. No elevated structure could be built along these streets unless the United States Government should voluntarily convey the easements of light, air and access, for these could not be condemned. And the Federal Government has expressed in very positive terms its unwillingness to allow an elevated railroad structure by the side of the new Custom House.

There seems to be therefore no choice as a practical matter between permitting the elevated structure to continue to occupy a portion of Battery Park or cutting off altogether the west side lines from access to South Ferry.

Possible Improvement in Battery Park Structure.

In view of the foregoing consideration, it has seemed to us worthy of consideration by the City authorities whether an arrangement might not be entered into with the Manhattan Railway Company by which it should be permitted to continue its occupation of some portion of Battery Park upon condition of beautifying and straightening its structure and of paying the City reasonable compensation for the privileges enjoyed.

The present situation of things is evidently unsatisfactory. The Elevated Railroad Company, in the opinion of the Law Department, is now and for the past twenty-five years has been occupying a portion of Battery Park without any legal authority; and if the pending case is pressed to a hearing, the structure may be removed. While this result would be satisfactory from an aesthetic point of view and would undoubtedly improve Battery Park, it would be at the cost of grave daily inconveniences to tens of thousands of our citizens.

The existing structure is excessively unsightly, and until the use of steam locomotives was discontinued it caused great injury to the grass and trees in the park. It would be possible to replace the present structure by one which would be more attractive to the eye, much lighter, and which would be a minimum of injury to the herbage and foliage. Plans indicating what can be done have been prepared by the officials of the Manhattan Railway Company, and without expressing approval of them in all of their details, it may be properly said that we think they clearly indicate how great an improvement it is easily practicable to make.

Finally, it is to be borne in mind, although the question of compensation is a minor point compared with the maintenance of our parks and the necessities of passenger transportation, that the Manhattan Railway Company pays nothing to the City for its right of way in Battery Park.

Proposed Legislation.

If it is desired to enter into an agreement of the kind above suggested, new legislation will be requisite.

The best way of dealing with the question will probably be to have the present Rapid Transit Act amended so as to remove the existing prohibition against authorizing any elevated structures in Battery Park. If this is to be done, we think it would be proper to provide in substance that the Rapid Transit Commissioners might authorize an elevated structure to connect the Greenwich Street Elevated road with the South Ferry, and also to provide that no such structure should be erected except on the approval of the Park Department.

It is not contemplated by any one that there should be any enlargement of the present occupation of Battery Park. On the contrary, we are satisfied that if the structure is improved in the way indicated on the company's drawings, the occupation of the park will be diminished and not increased; but it is very desirable that no power shall be given under any circumstances or at any time to permit further encroachments.

We think that the plan we have outlined would create no embarrassing precedent. The situation in Battery Park is exceptional and peculiar, and indeed the language of section 32 of the Rapid Transit Act, which it is proposed to amend, refers only to streets and places on which a railroad is already located.

We submit herewith the drawing exhibited to us by the Manhattan Railway Company, together with draft of a proposed amendment to the Rapid Transit Act, which we think is adequate to enable the City authorities acting through the Board of Rapid Transit Railroad Commissioners and the Park Department, to effect the object which we have in view, if that seems desirable.

We are, respectfully,

WILLIAM R. WILLCOX, President, Park Department.
GEORGE L. RIVES, Corporation Counsel.

In accordance with the above recommendations a bill was introduced in the State Legislature, but failed to pass at the last session. It is believed such legislation should be had at the earliest date possible.

Cleaning the Park Statuary.

The attention of the Department was called repeatedly in 1902 to the very unsatisfactory condition of the statues and monuments in the parks. No effort had been made to clean them for years, and they had become encrusted with foreign matter, in some cases causing corrosion and giving the bronzes a streaked appearance. Many methods of cleaning the metal had been suggested, but it was believed that sharp implements, acids or gritty substances should not be employed.

Mr. F. Edwin Elwell, Curator of Sculpture of the Metropolitan Museum of Art, took great interest in the project, and strongly advocated the use of pure water and fibre brushes. Mr. Elwell volunteered to superintend the work without compensation, and the satisfactory results attained are largely due to his expert advice and his energetic labors.

The first statue cleaned was that of Commerce, at the West Drive and Fifty-ninth street, Central Park, and in addition to this statue thirty others have been cleaned since May, 1903. A few memorials or works of art still require attention, but a very great deal has been accomplished since the work was begun.

From the statue of Scott, on the Mall, Central Park, nearly half a bushel of dried leaves, twigs, birds' nests, bird lime and other accumulations of thirty-two years was removed. From the group The Eagles thousands of dried and encrusted cocoons were taken, which in some cases were found to be imbedded in mud wasps' nests, requiring the use of a sharp, steel instrument to remove them. Ward's Indian Hunter was so disfigured by wasps' nests that the eyes of both the man and animal bore a weird expression little intended by the sculptor.

The following were found on the equestrian statue of Washington, Union Square, partly, it is believed, due to the subway construction: cement, tar, oil, bird lime, stone, putty, iron, brick, mortar, lead, paint and glass. On other statues hose couplings, nails, cigar butts, bird lime, rags and other accumulated matter were found.

Failure to clean the bronzes in the parks has prevented the acquisition of the green patina, so much desired by the artist, the encrustations interfering with the effect of the atmosphere upon the metal. It has been noticed that since cleaning some of the statues this green patina is becoming stronger in color, although it will take many years of care to produce the artistic effect that could now exist on nearly all of the works of art in the parks had they received proper care.

The work of the past summer has demonstrated that the bronzes may be cleaned by simple means and by the regular laboring forces under proper supervision, and it will no doubt have a beneficial effect upon the care of the statuary in the future.

Music.

The season of park concerts in 1903 was probably the most successful since the inauguration of this form of entertainment for the people in the parks. The Department asked for an increase in its appropriation for music sufficient to enable it to give concerts in the newly acquired parks. This increase, however, was not allowed, and in order that the various sections of the City might be treated impartially it became necessary to lessen the number of concerts given in some of the parks. The schedule adopted was as follows:

Central Park, 30 concerts.	Tompkins Square Park, 12 concerts.
Madison Square Park, 12 concerts.	Washington Square Park, 12 concerts.
Corlears Hook Park, 12 concerts.	Abingdon Square Park, 12 concerts.
East River Park, 12 concerts.	Hudson Park, 12 concerts.
Battery Park, 12 concerts.	Mulberry Bend Park, 12 concerts.
William H. Seward Park, 12 concerts.	Morningside Park, 10 concerts.
Mount Morris Park, 12 concerts.	Hamilton Fish Park, 10 concerts.

Concerts were also given in connection with opening and unveiling ceremonies, as follows:

Formal opening of William H. Seward Park.

Children's exercises and gymnasium exhibition, William H. Seward Park.

Unveiling of Murray Memorial, Park Avenue Park.

Formal opening of Morris (Jumel) property as a public park.

Opening of gymnasium and playgrounds, De Witt Clinton Park.

Owing to the unusual amount of rainy weather during the early part of the season the concerts were given later in the fall than usual.

In Morningside Park the concerts were changed from Saturday afternoon to Friday evening, and it is believed that the move was a proper one. During the summer months Morningside Park is extremely warm during the afternoons, and it was found that the audience at the concerts was made up largely of children. By beginning the concerts at 8 o'clock the weather conditions were much more agreeable, and persons were able to attend who would have been unable to stand the severe heat of the earlier hour. The attendance was much larger than in former years, and a larger proportion of grown persons were present, the increase in the number of working people being particularly noticeable.

In the Central Park the experiment was tried of changing the concerts from Saturday afternoon to Saturday evening. Communications were received both commending the change and objecting to it, and it was also stated that the holding of concerts in the Central Park had a tendency to bring disorderly persons to that place and was prejudicial to the good morals of the young people who gathered there. While the attendance at these evening concerts was very good when the weather was clear, and the behavior of the people in the vicinity of the bandstand was all that could be desired, it was, nevertheless, decided that it would be better to give the concerts in Central Park in the afternoon, and they were thereafter given at the usual hour.

The programmes rendered during the year have been carefully scrutinized and all inappropriate or objectionable selections stricken out. Particular effort has been made to prevent the playing of mediocre compositions in the parks for the purpose of advertising. It has been the idea of the Department that concerts should be given, while not too classical in character, yet of a sufficiently high standard to please persons

whose tastes demanded compositions of merit. Practically all of the communications received regarding the concerts have been of a commendatory nature, and it is believed that the Department succeeded in pleasing both the masses and those who prefer music of a more pretentious character.

As visitors have shown an interest in the character of programmes rendered in the parks, the matter being of interest especially to park departments in other cities where the inauguration of a concert system is under consideration, the following specimen programmes are published:

CENTRAL PARK.

PROGRAMME.

Part I.

"The Star Spangled Banner."

- 1 Grand March—"Huldigungs".....*Richard Wagner*
- 2 Overture—"Leonore, No. 2" (Fidelio-1806).....*Ludwig Beethoven*
- 3 Adagietto from "L'Arlesienne".....*G. Bizet*
- 4 Grand Fantasia from "A Midsummer Night's Dream"
Bartholdy-Mendelssohn
- 5 Cornet Solo—"A Northern Fantasia".....*Theo. Hoch*

Part II.

- 6 Intermezzo—"La Belle au bois Donaut".....*Tschaikowsky*
- 7 Suite—"Peer Gynt"*Edward Grieg*
(a) Morning (b) Ase's Death (c) Anitra's Dance
(d) The Hall of the Mountain Kings
- 8 Berceuse de Jocelyn.....*B. Godard*
- 9 Andante from "The Surprise Symphony"*Haydn*
- 10 Chorus—Halleluiah from "The Messiah".....*G. Handel*
"Doxology."

WASHINGTON SQUARE PARK.

PROGRAMME.

Part I.

- Prelude—"Star Spangled Banner".....*Key*
- 1 March—"Old Guard"*Bent*
- 2 Overture—"The Wanderer's Hope"*Suppe*
- 3 Valse, Sentimental—"Pense D. Automne".....*Ellis*
- 4 Song for Cornet—"Come Down, Ma Evening Star".....*Stromberg*
- 5 Operatic Selection—"Sultan of Sulu".....*Wathall*

Part II.

- 6 March Hongroise—"Rakoczy" *Liszt*
 7 Fantasie—"Irish Airs" *Bennett*
 8 Soprano Solo—"Good Night, Beloved; Good Night" *Oliver*
 9 Potpourri of Popular Airs *C. O. Hare*
 10 Finale, March—"My Own United States" *Edwards*
 "Home, Sweet Home"

WILLIAM H. SEWARD PARK

PROGRAMME.

Part I.

"Star Spangled Banner"

- 1 March—"Imperial Edward" *Sousa*
 2 Overture—"Maratana" *Wallace*
 3 Concert Waltz—"My Charmer" *Waldteufel*
 4 Selection—"Prince of Pilsen" *Luders*
 5 Pilgrim Chorus *Verdi*

Part II.

- 6 Selection—"Carmen" *Bizet*
 7 Vocal Solo—"Song of New York" *Damrosch*
 8 Overture—"The Climax" *O'Hare*
 9 Characteristic—"Jolly Musicians" *Linden*
 10 Galop—"Charge of the Light Brigade" *Paul*

EAST RIVER PARK

PROGRAMME.

Part I.

"Star Spangled Banner"

- 1 March—"Victory" *Smith*
 2 Overture—"Orpheus" *Offenbach*
 3 Concert Waltz—"Sally in Our Alley" *Stiern*
 4 Characteristic—"Down South" *Jones*
 5 Soprano Solo—Selected

Part II.

6	Selection from the Opera "Faust".....	<i>Gounod</i>
7	Patrol—"German"	<i>Restorff</i>
8	Processional March from "Aida".....	<i>Verdi</i>
9	Collection of Popular Melodies.....	<i>Von Tilzer</i>
10	Finale—"The Sentry".....	<i>Witmark</i>

"Home, Sweet Home"

In September the Department arranged with the United German Singing Societies to participate in a Sunday concert in Central Park. A very interesting programme was rendered and the attendance was exceedingly large. The concert was a great success, both from a popular and artistic standpoint.

Another innovation of the present season in the Borough of Manhattan has been the publication of the programmes by the city. Heretofore they have been published by an arrangement with an advertising agent, the programme proper forming but a small portion of the pamphlet and the major portion of the pages being devoted to advertising matter of all kinds. The present year the programmes have consisted of a four-page leaflet, the outer pages containing attractive pictures of park features and the inner pages the programmes and information regarding the parks and parkways. The change was a popular one, and it is believed the system adopted is more in keeping with the dignity of a city function. The programmes have not been strewn upon the walks and lawns to the extent that has been done in former years, but have been taken to the homes of the people. Each week a different set of pictures was given, and the programmes for the season presented an artistic collection of souvenirs of the parks.

Entomological Work.

Owing to the very thorough work done by the Entomologist in 1902, extra help and new machinery being provided for him, the keeping in subjection of the noxious insects, often so destructive to park vegetation, has this year been most successful. With the exception of some portions of the down-town parks very little damage was done. In those parks, where the egg masses were not entirely removed, the foliage was eaten somewhat, but not to the extent of disfigurement.

The trees were treated particularly for the destruction of fungi, now so prevalent everywhere, and which was the prime cause of the brown appearance of the foliage during the season. A large amount of this noxious cryptogamic material has been collected for study with the microscope—to discover the harmful species and the best means to combat them and as much time as possible has been given to the arrangement and classification of this material.

A large number of scale insects and aphis species, together with the noxious hemiptera, have been collected and have been experimented upon to determine the

agents best suited for their extermination without injuring the foliage of the plants they attack. The entomological garden has been of great assistance in this study, as many noxious insects heretofore unknown have appeared upon the plants. These plants (about 400 varieties) represent a great number of families, and have been the means of bringing to the notice of the Entomologist insects not hitherto known to be in the park domain.

Many interesting studies have been made as to the nature of the plants and their uses as insect food and the classes of insects that require certain genera of plants to develop. A critical study was also made of the principles that make up the plant structure, which differ in each family.

Much time has been spent by the Entomologist and his men in aiding students in the study of insects and plant material. The pupils and teachers of the public schools particularly have been assisted in this way and a large correspondence has been carried on concerning entomological problems, which it is believed will produce beneficial results in other cities. This correspondence in some instances has been with cities in other countries and information has been given regarding the machinery, methods and formulae employed.

A great deal of botanical material has been collected for the purpose of studying its relation to fungi and insect attack, its properties as insect food and its resisting power against insecticides and fungicides and much work of this character is still on hand. New York being a great importing centre, noxious insects are brought into the City on all classes of plants, fruits and merchandise, and the parks become at once a successful habitat from which these pests disseminate to the surrounding country. Many such insects are brought from China and Japan, the San Jose scale now doing destructive work over large portions of the United States, being traced to those countries.

The Central Park has been kept in a fine condition during the year, the colonies that appeared in destructive numbers being immediately attacked and destroyed. The tent caterpillar was unusually abundant, as many as twenty colonies being found on a single tree. The wild cherry, mulberry and juglin species especially have been affected by these caterpillars.

Scale insects on the ash, lilac and willow were treated with an emulsion especially prepared for the purpose, and the elm scale was also given similar attention. All of the young elms were sprayed before the appearance of the leaves and after the foliage had fallen.

The elm borer, which, in the past, has been so very destructive, has, by persistent work been somewhat reduced in number but all young trees have to be examined two or three times during the season to find if the borers are infesting the trunks. This is apparent from the frass protruding from the burrows, and an injection of bisulphide of carbon at once destroys the insect. The elm beetle has done

little destructive work during the year but it is believed to be increasing in numbers and in the future will require very careful watching.

Great masses of datana larvæ were removed from the juglans and quercus species, as many as fifteen pounds of these caterpillars having been taken from a single tree in the Central Park. The bag worm may still be found in some portions of the park but it has been kept in subjection by means of insecticides and the removal of their cases with tools adopted for the work. The pine chermes received treatment, and with the spring spraying will be in subjection. The tussock moth, everywhere abundant, has been the main enemy to combat but this has been successfully done in all of the parks. Borers affecting the salix, populus and fraximus families have been destroyed wherever possible and greatly reduced in numbers. Pulvinaria, once very common on the maples in Central Park, have been so reduced in numbers that they are now only found in out-of-the-way places. Erisoma Rileyi were extremely abundant during the year and seem to be increasing. A large number of the young elms were treated for their destruction. Their presence is made conspicuous by a knotty excrescence, covered with masses of flocculent plant lice, which appears on the trunks and branches. In addition to the species above mentioned, a great variety of insects not gregarious were collected, studied and destroyed.

The trees, shrubs and foliage in the other City parks and parkways were treated in a manner similar to those of the Central Park, being sprayed, brushed or the larvae jarred from the trees, as the conditions required. Probably never before in the history of the Department have the trees received the careful attention that has been given them this year, it being believed that there is no park work of more importance than the keeping in subjection of the insect pests and fungus growths.

Destruction of Malaria Mosquito Larvae.

As recommended by the Board of Health, the silt basins on Riverside Park and the Central Park were several times treated with kerosene oil to destroy the malaria mosquito. As will be seen from that portion of this report touching upon the cleaning of the Central Park lakes, particular attention was given to filling up all depressions and places where the larvae of mosquitoes could breed, and in many places fish and aquatic insects were introduced to further aid in destroying the mosquito larvae.

The Harlem River Driveway.

Perhaps no better idea of the condition of the Harlem River driveway can be given than to state that the fastest quarter mile and the fastest half mile ever trotted by any horse, in any way rigged, was made there during the present season, and the fastest half mile ever paced by a horse hitched to a road wagon was also made.

On November 12, 1903, Lou Dillon, driven to a road wagon, trotted a quarter mile in 27 seconds, and a half mile in 59 seconds, and later in the month Don Derby paced a half mile, hitched to a road wagon, in 57 1-2 seconds.

No attempt was made during the year to create a fast record for a mile upon the speedway but the records for the quarter and half mile clearly indicate that New York has the fastest speedway in the world. Such records could only be accomplished with the very best surfacing and the greatest of care in keeping it in condition. It was found at the beginning of the season that the loam placed in 1897 had become worn out and could no longer be kept fast, and in order that the roadway might be first class over 5,000 cubic yards of material were removed and the entire drive was resurfaced, at a depth of from three inches to one and one-half feet, 14,000 cubic yards of material being used.

Matinee speed contests were held during the season by the Road Drivers' Association, in which first-class exhibitions of speeding were witnessed. It is estimated that as many as 25,000 persons have attended these exhibitions in one day. Every clear day the walks on each side of the roadway have been filled with spectators, and people come from all parts of the country to witness the speeding during the fall months, when the fastest trotting and pacing horses in the world may be seen.

The iron railing along the driveway for its entire length had become badly rusted and the original coating of paint had chipped off in many places. The railing was properly cleaned and painted with red lead and a finishing coat. This was a work of considerable magnitude, the iron work being some 16,000 linear feet in length.

The Department forces resurfaced the macadam approach from One Hundred and Fifty-fifth street to One Hundred and Sixty-fifth street, using 800 yards of crushed limestone; hauled over 500 yards of cinders to repair the road from One Hundred and Seventy-fifth street and Amsterdam avenue; maintained the gutters and sidewalks; mowed the lawns; watered the roadway and attended to other routine work. They also accomplished the following:

Set in place five fire hydrants for the use of the watering carts; constructed a return drive one-eighth of a mile long and 50 feet wide for the accommodation of those not wishing to go the entire length of the drive before returning; laid over 50 feet of block pavement and reset 1,000 feet of curbing; laid 500 feet of 2-inch galvanized water pipe and 400 feet of $\frac{3}{4}$ -inch galvanized water pipe; hauled 250 loads of material to regrade the approaches at One Hundred and Sixty-fifth street and One Hundred and Seventy-fifth street, and the material to resod the same. The equipment of the Speedway has been greatly improved by the purchase of five pairs of fine work horses with the necessary trucks, double harness, etc., for their use, and the stables, the property of the Department near the Speedway, have been reconstructed for the proper keeping of its rolling stock and horses.

Construction and Engineering Work.

This work was carried on under the direction of the Chief Engineer, Mr. E. A. Miller, with funds provided by the issue of Corporate Stock of the City.

Improving Territory Near Metropolitan Museum of Art, Central Park.

In the Central Park, a new walk was constructed from Fifth avenue to the existing walk system south of the Metropolitan Museum of Art Building. The lawns adjacent were properly shaped, garden mould spread, and the necessary sodding and seeding done to complete the park features which had not heretofore been laid out.

North of the Museum Building the territory was resurfaced, the lawns seeded and in some places sodded. A traffic road, with the necessary drainage system was constructed.

Walk Adjacent to East Drive, Central Park.

One of the most necessary and popular improvements accomplished in the Central Park was the construction of a walk from Eighty-fifth to Ninety-eighth street along the East drive. Between these points the only walk available was that on top of the steep embankment of the reservoir, and the attention of the Department had many times been called to the desirability of constructing a promenade adjacent to what is probably the most popular drive in this country. The entrance to the Central Park at Fifth avenue and Ninetieth street was constructed originally to accommodate carriage traffic only. Owing, however, to the dense population that had in later years gathered in this section, it became the custom to use this entrance for pedestrians, and great numbers of young children and nurse girls daily enter the park at this point. To reach the only available walk it was necessary to cross the East drive, where the traffic is the heaviest at any point in the park, and also the bridle path, where equestrians pass at frequent intervals at a gallop. This was not only dangerous to the public but was a source of inconvenience to riders and drivers. Through the construction of the walk from Eighty-fifth to Ninety-fifth street a means of communication has been provided from the Ninetieth street entrance and connecting with paths already constructed north and south of the new walk. The topography of the land adjacent to the drive and the location of the trees made the construction of this walk rather a difficult landscaping and engineering problem. It was found possible, however, to accomplish the work without sacrificing the trees and without detracting in any way from the landscape features. The necessary drainage system was constructed, and the success of the improvement has been demonstrated by the great numbers of pedestrians who have used this point of vantage on every pleasant day to enjoy the spectacle presented on the East drive.

Resurfacing the Central Park Drives.

The entire East drive was resurfaced with gravel during the year, from near the main entrance at Fifty-ninth street and Fifth avenue. A considerable portion of this roadway had been surfaced with shale screenings. This material was unsatisfactory, being exceedingly slippery in dry weather, and presented a sticky, clayey condition

when the ground was moist. These conditions caused many complaints from the driving public, and an appropriation being obtained for the purpose, the unsatisfactory material was removed and gravel of a proper quality substituted. Since this work was undertaken, the Department has received numerous letters of commendation stating that the East drive is in the best condition that it has been in for many years. The cross drive from McGown's Pass Tavern was treated in a similar manner, as was the West drive, from the junction of the cross drive named, to a point near Eighty-second street. This work was accomplished by the Department forces and 20,000 yards of gravel were required.

Reconstruction of Transverse Road No. 3, Crossing the Park at Eighty-sixth Street.

The Interurban Street Railway Company having applied for permission to install subsurface electrical conduits in this transverse road in connection with a change in motive power, an arrangement was made by which the company practically reconstructed this thoroughfare. The work was done under conditions laid down by the Department and under the supervision of its Inspectors, without any expense to the City, and upon the provision that the conduits, tracks and pavements became the property of the City when completed. This work included a new drainage system, new receiving basins, the asphaltting of the entire roadway, with a fifteen years' guarantee, the setting of new curb and the laying of new sidewalks.

The Department shops and stables are situated in this transverse road, and in addition to the traffic to these buildings, a very heavy crosstown traffic has existed. The road is now in a splendid condition and a much needed improvement has been obtained by the City without cost to it.

New Central Park Drainage System.

Plans have been prepared for the construction of a new sewer system to obviate the drainage of sewage from the public comfort stations into the lakes. A contract has been let for a sewer running from the Mineral Springs building southward to a point near the East drive and Sixty-second street, into which all cottages in the section will be drained. This work will be begun early in 1904. To drain the Tennis House cottage a sewer one-third of a mile long was constructed. These sewers will be of great assistance in preventing future pollution of the lakes and will add greatly to the sanitary conditions of the park.

Belvedere Walk, Central Park.

The territory south of the old reservoir and adjacent to the Eighty-sixth street transverse road wall was greatly improved. The slopes were renovated, new sod was laid, a new asphalt walk with proper foundation constructed, and the drainage improved.

City Hall Park.

As the Rapid Transit subway work in this park was completed, the restoration of the walks and lawns was taken up. Much of this restoration work still remains to be done, and where the Hall of Records Building has been removed, the park will have to be remodeled. Mail street, adjacent to City Hall Park, which, for some time past, had been in a deplorable condition, was repaved. The pavement of this important thoroughfare was the cause of many bitter complaints, and its unsatisfactory condition was due to no fault on the part of this Department. The Rapid Transit work had caused the asphalt to be disturbed upon a portion of the street, and another portion was directly chargeable to the United States Government. The Park Department made temporary repairs several times, but it was found necessary to repave the entire roadway. Communications to this end were repeatedly sent to the Government officials and to the Rapid Transit Commission, but it was only after great delay and much negotiation that arrangements could be made with the several parties in interest to undertake this work.

Corlears Hook Park.

The settlement of the cement walks and some of the lawns in this park made it necessary to enter into a contract for its restoration. To remove as far as possible the cause of the settlement, the pipe connections with the houses that had formerly stood upon the park site required considerable attention. These connections had been left in the ground resulting in a leakage of water and the undermining of certain areas. The old taps were removed and the water mains properly plugged.

DeWitt Clinton Park.

Preliminary to the construction of this land as a formal park a contract was let for regulating, grading, the removal of brick walls, masonry and refuse, and the depositing of clean earth filling. The surface of the land, after the removal of the buildings, was very uneven, and required excavating to a depth of from one to five feet. This work was completed during the year, and the final design for the park prepared.

Contracts have been let for the improvement of this park and for the construction of a splendid pavilion with shower baths, toilet stations, etc. The building was designed by Barney & Chapman, architects, and will form an important feature of the development of the park. A pergola building, designed by the same architects, is also to be erected, containing rooms to be used in connection with the farm gardens, a tool house and other necessary provisions.

East River Park (Extension).

About two years ago a contract was entered into for the construction of a sea wall on the easterly side of this park. After the work had progressed to a certain

point it was found that the ground would not support the foundation originally intended and the contract was modified to permit of the completion of the work under proper conditions. This work was carried on throughout the summer and has been practically finished. In conjunction with the sea wall a broad esplanade is being constructed with the necessary modification of the slopes. When finished, this improvement will afford a fine opportunity for viewing the East river with the numerous craft constantly passing up and down.

Fort Washington Park.

A new roadway was constructed in this park to permit of safer and easier access and this afforded a much-needed improvement.

Hamilton Fish Park.

This park was remodeled during the year, one-half of its area being reconstructed for playground purposes. The park features were retained between Pitt and Willet streets, and a wrought iron picket fence was erected around this portion. The lawns were spaded, the rubbish removed, new mould spread and sod laid, and the ground was then properly planted with trees and shrubs. The asphalt walks were repaired and the plaza paved with asphalt. In the playground section of the park new drains were laid, and a wrought iron picket fence erected.

Hudson Park.

The easterly section of this park was set aside for playground purposes. The existing walks were regulated and graded, and new gravel was spread and rolled.

John Jay Park.

The lands for this park were acquired by the Department late in the summer. Funds for its permanent improvement not being available, steps were taken to put it in a condition for temporary use. A playground was installed and in this connection the ground between Seventy-sixth and Seventy-seventh streets was graded and rubbish removed and proper fences erected.

Civic Park (Thirty-fifth Street and Avenue A).

A contract for this park has been let, the design including permanent playground features. This park is small in area, covering but one city square, but the plans have been designed to make the best possible use of every available inch of space.

The building designed by Henry D. Whitfield, architect, furnishes a structure with shower baths, toilets, tool rooms and the other requirements of an up-to-date park with playground features.

Manhattan Square.

The condition of Manhattan Square north of the American Museum of Natural History has been very unsatisfactory for several years, and many petitions have been signed by adjacent property owners for its improvement. During the past year funds were obtained for this work and a contract let. The improvement consists of remodeling the walk system, the construction of proper drainage, the regrading of the lawns with new soil, the laying of sod and the erection of a pipe-rail fence with a wire mesh facing. The square will then be replanted and made into an attractive park. In connection with this improvement a traffic road to the museum building is being constructed, affording a much needed access for coal and other supplies.

Manhattan Square has for the past five years been in rather a neglected condition, owing to the intention to improve the same each year, and each year for a number of seasons past an effort has been made to obtain the necessary funds. In the meantime the grass has been overrun and the shrubbery has deteriorated. The work should be completed early in 1904.

Riverside Park and Drive.

In connection with the improvement of the territory near the Soldiers and Sailors' Memorial Monument, it became necessary to lay new asphalt walks, and to adjust the borders and planting. This work was completed during the year.

The restoration of this park north of One Hundred and Twenty-seventh street, where it had been disturbed during the erection of the Manhattanville viaduct, was completed during the year. This viaduct necessitated the reconstruction of the park territory on new lines, the work being done at the expense of the Department of the President of the Borough of Manhattan, upon plans made by the Park Department, and under its supervision.

Repairs to Roadway.

Riverside Drive from Seventy-second street to One Hundred and Twenty-ninth street was resurfaced where necessary, and the roadway kept in a satisfactory condition during the entire year.

Restoration of Slopes.

The tremendous rain pour in the early part of October did great damage to the steep slopes of Riverside Park. It is estimated that repairs involving between forty and fifty thousand dollars will be required. Owing to the lateness of the season only the preliminary work of cleaning up the walks and the drainage system could be undertaken the present year.

St. Nicholas Park.

These lands were turned over to the Department late in 1902. Funds could not be procured for permanent improvement the present year, but considerable work has been done to make the lands available for temporary use. The buildings were sold at public auction and removed and the disfiguring lines of advertising fences were taken down. A considerable portion of these lands required but the removal of the fences to make them available for public use. In addition to this work proper boundary fences were constructed and at places where objectionable dumping grounds had been maintained the refuse was carted away, the holes filled and the work of sloping begun.

At One Hundred and Thirty-fifth street, leading from St. Nicholas avenue to St. Nicholas Terrace, a flight of wooden steps was constructed several years ago by property owners of the neighborhood to afford a means of access to Amsterdam avenue and the adjacent territory. These steps have since been maintained by the Park Department but they have always been inadequate and unsightly. Work was begun in the fall under a contract for the construction of bluestone steps and asphalt walks to take the place of the wooden flight of steps. This improvement will permit pedestrians to reach the high ground by easy grades and it will furnish something desired by residents in the neighborhood for many years. The stone staircase will be a feature of the permanent improvement of St. Nicholas Park, plans for which have been drawn.

Within the boundaries of St. Nicholas Park at One Hundred and Thirty-seventh street and St. Nicholas Terrace the plot of ground formerly known as the Jasper Oval was maintained during the year by the Department as a recreation ground. Ball games and other field sports were permitted under proper restriction, and the youths of the neighborhood have derived a great deal of enjoyment from such use of the City's property.

Thomas Jefferson Park.

It was expected that the construction of Thomas Jefferson Park would be completed the present year. This work, which was described in the 1903 report, has been greatly delayed, however, because of strikes, and the park cannot be opened for public use until the spring of 1904.

The pavilion in Thomas Jefferson Park now being constructed under contract is similar to the one erected in Seward Park. Owing to the nature of the grounds at the site of this building, it was found necessary to drive piles for the foundation. This work was begun the latter part of September but because of the winter weather it has been impossible to complete the building the present year. The structure is of brick and ornamental terra cotta of light color, and is designed in the Italian renaissance style of architecture. It is composed of a series of arcades, reached by a broad terrace and a flight of steps on both entrances. The site is very much more favorable than that of the

Seward Park building, it being removed from the neighboring streets and surrounded on all sides by terraces and broad steps.

The Thomas Jefferson Park pavilion is 145 feet long and 40 feet wide. The main floor consists of a large recreation room 142 feet long and 37 feet wide, open on all sides and arranged so that it can be inclosed with glass in the winter.

On the lower floor public comfort stations are located for men and women; baths are also constructed, eleven for women and eleven for men. The partition dividing the baths will be of white Italian marble and the walls will be covered with enamel tile. Each bath is divided into two compartments, providing a small dressing room. The lower floor will also contain a room for the boilers to heat the building and the water tanks, and will provide space for the coal vaults and storage rooms for material required in the park. The pavilion was designed by Mr. Arnold W. Brunner, who was the architect for the building in William H. Seward Park.

Union Square.

Contract has been entered into for the repaving the entire walk system of this park. These walks have been disintegrating for a number of years and the present undertaking will be a much needed improvement.

William H. Seward Park.

The construction of the park features in this park was completed in the early spring. These features, with the playgrounds and gymnasium, form a unique example of development of an irregular plot of limited area into a combined park and playground.

West Eighty-sixth Street Parkway.

Contract for the repaving of West Eighty-sixth street with asphalt was entered into two years ago, but work upon the portion west of Amsterdam avenue was not undertaken until the present year. The Interurban Street Railway Company, through one of its leased companies, maintains railway tracks upon this portion of the parkway and as these tracks have been practically unused for several years, it was believed that they could legally be removed by the City and an action to this end was brought by the President of the Borough of Manhattan on behalf of the City. As the laying of the new pavement involved a regrading of the roadway and the necessity for either removing or relaying these railway tracks, the work was delayed for a long period pending litigation. In order, however, that the improvement might not be indefinitely postponed, a stipulation was entered into with the railway company under which it should reconstruct its line in West Eighty-sixth street without prejudicing the litigation in progress for the ultimate removal of the tracks.

Seventeenth Street Park.

This small tract of land was formed by the Department of Docks by filling behind the bulkhead wall. It was planted with grass, and under a special act of the Legislature was turned over to the Park Department for development and maintenance as a public park. In order to bring it to the standard of development of the other parks in the City, the plots were reshaped and replanted, proper fences erected, playground installed and other improvements made.

The New York Public Library Building.

The work on Contracts No. 1 (removal of reservoir and constructing foundation), 1A (excavation and removal of rock from boiler room), and No. 2 (construction of vault, etc.), was completed during the year.

On Contract No. 1 some masonry work remained from the previous year to be finished, and a portion of the old reservoir had been left in position to supply the stone. The total amount of this contract was \$103,500.

The work under Contract No. 1A was very greatly delayed in 1902, and was not completed until April of the present year. The amount of the contract was \$28,183.76, and a penalty has been fixed for the non-completion of the work within the stipulated time.

The work under Contract No. 2 accomplished during the present year consisted of waterproofing, brick masonry, steel floor construction, fireproof floor arches, concrete retaining wall along Fortieth street, temporary paving and sidewalk, fence along Fortieth street, temporary sewer connections, temporary toilet building and a temporary pumping plant. Owing to the delay on Contract No. 1A, the work on Contract No. 2 has been also much delayed. The contractor was obliged to maintain his plant and to operate pumps for a long period, and he has submitted claims for extra compensation because of the same. The amount of this contract as finally made is \$36,950.

Contract No. 3 (the erection of the building). Under this contract fairly satisfactory progress was made during the year, excepting when the work was interrupted by the labor troubles, which practically stopped it from May until late in August. The basement and first-story beams were laid, the masonry up to the first floor level completed, marblework for the exterior up to the first floor level, and a considerable portion of the work between the first and the second floors—that is, the first story walls. The fireproof floor arches for the basement floor were set in position, as were a portion of the floor arches for the first floor.

The architects report that fairly good progress was made on the marblework during the year. By December 1 about 80 per cent. of the work up to the main cornice had been sawed and was being cut, or had been already set.

The amount of this contract is \$2,865,706. During the present year \$290,000 of work has been accomplished.

Repairs to Public Comfort Stations and Other Buildings in the Parks.

Much progress has been made during the year in the rebuilding and improving of the public comfort stations in the parks, particular attention being paid to improving sanitary conditions. The plumbing in many of these buildings was in a shocking condition, but an appropriation having been made in 1901, the work of renovation and improvement has been carried on on a systematic basis. This work has been under the immediate charge and direction of Mr. Julius F. Munckwitz, Department Architect.

In the Central Park the ball players' house, which had been used for storage purposes, was remodeled for the use of the croquet players with an up-to-date comfort station for women and children in one section and for males in another. This work included the installation of tiled floors, new plumbing and new carpenter work, involving altogether \$2,248.

The comfort station near the center drive, north of Transverse Road No. 1, is to be entirely reconstructed at a cost of \$2,800. This building has been in a very unsatisfactory condition, but with the improvements about to be begun will be adequate and sanitary. The comfort station in the basement of the Union Square cottage has been completely remodeled. This work has been very thorough, everything in the building being new excepting the walls and sanitary plumbing of a high grade, marble floors and tiled walls have been installed, all being of the latest design and selected especially with a view to sanitary conditions. The cost of this work is \$3,613.

In City Hall Park a new cast-iron station has been ordered, at a cost of \$1,774, to replace a much smaller and dilapidated one, which stood in this park for many years.

New Comfort Stations.

The important station at the North Meadow, Central Park, designed by Mr. A. W. Brunner, was completed during the year, considerable delays having been caused by strikes. This building was greatly needed, the attendance at the lawn tennis grounds and during the May parties being enormous and no facilities being provided. The building is designed in the style of the old English half-timbered houses, with red brick up to the level of the window sills and strongly marked weathered chestnut timbering enclosing light gray stucco panels above. The roof, with its large overhanging eaves, is covered with red Spanish tiles. The interior fittings are of the best, the walls being covered with white enamel tiles and the toilet compartments being of white Italian marble.

The station in the Central Park near the Arsenal building, built to accommodate the large crowds visiting the Menagerie, has also been completed. The building will cost \$8,370, and combines accommodations for both males and females. It replaces an inadequate building that stood upon its site and will permit the removal of the toilets from the basement of the Arsenal building, which are in a wretched condition. The new structure is constructed of wood, has a stained shingle roof and is in keeping with the landscape features of its vicinity. Its interior arrangements have been designed to produce the best sanitary results and to make the best use possible of the space occupied. It was designed by the Department Architect.

Work was begun during the fall upon the stone comfort station in Morningside Park, designed by Messrs. Barney & Chapman, Architects. This structure, which was described in the 1902 report, should be completed during the early part of 1904 and will provide accommodations in this important park where none have heretofore existed. The building will also include tool rooms and a bandstand.

Repaving West Seventy-second Street.

The residents of West Seventy-second street for the past two years have used every effort to have that parkway repaved with material different from that used upon the park roads. This street, being the main thoroughfare for drivers en route from Central Park to Riverside Drive, has been surfaced with macadam and gravel. The residents, however, have objected to this pavement because of the dust in dry weather and of the mud in thawing or wet weather. They were anxious to have either a sheet or block asphalt pavement laid, while the driving public strenuously objected to any material that would provide poor footing for horses. For these reasons the selection of a pavement was a very difficult problem and before a conclusion was reached a public hearing was given upon the subject, at which representatives of both the residents and the driving public gave their views. Other cities where similar conditions existed were visited and the merits of the various kinds of pavements carefully looked into. It was finally decided that a bitulithic macadam surface would best meet the exigencies of the situation and a contract and specifications were drawn by the Law Department for the work. The bitulithic pavement being patented, a contract could only be let after certain proceedings had been taken, and with the approval of the Board of Estimate and Apportionment. The matter from the beginning was subject to the advice of the Corporation Counsel and, after due advertisement, bids were received for the work.

The necessary proceedings to permit contracting for a bitulithic pavement and the necessity for ascertaining which kind of a pavement would best meet the wishes of all persons interested caused several months delay and when the bids were received the Department was served with papers in an injunction proceeding to re-

strain it from contracting for the desired pavement. The injunction was vacated and later an application for a stay of proceedings was denied and the contract finally awarded. The new pavement should be completed early in 1904, and it is believed it will give satisfaction to both the residents of Seventy-second street and to the owners of horses and will put that important parkway in the best condition in which it has ever been.

Maintenance and Gardening Work.

Notwithstanding the appropriation for maintenance work for 1903 was the same as that for 1902 (some \$60,000 less than was allowed for 1901), and a number of new parks have had to be cared for, this very important part of the service has been kept at a high standard. It has been under the immediate direction of Mr. Thomas F. Murphy, Superintendent of Parks, who, by rearrangement and reorganization, has obtained the best results possible with the means at hand. All of the parks, from Fort Washington to Staten Island, have been cared for, minor repairs have been made and the bridges, rolling stock and other park property have been kept in good repair and in a clean and attractive condition.

The experiment of combining the laboring and gardening forces in each section under the supervision of one Section Foreman has proved a success, both from an economical and practical standpoint, the men working together and producing better results than when they were organized in separate gangs under the direction of different foremen.

The fences and ironwork throughout the parks have been repainted where necessary, the machinery and rolling stock have been kept in repair, the heating apparatus in the park buildings maintained and repaired and all of the property of the Department carefully preserved.

In addition to the regular maintenance work much construction work has been done by the maintenance forces during the year. For the first time in many years by employing the maintenance forces upon minor improvements, the mechanics and laborers have been given work, with full time, during the entire year. Wages of mechanics have in every instance been raised to the prevailing rates, and it is believed that the Department forces are now organized to produce more work and better work than has heretofore been accomplished with the same number of men.

At the Central Park Conservatory much attention in the spring was given to the propagation of bedding plants. Many thousands of plants are raised every year in the propagating houses for bedding in the various parks and for display in the greenhouses.

The usual early display was given in the parks, English primroses and cowslips being used in large numbers. The summer bedding was arranged in several prominent places with a view to creating subtropical effects, which was successfully accom-

plished, although the beds were badly broken up by the severe storms of September and October. The formal bedding in the flower garden at the Conservatory was successfully cultivated and greatly admired by the public.

Flower shows were held at the Conservatory several times during the year. At the Chrysanthemum Show, begun on November 5, a splendid exhibition of flowers was given and was very largely attended. These flower shows are exceedingly popular and afford entertainment to a very large number of people in the course of a year.

In the Ramble, Central Park, the planting as planned by the General Foreman of Gardeners was carried on. Many rhododendrons and kalmias were set out and the appearance of this interesting portion of the park greatly improved.

American Museum of Natural History.

The work of the museum has been carried on during the year under grants from the following sources:

Appropriated by The City of New York	\$160,000 00
Appropriated by the Board of Trustees of the Museum, approximately.	75,000 00
Receipts from friends of the museum	<u>35,000 00</u>

In addition to the above, improvements to the building have been under way, funds for which have been provided by the City.

The sum appropriated by the City for the maintenance of the museum has been expended in keeping the buildings in repair, caring for and guarding the exhibition halls, and for rendering available to the public a considerable amount of new material acquired through purchase, gift, field parties and exchange. A new hall illustrating life and culture of the inhabitants of Eastern Siberia, was opened to the public, the collection being the most complete of its kind in the world. A hall devoted to invertebrate zoology was also opened during the summer, and a room was prepared for exhibiting the collection of insects given by the late Very Reverend Dean Hoffman.

Considerable progress is made toward the opening of a hall of fossil reptiles. When the material in this hall is placed on exhibition The City of New York will have the most impressive exhibit of fossil vertebrates in the world.

Much time has been spent in the rearrangement of certain of the older collections, in revising the material and bringing the specimens to the highest stage of usefulness. For this purpose it has been thought best to secure the advice of those who stand as leaders in the various branches of natural science. That these efforts have been appreciated has been shown by the attitude of the public, the emphatic approval of visitors from similar institutions abroad and the great increase in the use of the collections by students, teachers and scientists.

The work of the year was signalized also by the use that the press has made of material placed on exhibition, and the descriptive matter collected by various expeditions.

The museum authorities believe that the educational work of the institution is as well performed when carried on through the press, as when made available through its exhibition and lecture halls. Scarcely a day has passed when the public has not received, through the daily papers or the illustrated periodicals, substantial information in regard to the general progress of science. The Museum is in constant receipt of requests from publications at home and abroad, for photographs or statements bearing upon its work.

More than a score of expeditions have been kept in the field through the generosity of the trustees and friends of the Museum. These expeditions have covered territory in Siberia, China, Alaska, British Columbia, Hudson Bay, Greenland, Mexico, Peru, the Bahamas and practically all of the Western States. Hundreds of thousands of specimens have been collected. The following notable donations, purchases, and explorations are reported:

Ethnological material from the Jesup North Pacific Expedition; exhaustive archaeological material from the Delaware Valley (for several years past the funds for the Delaware Valley research have been contributed by Dr. F. E. Hyde); several additions to the collection illustrating the origin of the horse (these have been made possible by a gift of Mr. William C. Whitney); Mr. John L. Cadwalader has interested several friends in the preparation of an extensive series of native bird groups; Messrs. B. T. B. Hyde and F. E. Hyde, Jr., have maintained exploring expeditions among the Indians of the southwest; Mr. Archer M. Huntington has maintained an expedition among the Indians of California; President Morris K. Jesup has maintained expeditions to study certain native tribes on the verge of extinction; Mr. Jacob H. Schiff has maintained an expedition in China, and Mr. Madison Grant and several of his friends have borne the expense of a zoological expedition in Alaska.

The end of the year 1903 finds the Museum building more complete and in better repair than at any time in the past. The collections are much larger, and their use by students greater than ever before. A larger number of lectures has been delivered during the year than in previous years, the attendance at the museum has been larger, its library facilities have been increased and its publications have been more extensive than in previous years.

Two important contracts for improvements to the museum building were let during the year. The first, amounting to \$184,500, was for the erection of a new wing for heating, power and electric light plant. For some time past it has been necessary to run the boilers to their full capacity, no margin being allowed for emergencies. The new building is located to the west of the lecture hall and the

greatest portion of it will be constructed underground. In connection with this new wing important changes in the heating pipes, wiring and machinery will be made.

The second contract of importance is that for the remodeling of the entrance hall, changing the elevator system and improving the steam, water and electric service. This contract will also include the construction of rooms for teachers, the total cost of the work being \$92,500. The rooms for teachers will occupy the space used for the old lecture hall, it being the intention to provide an assembly room and an adequate comfort station. The location of these new rooms will make them readily accessible, and will supply an improvement that is much needed, owing to the great extent to which the museum is used by the Department of Education for demonstrations to the pupils of the public schools.

The Aquarium.

Many important improvements have been made in the Aquarium since its management was transferred to the New York Zoological Society. Early in the year a fish hatchery was installed, adding greatly to the attractions, and to the value of the educational features. Over two millions of fishes were hatched and distributed in the waters of New York State. The fish eggs are furnished free by the United States Government Fisheries Bureau, and the young fry are taken away and distributed by the New York State Fish Commission, the exhibit being maintained in this way at a nominal cost. The species hatched were shad, white fish, lake trout, rainbow trout, brown trout, pike-perch and yellow perch. It is expected that a school of fish culture will shortly be begun in connection with this exhibit.

The white tile lining of the exhibition tanks, said to be totally unsuited to a proper display of the collections, was replaced with natural rock of various kinds, some thirty of the tanks having already been altered and excellent results attained. Better illumination of the tanks has been provided by enlarging the skylights, and marine and fresh-water plants will be introduced to make the surroundings natural and in keeping with the aquatic life exhibited.

The lighting of this structure, which has always been very unsatisfactory, is being improved by the enlargement of the overhead skylights, and the interior has been tinted in pleasing and suitable tones to remedy the gloominess heretofore so noticeable.

Many improvements have been made in the mechanical appliances. A contract was let for an underground reservoir and work begun thereunder. This reservoir will hold one hundred thousand gallons of water brought from the ocean, which will be heated, pumped through the tanks containing the fish and returned through the filters to the reservoir. In this way the water will be kept at a uniform temperature

without an undue expenditure for coal. It is believed that this method will result in a great saving of fuel and will be of material benefit to the fish.

The Director of the Aquarium, Mr. C. H. Townsend, has made special efforts to develop a closer alliance of the Aquarium with the schools and colleges of the City. By a special arrangement with the Board of Education, some one hundred small aquaria have been placed in the public schools and kept stocked. These have been supplied with small forms of marine life, gathered by the Aquarium staff, and the service has become exceedingly popular with both teachers and pupils. Many teachers now visit the laboratory for special nature study, and this work is being extended throughout the school system.

A Field Collector has been added to the force of employees, with the result that the local marine and fresh-water forms of life are better represented than heretofore. Transparent labels have been placed above the tanks, thus solving a vexatious problem of having legible labels in a building necessarily somewhat dark. The labels now used are easy to read and contain much useful information.

The number of exhibits has been greatly increased during the past year, and a fine, large specimen of manatee, or sea cow, has been added to the collection in the large floor pool.

The employees have been provided with attractive uniforms, circular seats have been constructed around several of the large pillars, additional reserve tanks have been constructed and many minor improvements made. It is safe to say that greater progress has been made in the Aquarium during 1903 than in any year since its inception.

The Metropolitan Museum of Art.

Work under the contract for installing lockers, ventilation, room for casting and moulding, photographer's studio, freight shift, shelving, partition work, exhibition cases, lining of wall, etc., has been completed with the exception of a few details. The total amount of the contract is \$41,019.43.

Under the contract for granite steps and terraces at entrance to old building, new coal vault, addition to main boiler stack, changes in flooring of machinery rooms, changes in heating arrangements, additions to plumbing, case work, wainscoting, fitting for catalogue and other rooms, settees, shades, etc., the work was completed during the year. This contract amounted to \$24,900.

Under the contract for making changes in the sewers and water mains, and alterations in the heating pipes, work was completed, the total amount of the contract being \$1,475.

Under contract for repairs on the roof of the old building, adding skylights on the roof of the carpenter shop and changing the ventilators in the new east wing, the work was practically completed. This contract amounts to \$5,850.

Plans have been prepared and contract let for an artistic stone wing-wall running from the park wall to the entrance of the Museum Building. The material to be used in this wall will be the same as that used in the new wing of the museum, and with the new approach will form an imposing and appropriate access to the building.

The Sherman Memorial.

The erection of the Sherman Memorial in the Central Park was a notable addition to the works of art in the parks of the City, the statue being generally regarded as one of the most artistic and successful designed during the last decade.

In 1891 members of the Chamber of Commerce who had been friends of General William Tecumseh Sherman held a meeting in the Chamber of Commerce and a committee was appointed to raise funds for a fitting memorial to the gallant General. In a short time a sufficient amount was contributed and a contract was entered into with Mr. Augustus St. Gaudens for the erection of an equestrian statue of heroic size. The memorial was to be completed by 1894, but it was not finally cast until several years later, and the site selected in 1902. Various sites had been suggested, including the southern end of the Mall, Central Park, and Riverside Park near General Grant's Tomb. After a public hearing held in 1902 in the Chamber of Commerce, the upper circle at the main entrance to the Central Park, Fifty-ninth street and Fifth avenue, was selected by this Department and received the approval of the Art Commission.

The statue was originally modeled in the United States but was demolished and remodeled by Mr. St. Gaudens in Paris, where it was cast in bronze by Messrs. Thiebault Brothers. It was exhibited in plaster at the Paris Exposition of 1900 and received a grand medal of honor and it was recognized by visitors to the Exposition as one of the most original and successful works of art exhibited. It was subsequently shown at the Buffalo Exposition, where a grand medal of honor was also awarded. The horse in the memorial was modeled in this country from Ontario, the famous jumper, and the figure of Victory was modeled in the nude in this country and the drapery was afterwards added abroad.

The pedestal of the memorial is built of Stony Creek granite. It is 17 feet $9\frac{1}{2}$ inches long and 5 feet 7 inches wide. The carved base forms the back of a seat encircling the monument, the whole resting on a series of steps. The measurements on the ground, including the base, are 42 feet 7 inches by 30 feet 3 inches. The total height is 11 feet. Three bronze wreaths are inlaid in the east and west sides, and on the southern end the following inscription is inlaid in bronze letters:

"To General William Tecumseh Sherman. Born February 8, 1820; Died February 14, 1891. Erected by Citizens of New York, under the Auspices of the Chamber of Commerce, of the State of New York."

The monument was unveiled on Memorial Day with appropriate ceremonies, in which Government, State and City officials participated and a parade by bodies from the United States Army and Navy, the National Guard of the State of New York and the Grand Army of the Republic passed in review.

The cost of the memorial was approximately \$75,000.

The Roger Morris House.

A notable addition to the park system of New York, made during the present year, was the Roger Morris property, later known as the Jumel Mansion. This property is a plot of ground almost opposite the intersection of Amsterdam avenue and One Hundred and Sixtieth street with Kingsbridge road. The mansion is in close proximity to High Bridge Park and the site commands a fine view of the Harlem river, the Sound and the upper portion of the Island of Manhattan.

The property was purchased by the City because of its historic value. The present mansion was erected in 1758 and at different periods during the Revolution it was selected by General Washington and the commanding officers in the British service as their headquarters. Colonel Morris was a Loyalist and the premises was confiscated and sold in 1779.

After the disastrous battle of Long Island, August 27, 1776, the American forces retired to New York. They then retreated to Harlem, and General Washington took up his headquarters at the Morris house, which its owners had deserted. Situated 200 feet above the river, it afforded admirable facilities for observation, and it was the practice of General Washington to survey the neighboring country from the balcony above the hall door, the enemy being entrenched on the north and east, and on both sides of the Hudson. Washington left the Morris house on the 21st of October, 1776, and marched to White Plains.

Within fifteen minutes after the American officers had vacated the premises it was taken possession of by the British forces, which came across the Harlem river. The house then became the headquarters of General Knyphausen, commanding Hessian troops, and it was so occupied until the evacuation of the City in 1783.

After the Revolution it passed through the hands of several owners, and in 1785 it became a public tavern. General Washington visited the property in the summer of 1790, while the seat of government was in New York. In his diary, under date of the 10th of July, we find the following:

“Having formed a party consisting of the Vice-President, his lady and Miss Smith, the Secretary of State, Treasury and War, and the ladies of the latter, with all the gentlemen of my family, Mrs. Lear and the two children, we visited the old position of Fort Washington and afterwards dined on a dinner prepared by Mr. Mariner, at the house lately Colonel Morris's, but confiscated and in occupation by a common farmer.”

In 1810 the property was purchased by Stephen Jumel, and from that time it has been known and famous as the Jumel House. Jumel had acquired a large fortune and he lived in great splendor in his newly acquired home. It became a place where individuals of celebrity were entertained, and was soon widely known. Jumel was an admirer of Napoleon and conceived the notion of giving him an asylum in America, which Napoleon, however, declined.

The mansion afterwards became the property of Madame Jumel and in 1814 a number of African cypress trees were planted upon the premises, having been a portion of four hundred trees presented to Napoleon by the Khedive of Egypt. Twenty of these trees are still standing.

Louis Napoleon was the guest at the Jumel mansion while he was in exile and Joseph Bonaparte also visited there. M. Jumel died in 1832, and after his death Madame Jumel occupied the premises, entertaining with great splendor.

Madame Jumel was married to Aaron Burr in 1833 and they lived for a time thereafter at the mansion. An estrangement between them, however, took place, and Aaron Burr died at Port Richmond in 1836. Madame Jumel died at the mansion in 1865. The property was afterwards occupied by Mr. Nelson Chase, whose wife was a niece of Madame Jumel, and after his death it passed into the hands of several occupants and was finally purchased by General Ferdinand P. Earle, who died there early in the present year.

To the right of the doorway of the mansion a profile bust of Washington has been inserted, and beneath it is a plate bearing this inscription:

"Washington's Headquarters.

This tablet is dedicated by the Washington Heights Chapter, Daughters of the American Revolution, to the memory of General George Washington, who occupied this mansion as his headquarters from September 16 to October 21, 1776.

Battle of Harlem Heights, September 16.

Councils of War.

President Washington visited this mansion, accompanied by his Cabinet, July, 1790.

Morris House, 1758; Jumel Mansion, 1810; Earle Cliff, 1900."

The Morris Mansion and grounds were formally opened as a public park on December 28, 1903, with interesting exercises, which included an oration by Senator Chauncey M. Depew, addresses by other prominent gentlemen, and a band concert. The Reception Committee was made up of delegates from the historical and patriotic societies of the City and a large audience composed of members of those societies and many prominent citizens was present.

The following paragraph from Senator Depew's oration will be of interest:

"This great City will extend far and wide; it will increase in wealth and majesty and power; its public buildings and its palaces, its avenues and its parks, its warehouses and its wharves will grow greater in number, appointments and splendor; but one of its choicest jewels, forever maintained in its original simplicity, to inspire patriotism, good citizenship, culture and democratic spirit, will be this modest mansion of our early days."

The Meteorological Observatory.

The various atmospheric conditions have been observed with standard instruments, read personally, and hourly readings have been taken from the self-recording instruments which were designed and made in the Observatory.

Two hundred monthly reports have been issued as soon as practicable after the end of each month and sent to the various City Departments, libraries and other observatories. These reports are used largely in the Office of the Corporation Counsel in suits against the City, the Meteorologist having appeared many times in the courts during the year. On one day he was subpoenaed to appear in three different courts, one case being in the Borough of The Bronx and the other two in the County Courthouse, City Hall Park.

The most notable meteorological events during the year were the drought that occurred in the month of May, when only three-tenths of an inch of rain fell, and this on four days of the month; the excessive fall of rain in the month of October, when 13.31 inches of rain fell in ten days, and the unusual precipitation on October 8 and 9, when 11.63 inches of water fell in thirty-one hours. The maximum amount of water for one hour was 1.59 inch, between the hours of nine and ten on the morning of the 9th. It was so heavy that the sewers could not carry the water off, and great damage was done in the parks, particularly upon the steep slopes of Riverside Park. The gutters throughout the City overflowed and the water entered the electric ducts of the street railway lines, short circuiting the currents and causing the cars to come to a standstill. Areas and cellars were also flooded. This was the heaviest rainfall recorded since the establishment of the Observatory. The next greatest fall was in September, 1882, when but 8.28 inches of water fell.

The total rainfall for the year to November 1, was 54.25 inches. The temperature for the months of June, July and August was unusually low, being 10.7 degrees below the average for the same months for the past thirty-four years. This low temperature is equivalent to 7,704 hour degrees of less heat for these three months than the average, or, in other words, about twenty per cent. less heat for the three months. This was the cause of the immature ripening of foliage and crops in this vicinity. The average temperature of the year to November 1 was 55.8 degrees. The maximum temperature for 1903 was 95 degrees at 5 p. m. on July 9.

The Central Park Menagerie.

The Central Park Menagerie has been maintained during the year up to the usual standard for that popular place of entertainment and study of the people. The buildings have been kept in repair and repainted, and the collection cared for. At this time the exhibit consists of 390 mammals, 512 birds and 50 reptiles.

Owing to the limited area of the menagerie, no effort has been made to largely increase the collection by breeding, purchase or exchange. In order, however, that the exhibit might not fall below the accustomed number, the following purchases were made:

One Polar bear, 4 baboons, 12 monkeys, 32 rabbits, 2 snakes, 5 swans, 5 golden eagles, 3 pheasants, 36 canary birds, 4 thrushes, 4 blackbirds.

The following exchanges were made:

One nylghau (buck) exchanged for 2 red deer (does).

One young hippopotamus exchanged for 1 elephant, 1 tigress, 1 Indian antelope, 1 pair vultures.

One elk (buck), 1 nylghau (buck), exchanged for 1 pair striped hyenas.

The following animals were born in the menagerie during the year:

One male hippopotamus, 2 lions, 1 leopard, 5 aoudads, 2 zebus, 1 American elk, 1 axis deer, 1 fallow deer, 1 goat, 1 bison.

The attendance during the year at the Menagerie is reported to have been the largest since its inception. On Sundays and holidays, especially, the number of people present has been very great. The hippopotamus born during the year has attracted multitudes of people, and the young elephant, acquired through a trade, has also been a great source of attraction. This animal, about three years of age, is a remarkably intelligent specimen, and since its acquisition by the Department has been taught a number of clever tricks by its keeper. It is a female, with an excellent disposition, and has proved an acceptable substitute for the trick elephant Tom, which it was found necessary to destroy in 1902 because of a vicious temper.

The annual sale of surplus stock and wool was held in June, at which time \$749.29 was realized, 1 male buffalo, 2 lions, 2 zebus, 20 sheep and 1,224 pounds of wool being disposed of.

Following is a list of donations made to the Menagerie, published, as required by the charter:

1 monkey, G. S. Terry.
2 Belgian hares, James Hackett.
1 pigeon, Mrs. Jane Christie.
1 monkey, W. E. D. Stokes.
1 rabbit, Mrs. J. Patten

2 doves, Mr. Fisher.
1 sloth, A. M. Alut.
1 peccary, A. M. Alut.
1 monkey, Mrs. Craig.
1 owl, L. G. Hampton.

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| 6 Canada geese, L. M. Wheaton. | 1 parrot, Mrs. Albucht. |
| 4 American ducks, L. M. Wheaton. | 2 ducks, Mrs. G. Noaks. |
| 1 rabbit, unknown. | 1 guinea pig, T. A. Sly. |
| 1 canary bird, unknown. | 1 hawk, H. F. McTaul. |
| 1 owl, P. Schuster. | 1 peacock, John Goldsbury. |
| 1 raccoon, T. M. Costello. | 1 condor, Mrs. W. R. Grace. |
| 1 gold finch, Mary Keebee. | 1 parrot, F. E. Schaffer. |
| 1 hare, Alexander Kirkwood. | 2 civet cats, R. L. Edwards. |
| 1 parrot, Madame Du Val. | 1 macaw, S. Nachtingale. |
| 3 owls, Morris Weiss. | 2 parrots, A. Illg. |
| 1 blackbird, Mrs. Delafield. | 2 pigeons, unknown. |
| 1 canary bird, unknown. | 1 rail, unknown. |
| 2 guinea pigs, unknown. | 1 catbird, E. L. Dilleson. |
| 3 doves, L. F. Requa. | 1 cockatoo, M. Kinstler. |
| 1 parrot, Mr. Marks. | 1 monkey, George S. Terry. |
| 1 rabbit, M. Bocker. | 3 crows, A. T. Burr. |
| 1 cockatoo, Robert M. Thompson. | 1 monkey, Mrs. L. S. Cleaves. |
| 2 hawks, unknown. | 1 parakeet, Mrs. Cipperly. |
| 1 robin, unknown. | 1 parrot, Mrs. Krohn. |
| 1 fox, F. Nickola. | 1 woodpecker, Mrs. Krohn. |
| 2 alligators, S. A. Chase. | 2 monkeys, N. Bolet. |
| 1 owl, C. B. Stone. | 2 alligators, Mr. Timpken. |
| 1 parrot, unknown. | 1 catbird, John Scott Browning, Jr. |
| 2 hawks, unknown. | 1 mocking bird, J. Carter. |
| 1 owl, W. F. Kittle. | 1 peccary, F. Barton. |

Games and Recreation.

In addition to the gymnasia and playgrounds described elsewhere in this report, the recreative use of the parks has been encouraged and facilitated during the year. A larger number of permits have been issued than ever before for lawn tennis, football and kindred sports, and no opportunity has been lost to provide the best accommodations permissible with the limited areas available in the Borough of Manhattan. Each year shows more clearly that within a short time the land available for field sports in the island of Manhattan will meet but a small proportion of the demand for open-air spaces. The Central Park grounds have been taxed this year to the utmost, the crowding on the ball ground and the tennis grounds being particularly apparent. It is my belief that this legitimate demand of the boys and girls of our public schools should be met by acquiring lands in the Borough of Richmond which, with a proper ferry service, could be made easily accessible, and the large areas would permit of field sports on an adequate scale.

The lakes in the Central Park were thrown open to skaters this year much earlier than usual and every effort has been made to keep the ice in condition and to provide proper accommodations. Owing to the sheltered locations of the Central Park waters they require longer periods of freezing weather to make them safe for skating than do outlying bodies of water within the City limits. The Department, however, is always ready with its temporary buildings and ice-cleaning apparatus to put the ice in condition so that when it is of sufficient thickness it may be thrown open to the public. Owing to the tremendous crowds that use the Central Park lakes the ice must be at least four inches thick and of good quality to be safe and the Department feels that safety to the people must be the first consideration in throwing open the lakes for winter sports.

Coasting has been allowed whenever the fall of snow would permit it, numerous areas being set aside for this purpose.

Proposed Park System for the Borough of Richmond.

As mentioned in the 1902 report, proceedings looking to the acquisition of large tracts of land in the Borough of Richmond for development as future parks were begun last year. Under date of December 19, 1902, the Committee on Parks of the Staten Island Chamber of Commerce made an exhaustive report recommending that a number of tracts be acquired. Although the acquisition of property by the City is not a matter coming within the jurisdiction of the Park Commissioners, I have for many years believed that, following the example of other cities, the park areas of New York should be augmented by acquiring large tracts in Staten Island. To this end I have rendered what assistance I could to the Staten Island Chamber of Commerce and, in company with President Cromwell of the Borough of Richmond, acted as an ex-officio member of the Committee on Parks above referred to.

The report of the Staten Island Committee stated that The City of New York had but one acre of park land to each 500 inhabitants, while the City of Boston had one acre to each 130 inhabitants and the City of St. Louis one acre to each 272 inhabitants. Statistics regarding other cities were given, ranging from Washington, with one acre of park land to each 78 inhabitants, to Chicago (the only city given with a smaller showing than New York), with one acre to each 818 persons.

In recapitulating the areas recommended, the Staten Island Committee gave the following:

Playgrounds—First Ward, 41 acres; Second Ward, 10½ acres; Third Ward, 63¼ acres; Fourth Ward, 21 acres; Fifth Ward, 74 acres. Total, 209¾ acres.

Parks—First Ward, 148 acres; Second Ward, 1,645½ acres; Third Ward, 75 acres; Fourth Ward, 792 acres; Fifth Ward, 775 acres. Total, 3,535½ acres.

The recommendation of the Committee of the Staten Island Chamber of Commerce was in due course transmitted to the Board of Estimate and Apportionment

for action by that Board, as provided by law. The matter was then referred to the Chief Engineer of the Board of Estimate and Apportionment and myself for report, and I beg to quote my report as follows:

"The City of New York—Department of Parks,
The Arsenal, Central Park, November 19, 1903."

To the Board of Estimate and Apportionment, The City of New York:

Gentlemen—In April of the present year there was presented to your Honorable Board the recommendation of the Local Board of Public Improvements of the Borough of Richmond for the establishment of a system of parks, playgrounds and boulevards in that borough, which was referred to Mr. Lewis, Chief Engineer of your Board, and myself for examination and report.

Soon thereafter, in company with Mr. Cromwell, President of the Borough of Richmond, and several representatives of the Staten Island Chamber of Commerce, Mr. Lewis and I visited Staten Island and carefully inspected the proposed park system. The plan presented had been carefully prepared by committees appointed by the Staten Island Chamber of Commerce. Maps were made and a report at some length submitted, all of which are now before your Honorable Board, and it is therefore unnecessary for me to outline the details of the said plan.

After having carefully weighed the recommendations of the committee, I feel that for the most part they have been carefully made, and I would recommend that, with some exceptions, steps be taken to acquire the property described in the report.

It is my judgment that some of the properties are undesirable for park purposes and should not be acquired, notably, in the Fourth Ward parcels described as New Dorp Beach Park, Great Kills Park and Gifford's Park, and I would therefore recommend that those plots should be excluded from consideration.

The proposed Christopher Billop Park in the Fifth Ward should be enlarged by the addition of the plot of ground practically bounded on the north side by the Amboy road, easterly by Bentley or Sixth street, southerly by the Lower Bay of New York and westerly by the Arthur Kill or Staten Island Sound. This park is the magnificent site along the Arthur Kill, on high ground and affording a fine view of the Lower Bay and ocean and also a fine bathing beach. Within its boundaries is located the historic Billop house and grounds and with the proposed addition, it embraces the whole of the southern end of the island, which is the southernmost point of the State of New York. So well is it adapted for park purposes that several efforts have been made in the Legislature to authorize its purchase for a State park. The plot recommended by the committee, with the addition described, seems to be particularly appropriate for park uses.

In making the recommendations for the purchase of these lands, it is not designed that the properties should be immediately improved as parks, but that they should be held as reservations, for future development. Mr. Lewis, in his report,

has set forth the percentage of acreage devoted to park purposes in the various boroughs and it will be seen at a glance that in all of the boroughs of the City far better provision has been made for park development than in the Borough of Richmond. If the considerable areas recommended for acquisition are taken, no larger percentage of acreage will be devoted to park purposes in the Borough of Richmond than obtains in the Borough of The Bronx or the Borough of Manhattan.

In the consideration of this subject the history of park development in this City may well be brought to your attention. Nothing of importance has been accomplished, except in those cases where the future needs of the City have been the chief consideration, and this has led to action being taken.

The lands for the Central Park and Riverside Park were acquired long before the development of the city in their immediate vicinity showed any need for parks at these points. The park areas of The Bronx were acquired at a cost of over \$9,000,000, at a time when that borough was practically an open country. Although criticism was made at the time that the needs of the City did not warrant the purchase of those parks, I think it may now be stated that it is the universal opinion that no funds of the City were ever invested for more useful purposes than the sums expended for the purchase of the lands now included in the Central, Riverside and Bronx parks.

In recommending the purchase of these lands in Staten Island the same considerations are involved that were in the purchase of the tracts in the Borough of The Bronx and not only will these reservations be ultimately needed for the health and comfort of the residents of the Borough of Richmond, but if they are purchased they will afford health and recreation to the people of the other parts of our City, pending their actual development as parks.

Although The City of New York is the greatest maritime city of the Western Hemisphere, the fact remains that we have no great seaside park where the masses of our people can go for bathing and recreation. Among the tracts suggested in the recommendations before you, provision is made for the establishment of a large seaside park directly south of Fort Wadsworth and it is believed that with an adequate ferry service to Staten Island, which will soon be afforded, the establishment of a seaside park would be a boon, not only to the inhabitants of Staten Island, but to a large portion of the population of the Borough of Manhattan as well. At the present time the park spaces of Manhattan are not sufficient in extent to permit of their being thrown open to those who wish to enjoy baseball, football, cricket, golf and other sports. The crowded condition of our largest park is well known. If these reservations in Staten Island are obtained it will then be possible to throw open hundreds of acres to the pupils of our public schools and others who may there find upon City property an opportunity for the enjoyment of field sports.

It is not possible for me in this report to place before your Honorable Board the valuation of the property in the Borough of Richmond proposed to be acquired,

but I am informed by those in whose judgment I have confidence that the lands embraced in the recommendation will not in price average more than five hundred dollars per acre. As it is proposed to take less than four thousand acres, the cost to the City would be less than two million dollars. While this is a comparatively large sum, it is a very small one when we consider the great benefits to be derived from the purchase.

It is proper to point out at this time that had the question of acquiring lands for parks been placed before the people and given proper consideration by the City authorities years ago, it would not have been necessary to purchase the very small tracts in the congested parts of the city where it is now believed open spaces are necessary for the health and morals of the people. The single example of William H. Seward Park may be quoted. The lands for this park, situated at East Broadway and Canal street, only about three acres in extent, were acquired at a cost of over two million dollars and yet, even at this large cost, no one doubts the wisdom of the purchase or questions the benefits that have already been derived and will accrue to the neighborhood where this park is situated.

It is now possible with an expenditure of even less than two million dollars to acquire a park system of about four thousand acres in the Borough of Richmond, which borough is the best adapted for park developments of any of the boroughs of Greater New York.

Many of the plots recommended for purchase will make the finest sites for public parks along the entire coast. The high ridge of hills through the centre and north part of the island afford opportunities for the ultimate construction of the finest park in the whole city. Some of this land is the highest along the shore, and the landscape is of the varied and beautiful character which, at some future time, will afford an opportunity for improvement from which benefits will be derived that can hardly be indicated at this time.

In closing I would urge that your Honorable Board give this matter your early consideration, and I would respectfully ask that a public hearing be afforded at an early date."

On December 22, 1903, a public hearing was given by the Board of Estimate and Apportionment, and I was invited to attend and to make an argument as to the desirability of acquiring properties in Staten Island for park purposes.

I appeared before the Board on the date mentioned and expressed my belief that lands should be acquired for future development as set forth in my report upon the subject above quoted.

The Mary Lindley Murray Memorial.

On Evacuation Day, 1903 (November 25), a bronze tablet was unveiled in the small park at Thirty-seventh street and Park avenue, bearing the following inscription:

"In honor of Mary Lindley Murray, wife of Robert Murray, for services rendered her country during the American Revolution, entertaining at her home, on this site, General Howe and his officers until the American troops under General Putnam escaped. September 15, 1776. November 25, 1903.

Erected by Knickerbocker Chapter, New York City, Daughters of the American Revolution."

After the disastrous battle of Long Island, August 27, 1776, General Washington and the American troops retreated to New York. General Putnam was in command of the lower portion of the city when, on September 15, two divisions, one British and the other Hessian, crossed the river. General Putnam's troops were in a very dangerous position and had the English forces moved quickly he would have probably been taken. At the point marked by the memorial, however, General Howe and his officers called at the residence of Mary Lindley Murray, mother of the grammarian, Lindley Murray, who, for the express purpose of permitting General Putnam's forces to escape, entertained the English officers.

The memorial was unveiled with appropriate ceremonies, representatives of the patriotic societies and the City government taking part.

The Ericsson Statue.

A statue of John Ericsson, modeled by Jonathan Scott Hartley, stood in Battery Park from the date of its unveiling in 1893 until the present year. It had not been satisfactory to either the Swedish residents of the city or to its sculptor, and an arrangement was therefore made to recast it and an application was made to the Department for a better site.

A new statue was designed by Mr. Hartley, who defrayed the expense of casting the same. A new site was selected in Battery Park, more suitable for the memorial, and approved by the Art Commission, and on Saturday, August 1, it was unveiled with appropriate ceremonies in the presence of the Mayor, representatives of the United States Army and Navy, the State National Guard and many thousands of spectators.

In connection with these ceremonies a parade was held in which about six thousand persons participated. It was the intention to unveil the new memorial on the one hundredth anniversary of the birth of Ericsson, July 31, but the ceremonies were postponed until the day following, in order that the attendance of the Swedish citizens might be as large as possible. Some sixty Swedish-American organizations took part in the parade.

Fraunces' Tavern.

Proceedings were begun in the fall for the acquisition by the City for park purposes of the building at the corner of Pearl and Broad streets, known as Fraunces'

Tavern. This structure was erected in 1730, is one of the oldest buildings in the City, and it is closely identified with the Revolutionary War. In Colonial times many important meetings took place in its rooms, and on Evacuation Day, 1783, General Washington established his headquarters there. He also took leave of the *officers of the army in this building*. A tablet erected on the Broad street side of the structure bears the following inscription:

"Fraunces' Tavern.

To this building General George Washington came Evacuation Day, November 25, 1783, and on Thursday, December 4, following, here took leave of the principal officers of the army yet in service.

Erected by the Sons of the Revolution."

It was earnestly hoped that Fraunces' Tavern might be purchased at private sale, in order that this historic property and the Morris (Jumel) property might be acquired under your administration. Communications to this end, however, proved unsuccessful and steps have been taken to acquire the first named building through condemnation proceedings.

The Central Park Obelisk.

The first suggestion that the obelisk might be moved from Egypt to the United States was made by His Highness, Ismail, Khedive of Egypt, at the time of the opening of the Suez Canal in 1869. In 1877, after the removal of the prostrate obelisk from Alexandria to London, it was learned that the standing obelisk could be secured for the United States if the cost of its removal could be defrayed. Mr. William H. Vanderbilt guaranteed the payment of the necessary sum, and Mr. Henry G. Stebbins, then Commissioner of Parks, New York City, requested Mr. Evarts to begin negotiations with the Khedive.

The question of transportation was one of great magnitude and presented great engineering difficulties. The Paris and London obelisks were transported in vessels built expressly for the purpose, but in neither case was the problem presented equal to that of bringing the obelisk to America. In former instances it was not necessary for the vessels to go out of sight of land, nor to get beyond easy reach of safe harbors yet both voyages were made under the greatest difficulties, showing that the vessel in which the New York obelisk was to be transported must be able to withstand all weather conditions and have her own motive power. Such a vessel could not have been built around the obelisk, the size of which was as embarrassing as its weight, for much less than the whole amount that was to be spent for its removal.

The pedestal was embarked and disembarked by the usual means but the shaft was placed in the vessel while its bow was out of water through an aperture made for the purpose and closed for the voyage. Before being placed in the vessel the shaft was

encased in timbers and was turned from its pedestal by means of a pair of trunnions clasped at its centre of gravity, each weighing 12,570 pounds. After being turned, it was lowered by means of hydraulic pumps and was rested upon two tiers of timbers, the layers of which were removed alternately.

The work of removing the obelisk was begun August 4, 1879. The French had waited about twenty-five years before attempting the removal of the obelisk presented to them and the English nearly seventy-five years and this had caused a feeling in Egypt that the Americans would require a century to accomplish the same. Although it was well known that it had been presented to the United States, it was not believed that the obelisk would ever be removed. When Lieutenant-Commander Henry H. Gorringer of the United States Navy and his assistant, Lieutenant Seaton Schroeder, arrived the people were much surprised and an agitation ensued to prevent the work from going on. Abusive articles were published in the Egyptian papers, public meetings were held and petitions sent to the Khedive and only after vexatious delays and much negotiation, were the operations permitted.

The general subsidence of the land in this part of North Africa had permitted the sea to approach to within about eighty feet from the base of the obelisk. The constant washing of the surf had begun to affect the foundation and for fifteen years the shaft had been gradually inclining seaward and in a few years it must have fallen and been broken by the fall.

The vessel "Dessoug," an iron steamer built in England in 1864, purchased from the Egyptian Government for the transportation to New York, was placed in dry dock where about seven thousand rivets, sixteen frames and thirty plates were removed from the starboard bow. The caisson supporting the obelisk was then placed in the dock and hydraulic pumps were used to force the stone into the hold. To obviate all risk of breaking the stone by the working of the ship, it was placed upon a bed of soft Adriatic white pine. The "Dessoug" sailed on June 12, 1881, but owing to defective boilers and machinery did not reach New York until July 20 of that year.

After considerable discussion, the site in Central Park, near the Metropolitan Museum of Art Building, known as "Graywacke Knoll," was chosen. The Circle at Eighth avenue and Fifty-ninth street was urged, as was the Plaza at Fifty-ninth street and Fifth avenue, but it was decided that the tall buildings that would be erected at those points in the future would make those sites undesirable.

The Central Park site was approved by the Park Board on May 5, 1879, and the "Dessoug" was brought to the dock at Fifty-first street and North river. The pedestal was moved from there on a truck built for the purpose, and drawn by 32 horses, to Fifth avenue and Eighty-second street, from which point it was carried on greased skids. After the necessary excavation at the site had been made, the foundation was replaced exactly as it stood in Alexandria, each piece in the same relative position to the others and to the points of the compass. The cornerstone was laid with an elaborate ceremony, 9,000 Freemasons taking part in the parade and exercises.

The "Dessoug" was then taken to Staten Island, where the shaft was placed upon pontoons, which were towed to the dock at the foot of West Ninety-sixth street. It was moved across the railroad tracks on heavy timbers and then through Ninety-sixth street to the Boulevard, southward to Eighty-sixth street, eastward to Eighth avenue and across the Eighty-sixth street transverse road, Central Park, to Fifth avenue, southward to the entrance near the Metropolitan Museum of Art Building and thence westward to its present site. The stone was hauled by means of a pile-driver engine used in connection with a cradle, rollers and track of the character employed for marine railways. The shaft was transported from Fifth avenue to the knoll on a trestle, reaching its destination January 5, 1881. It had travelled 10,905 feet, taking 112 days, or at the rate of about 97 feet a day. It was turned to an upright position by means of the trunnions and hydraulic pumps used in Egypt on January 22, 1881, with appropriate ceremonies, the National Government, City Government, Army and Navy officials and the Masonic societies taking part.

The total cost of removing the obelisk was \$103,732. It is of fine syenite of the Assouan quarries. It was formerly the companion of the obelisk now standing on the Thames Embankment, London. The pair were erected originally by Thothmes III. about 1590 B. C., before the famous Temple of the Sun, at Heliopolis. The total height of the Central Park obelisk is 71 feet, its thickness at base 8 feet 8 inches, and its weight 448,000 pounds.

"Cleopatra's Needle," as the Central Park obelisk is frequently termed, was taken to Alexandria previous to or during the reign of Tiberius, A. D., 14-37, and was placed with its companion, now in London, on the shore of the sea in front of the Temple of Caesar. Why it bears the name "Cleopatra's Needle" is not known. Cleopatra died about sixty years before the completion of this temple but it may have been commenced by her.

New Parks Acquired Since January, 1895.

Name of Park.	Acres.	Cost of Land.	Proceed- ings Begun.	Opened for Public Use.	Appropriations for Improvement.	
					Date.	Amount.
Hamilton Fish.....	3.673	\$1,719,455 00	1896	1899	1897	\$162,500 00
					1899	17,000 00
					1900	*8,500 00
William H. Seward.....	2.651	1,811,127 00	1897	1903	1901	136,371 00
					1903	†8,799 00
a DeWitt Clinton.....	7.377	1,272,385 00	1898	1903	1902	50,000 00

* Other funds from appropriation "Parks, Parkways and Drives"; total fund, \$205,272.

† Other funds from appropriation "Parks, Parkways and Drives"; total fund, \$145,171.

a Opened for temporary use, 1902.

Name of Park.	Acres.	Cost of Land.	Proceed- ings Begun	Opened for Public Use	Appropriations for Improvements	
					Date.	Amount.
Hudson	1.700	\$533,765 00	1891	1898	1897	\$85,000 00
					1900	15,000 00
a Thomas Jefferson.....	15.409	2,748,122 00	1894	1902	1900	33,055 00
					1901	7,942 00
					1903	221,957 00
					1903	3,750 00
Mulberry Bend.....	2.750	1,522,055 00	1891	1897	1896	100,000 00
Harlem Lane.....	1.270	180,000 00	1892	1897	1897	21,000 00
b Colonial	12.790	1,743,017 00	1894	....	....	.....
Fort Washington.....	40.810	904,268 00	1894	1896	....	.....
c St. Nicholas.....	22.817	1,199,090 00	1894	1903	....	.....
c John Jay.....	3.004	338,544 00	1896	1903	....	.....
First Avenue and Thirty-fifth Street	2.947	1,034,711 00	1901	....	....	.....
d Seventeenth Street and East River	1.037	.....	....	1903	....	.....
e Fort George .....	.....	.....	....	....	....	.....
f Schuyler Square.....	.072	32,500 00	....	1894	....	.....
Additions to—						
High Bridge.....	.....	1,194,542 00	1895	....	....	.....
Riverside .....	.....	486,291 00	1894	....	....	.....
Mulberry Bend.....	.0187	184,724 00	1891	....	....	.....
Morningside .....	.074	47,000 00	....	....	....	.....

b In hands of Department of Finance, 1903.

c Temporary use, 1903.

d Transferred from Department of Docks, 1903.

e Proceedings not completed.

f Transferred from Department of Highways.

Expenditures on Construction Accounts, 1903.

Riverside Park and Drive, Completion of Construction—

Grading and construction, drainage and walks.....	\$862 88
Construction of viaduct over West Ninety-sixth street.....	6,830 42
Improvement between Ninety-sixth and One Hundred and Twenty-fourth streets.....	1,192 25

Improvement Parks, Parkways and Drives—

Constructing and improving small park north of One Hundred and Fifty-third street, between Seventh avenue and Macomb's Dam road, etc.....	21 32
St. John's Park, construction of—Hudson Park.....	49 75

Improvement Parks, Parkways and Drives—

Jefferson Park, improvement of.....	29 51
East River Park, improvement of extension.....	401 72
Laying asphalt walks, leveling playgrounds, etc., East River Park.....	57 67
Constructing new walks around Arsenal Building, repairing and constructing other walks in Central Park.....	57 22
Asphalting in other localities in Central Park.....	172 42
Improving principal entrance Central Park, Fifty-ninth street and Fifth avenue.....	84 01
New York Public Library Fund.....	319,043 78
Foundation, etc., Bartholdi statues of Washington and Lafayette.....	12 14
Hester Street Park Fund—William H. Seward Park.....	85,196 70
Repairing with asphalt Eighty-sixth street, from Central Park, West, to Riverside drive.....	11,732 16
Washington Park, in the Town of Stapleton, and the small park in Port Richmond, improvement of.....	1,378 98
Widening roadway of Fifty-ninth street, between Fifth and Eighth avenues, etc.....	1,760 46
Improvement of parks, parkways and drives, Boroughs of Manhattan and Richmond.....	656,469 67
Constructing improved toilet facilities in City parks, and rebuilding Bank Rock Bridge, Central Park, etc.....	16,310 80
Aquarium Building, Battery Park, improvement of.....	633 65
Cathedral Parkway, improvement and completion of.....	529 10
Mulberry Bend Park, construction of.....	42 00
Rents, licenses, etc., 1903.....	46,072 34

Statement of Balances of Appropriations, December 31, 1903.

Titles of Appropriations.	Amount of Appropriations.	Payments.	Amount of Unexpended Balances.
Salaries of Commissioners, Secretary and Employees of the Board of Parks.....	\$29,300 00	\$29,300 00	.....
Boroughs of Manhattan and Richmond.			
Administration.....	32,790 00	32,443 17	\$346 83
Labor, Maintenance and Supplies.....	437,017 50	.....	.....
Supplies.....	.....	85,423 00	.....
Payrolls.....	.....	351,429 32	165 18
Zoological Department.....	30,500 00	.....	.....
Supplies.....	.....	13,751 95	.....
Payrolls.....	.....	16,676 22	71 83

Titles of Appropriations.	Amount of Appropriations.	Payments.	Amount of Unexpended Balances.
Maintenance of Museums—			
American Museum of Natural History.....	\$160,000 00	\$160,000 00	.....
Metropolitan Museum of Art.....	150,000 00	150,000 00	.....
Music	26,575 00	26,489 50	\$85 50
Contingencies	2,500 00	2,500 00	.....
Surveys, Maps and Plans.....	2,000 00	2,000 00	.....
Aquarium	40,000 00	40,000 00	.....
Ambulance Service, Central Park.....	1,200 00	1,200 00	.....
Care of Grant's Tomb.....	5,000 00	.....	5,000 00
Harlem River Driveway.....	18,600 00	16,313 11	1,686 89
Maintenance of Playgrounds, Kindergartens, etc., in the Parks	20,000 00	15,537 37	4,462 63

New York City Public Parks and Parkways.

BOROUGH OF MANHATTAN.

Improved Parks with Names.

Name.	Location.	Area in Acres.
Abingdon Square	Eighth avenue and Hudson street.....	0.202
Battery Park	Foot of Broadway.....	21.199
Beach Street Park.....	Beach street and West Broadway.....	0.038
Bowling Green	Broadway and Whitehall street.....	0.517
Bryant Park	Sixth avenue and Forty-second street.....	4.775
Canal Street Park.....	Canal and West streets.....	0.318
Central Park	Fifth to Eighth avenue, Fifty-ninth to One Hundred and Tenth streets.....	843.019
Christopher Street Park.....	Christopher and West Fourth streets.....	0.139
City Hall Park.....	Broadway and Chambers street.....	8.239
Cooper Park	Third avenue and Seventh street.....	0.229
Corlears Hook Park.....	Corlears and South streets.....	8.300
Duane Street Park.....	Duane and Hudson streets.....	0.108
East River Park.....	Eighty-fourth to Eighty-ninth streets, East river.	12.546
Empire Park, south.....	Broadway and Sixty-third street.....	0.344
Empire Park, north.....	Broadway and Sixty-sixth street.....	0.069
Grand Street Park.....	Grand street and East Broadway.....	0.630
Greeley Square	Sixth avenue and Thirty-second street.....	0.144
Hamilton Fish Park.....	Houston and Willett streets.....	3 673
Hancock Square	St. Nicholas avenue and One Hundred and Twenty-third street	0.072

Name.	Location.	Area in Acres.
Harlem Lane Park.....	Seventh avenue and One Hundred and Fifty-third street	1.270
Hudson Park	Hudson and Leroy streets.....	1.700
Jackson Square	Eighth avenue and Horatio street.....	0.227
Jeannette Park	Coenties slip and South street.....	0.728
Madison Square	Broadway and Twenty-third street.....	6.840
Manhattan Square	Central Park West, Seventy-seventh to Eighty-first street	17.582
Morningside Park	One Hundred and Tenth to One Hundred and Twenty-third streets, between Columbus and Amsterdam avenues	31.238
Mount Morris Park.....	Mt. Morris to Madison avenue, One Hundred and Twentieth to One Hundred and Twenty-fourth street	20.174
Mulberry Bend Park.....	Mulberry and Bayard streets.....	2.750
Paradise Park	Mission place and Worth street.....	0.114
Park Avenue Parks.....	Park avenue, Thirty-fourth to Fortieth street, and Fifty-sixth to Ninety-sixth street.....	8.118
Riverside Park	North river, Seventy-second to One Hundred and Twenty-ninth street.....	140.037
Riverside Park Extension.....	N. Y. C. and H. R. R. to bulkhead line of Hudson river, Seventy-second to One Hundred and Twenty-ninth street	48.215
Rutgers Park	Rutgers slip and South street.....	0.478
Ryan Park	Second avenue and Forty-second street.....	0.180
Sherman Square	Broadway and Seventieth street.....	0.001
Stuyvesant Park	Rutherford place and Sixteenth street.....	4.229
Tompkins Square	Avenue A and Seventh street.....	10.508
Union Square	Broadway and Fourteenth street.....	3.483
Washington Square	Fifth avenue and Waverly place.....	8.115
William H. Seward Park.....	Canal and Jefferson streets.....	3.315
Total		1,213.863

Unimproved Parks with Names.

Name.	Location.	Area in Acres.
Colonial Park	One Hundred and Forty-fifth to One Hundred and Fifty-fifth street, Bradhurst avenue to Edgcombe avenue	12.790
DeWitt Clinton Park.....	Fifty-second to Fifty-fourth street, North river..	7.377
Fort Washington Park.....	Fort Washington Point, Hudson river.....	40.810
Thomas Jefferson Park.....	One Hundred and Eleventh street, First avenue, One Hundred and Fourteenth street and Harlem river	15.529
Highbridge Park	One Hundred and Fifty-fifth street to Washington Bridge, west of driveway.....	64.343
St. Nicholas Park.....	One Hundred and Thirtieth to One Hundred and Forty-first street, St. Nicholas to Tenth avenue	26.604
	Total	167.453

Improved Unnamed Parks.

Location.	Area in Acres.
Park bounded by Seventh and Eighteenth streets, Avenue C and East river.....	1.037
Triangle at Broadway and Seventy-third street.....	0.095
Triangle at Manhattan avenue and One Hundred and Fourteenth street.....	0.018
Triangle at Seventh avenue and One Hundred and Seventeenth street.....	0.074
Triangle at Sixth avenue and Thirty-fifth street.....	0.042
Total	1.266

Unimproved Unnamed Parks.

Location.	Area in Acres.
Park bounded by Thirty-fifth street, Thirty-sixth street, First and Second avenues.....	2.947
Triangle at Broadway and One Hundred and Sixth street.....	0.072
Triangle at St. Nicholas avenue and One Hundred and Thirty-seventh street.....	0.038
Triangle at St. Nicholas avenue and One Hundred and Fiftieth street.....	0.024
Addition to Riverside Park, One Hundred and Twenty-second street to Claremont place, Riverside avenue to Claremont avenue.....	2.064
Extension of Highbridge Park, One Hundred and Fifty-fifth to One Hundred and Fifty-ninth street, east of Speedway.....	2.511
West of Harlem River driveway and north of Washington Bridge.....	22.817
Corner of Worth and Baxter streets.....	0.187
Total	30.660

Parks in Process of Condemnation.

Name.	Location.	Area in Acres.
John Jay Park.....	Seventy-sixth to Seventy-eighth street, East river	3.004

Parkways, Streets, Avenues, Etc., Under the Jurisdiction of the Department of Parks.

Location.	Length, Feet.	Width, Feet.
Cathedral parkway (One Hundred and Tenth street, west of Seventh avenue).	4,061	100 to 126
Circle at Eighth avenue and Fifty-ninth street.....	.....	.....
Eighty-sixth street, west of Central Park West.....	3,435	100
Fifth avenue, Fifty-ninth to One Hundred and Tenth street.....	13,661	100
Harlem River driveway	11,562	100 to 150
Morningside avenue, west	3,538	90
Ninety-sixth street, west of West End avenue.....	802	100
One Hundred and Tenth street, Fifth to Seventh avenue.....	2,045	100
One Hundred and Twenty-second street, west of Tenth avenue.....	1,450	80
One Hundred and Twenty-third street, west of Morningside Park.....	819	60
Plaza at Fifty-ninth street and Fifth avenue.....	.....	.....
Plaza at One Hundred and Tenth street and Fifth avenue.....	.....	.....
Plaza at One Hundred and Tenth street and Eighth avenue.....	.....	.....
Riverside drive	17,000	90 to 168
Seventy-second street, west of Central Park West.....	3,025	100
Total	61,398	.....

BOROUGH OF RICHMOND.

Name.	Location.	Area in Acres.
	Improved Park, with Name.	
Washington Square	Bay, Water and Canal streets, Stapleton.....	1.46
	Improved Unnamed Park.	
.....	Broadway, Bennett street, Herberton avenue and Vreeland street, Port Richmond.....	1.28
Total		2.74

Recapitulation of Park Areas.

	Acres.
Borough of Manhattan.....	1,416.246
Borough of Richmond.....	2.740
Borough of Brooklyn.....	1,026.875
Borough of Queens.....	550.843
Borough of The Bronx.....	3,866.500

Recapitulation of Parkways, Streets, Avenues, etc.

	Length, Feet.
Borough of Manhattan.....	61,398
Borough of Richmond.....	.....
Borough of Brooklyn and Borough of Queens.....	226,952
Borough of The Bronx.....	33,211
Total.....	321,561

List of Statuary, Monuments, Etc., in the Public Parks, Borough of Manhattan.

Central Park—Bolivar (equestrian), Schiller (bust), Beethoven (bust), Eagles, The (group), Daniel Webster (standing figure), Indian Hunter (group), Columbus (standing figure), Shakespeare (standing figure), Robert Burns (sitting figure), Walter Scott (sitting figure), Fitz Greene Halleck (sitting figure), Humboldt (bust), Thorwaldsen (standing figure), Commerce, Seventh Regiment Memorial (standing figure), Mazzini (bust), Morse (standing figure), The Pilgrim (standing figure), Still Hunt (group), Falconer (standing figure), Tigress, Moore (bust), Hamilton (standing figure), The Alexandrian Obelisk, Richard Morris Hunt (exedra), Shepard Fountain, General W. T. Sherman (equestrian).

Riverside Park—Washington (near Eighty-ninth street), Soldiers' and Sailors' Memorial Monument (Ninety-second street), Tomb of General U. S. Grant (One Hundred and Twenty-fourth street).

Madison Square Park—Chester A. Arthur, Admiral Farragut, Roscoe Conkling, William H. Seward.

Washington Square Park—Washington Arch, Garibaldi, Alexander L. Holly.

Bryant Park—Dr. J. Marion Sims, Washington Irving.

Union Square Park—Lafayette, Washington, Lincoln, D. Willis James Fountain.

City Hall Park—Nathan Hale.

Morningside Park—Washington-Lafayette.
 Hancock Square—General Winfield Scott Hancock.
 Greeley Square—Horace Greeley.
 Cooper Park—Peter Cooper.
 Battery Park—Ericsson.
 Broadway and Thirty-fifth Street—William Earl Dodge.
 Printing House Square—Franklin.
 Broadway and Twenty-fifth Street—Worth Monument.
 Bowling Green Park—Abraham DePeyster.
 Park Avenue—Murray Memorial.

The Commissioner's Report of the Work of the Department of Parks for the
 Borough of The Bronx for the Year 1903.

Hon. SETH LOW, Mayor of The City of New York:

Dear Sir—In compliance with the provisions of the Charter, I send you herewith the report of the work undertaken and accomplished in this Department for the year closing December 31, 1903.

I have the honor to remain,

Very respectfully yours,

JOHN E. EUSTIS,

Commissioner of Parks, Borough of The Bronx.

The work of the Department was in full progress on the first of January, 1903, and proceeded during all the workable weather of the year, so that much greater progress was made in 1903 than in 1902, from the fact that no time was lost in the beginning of the year.

So much delay was experienced in getting the work finished during the year 1902, that was being done by contract, that the Department resolved to do all of the work it was possible to do with the Park Laborers themselves, in order that the work might be expedited and finished, and I wish in this report to emphasize the fact that the result has been marvelous. That the only contract which was under way in 1902 was the development of Crotona Parkway, and when the contractor had about one-quarter of the work finished he had used up more than all of his contract time, and he then abandoned the work. We were obliged to prepare new specifications and readvertise the contract, and it was near the end of the present year before the contract for finishing this work was started; when, if the work had been started by the Department itself, and the necessary plant could have been obtained, it would have been finished long before the end of the year 1903. In several instances the work undertaken by the Department has been better done, and has been finished

by the time it could have been started if done under contract, on account of the delay in getting contracts executed, preparing specifications, etc.

In order to systematically outline the work that has been done, we will take it up park by park. Beginning with the westerly side of the borough, the first park property is:

Spuyten Duyvil Parkway.

Length, 11,500 feet; width, from 60 to 180 feet.

This has been maintained in its regular condition; roadbed resurfaced with trap-rock screenings over its entire length; portions of the slopes near the western end have been graded; and the drainage system of that portion at the Big Loop has been overhauled and improved, and the driveway has been maintained during the whole year in good shape.

Sixteen trees and 881 shrubs have been planted along this drive during the year.

Van Cortlandt Park.

Area, 1,132.35 acres.

The good work started in this park during the year 1902 developed the necessity of a great deal more, and showed how much could be made of this section, if proper attention were given to it; and the improvements carried on during the year have been radical and far eclipse those of the year 1902.

A new and splendid driveway has been constructed from Mosholu avenue to Van Cortlandt Park avenue, in the City of Yonkers, a distance of 4,950 feet. This driveway has been named Rockwood drive, on account of the splendid rock and wood views on every hand for its entire length. It has a width of 30 feet, 25 feet of which is paved with telford macadam pavement, and as it winds and turns through the forest and rocks the eye has a pleasing variety and change of view every moment. The construction of this driveway necessitated the excavation of 4,000 cubic yards of rock, 12,000 cubic yards of earth, and of the laying of 13,750 square yards of telford macadam pavement, all of which was done by the Park Department employees. The forest lands on each side of this road for its entire length were underbrushed and cleaned up, in order to give the trees a better chance for development. Had this work been done by contract, in the usual way, it would have occupied at least two years. It was accomplished in less than six months by the Department doing it with its own men and under its own superintendence. The work was far better done than it would have been done by a contractor; and had it not been for the delay in obtaining from the contractor trap-rock and trap-rock screenings for the surfacing of this road it would have been finished a month or two earlier than it was. On account of the delay in getting the trap-rock the road was not completed and opened to the public until the end of the year.

A driveway 4,615 feet long and 30 feet wide has been laid out and constructed from Van Cortlandt Station along the easterly boundary of the Parade Ground, and through that portion of the Park known as Vault Hill and the Deer Paddock, up to Mosholu avenue, at the junction where the Rockwood drive begins. This drive has opened to the public a portion of this park that for many years has been absolutely shut off, on account of the same being used for a herd of deer. These deer have been transferred to the Zoological Park, where all the other animals are, so that, when people come to the park to visit the animal collection, they will find them all together. This is one of the finest sections of Van Cortlandt Park. Vault Hill has a commanding view in every direction, and, now that the road has been constructed so that the public are able to enter this portion, this hill will be dotted with visitors during the entire summer season, on account of the high altitude and commanding view therefrom. It also makes a more direct route from the city to Yonkers for carriage driving for people who wish to avoid the cars on Broadway. This road is known as "Vault Hill Drive."

The border of the Parade Ground, between this drive and the railroad, has been heavily planted with trees and shrubs for a distance of 1,800 feet in length and 50 feet in width. The soil in this section was a pure white sand, which required the digging of large holes for all the trees and shrubs, and the carting of top-soil to fill the same, in order to insure success in their development. This top-soil was largely brought from the excavation taken from the lake. The balance of the bank between the shrubs and trees was covered from three to six inches with mould and manure, requiring 2,500 cubic yards, all of which was secured from park property.

The Colonial Garden, which was well under way in the year 1902, was pushed with great vigor during the first half of 1903, with such success that, by the first of June, the garden was opened, and that section lying within the Moat and the banks to the east and north was fully completed and planted, leaving only the flat and slope to the west to be finished, which was done during the summer and fall. The work done in connection with the completion of the Garden in 1903 required the laying of about 1,100 cubic yards of rubble wall, 40 cubic yards of concrete, 3,000 cubic yards of excavation, 6,500 cubic yards of filling, 4,000 cubic yards of top-soil and the laying of 3,936 square yards of walks with rubble foundations, and a surface of trap-rock screenings; the construction of three rustic bridges and three flights of rustic steps with hand-rails; the seeding and sodding of two acres of in-lying courts; the construction of a handsome fountain and central court, and the laying of 1,300 feet of water pipe from one to six inches in diameter, and about 3,500 feet of drain pipe.

The development of the Colonial Garden, outside the Moat, required the excavation of 2,100 cubic yards of earth, 3,500 cubic yards of fill, and 360 square yards of telford walk to be constructed, all of which was done during the year.

The planting of the garden required the grading and seeding of 5 acres; 12,000 feet of sod was cut and laid; 35,000 boxwood edging plants were used; 24,000 herbaceous plants; 1,400 shrubs; 66 specimen trees, and 36 water lilies were planted; 20,000 crocus, 9,000 narcissus, 9,000 tulips, and 900 hardy lilies were planted in the autumn for spring blooming.

Three polo fields were kept in perfect order during the whole season for polo players. Fifty tons of bone fertilizer was purchased and used on the polo fields and golf links in the early spring.

Five thousand four hundred and thirty bedding plants were planted in beds in Van Cortlandt Park.

Van Cortlandt lake, which has been a matter of great thought in the past, in regard to its unsanitary condition during the summer season, was tackled, the dam torn away, and the water drawn out, and a large part of the semi-bog known as Van Cortlandt lake has been thoroughly renovated and cleaned. This lake has not been cleaned, probably, before since the dam was built, 150 years ago. There was about on an average of 2 or 3 feet of ooze and slime on the bottom, on a clay foundation. About 30,000 cubic yards of this deposit, which in the summer was filled with vegetation, has been removed. A substantial stone retaining wall has been built from the railroad bridge, along the easterly shore to a point near the upper end of the lake, a distance of 2,270 feet, requiring for its construction about 1,000 cubic yards of dry masonry.

The low, marshy shores of the lake, from the Skate House along the golf links to the northerly end of the lake, have been filled in and reclaimed, and now it is good park land to the water's edge. The cleaning of the lake necessitated the removal of the old dam. A new dam and spillway has been built, with a 24-inch cast-iron discharge pipe with valve, so that hereafter when it is necessary to make future cleaning or repairs to this lake the water can be drawn off without interfering in any way with the dam.

In the construction of the shore wall around the lake a large quantity of old and unsightly stone walls have been removed from the park, improving greatly the appearance of park land in other sections.

New drains have been laid in connection with the grading of the lake banks, and all sections are thoroughly drained.

The Link View road, built in 1902, has been extended at the northeasterly end, to connect with a new macadam road, built by the Valley Farms people, to the northerly end of the park.

Croton water pipes have been laid on one of the polo fields on the Parade Ground, and connected with the main in Broadway, so that, during a dry season, it will be possible to keep this field in a good condition for playing. Croton water has also been introduced into the Disbrow Mansion and stables.

Plans have been prepared and approved for reclaiming and improving the marsh lands to the south of the Colonial Garden.

We have succeeded during the year in getting the New York Central and Hudson River Railroad Company to prepare plans for building a new station at Van Cortlandt Park, farther north than the present station, and providing for an undergrade crossing on Van Cortlandt avenue. They have also prepared plans for the undergrade crossing on the new road at the east side of the Parade Ground. Before these improvements can be made additional legislation is necessary.

A new shelter house and refreshment stand was constructed near the foot of Gun Hill road, which has been greatly appreciated by the golf players.

About 25 acres of land in the northeasterly section of Van Cortlandt Park has been set aside as a nursery. About 10 acres of this has been cleared of boulders, sumac, briars, etc., and the same partly plowed and cultivated, and a nursery started, about five acres being now planted.

Four hundred and forty-three pin oaks, three hundred and thirty-four liquid-amber, one thousand two hundred and fifty American elms have been collected from the woods in the parks and planted in the nursery. This is a new innovation in the park work of the City. It is more economical and far more satisfactory to raise our own trees; and if the system now started is carried out it will be but a few years before the nursery in The Bronx will suffice not only to supply all the trees and shrubs that are necessary for the parks of The Bronx, but could also supply the parks of the other boroughs of the City.

During the present year we have expended for trees and shrubs \$12,922.42.

Arrangements have been made during the year to receive from the contractors who are excavating Jerome Park Reservoir about one million yards of their surplus material along the westerly line of the old Croton Aqueduct. This will not only furnish and grade this westerly slope so that it can be beautifully terraced and planted, but it will enable the Department to lay out a fine drive on the top of the hill along the line of the Croton Aqueduct, between Mosholu avenue and Gun Hill road.

Plans have been prepared for the regulating and grading of Gun Hill road, from the top of Gun Hill to its junction with Grand avenue, increasing its width to 40 feet, and taking out a great deal of the stiffness of the hill, this being the steepest grade in any of the park drives or roads. The change will reduce it from 12 per cent. to about 7 per cent. grade. The material necessary for the grading and telfording of this road will all be supplied free of cost to the City from the reservoir excavation.

The reassignment of lockers to the Golf House during the past year has worked with marvelous success. The lockers have been occupied by two or three players each, and they have brought in to the City an income (which has gone into the Sinking Fund) almost as large as the cost of maintaining the house during the season.

We have also constructed 24 new lockers, at a cost of \$6 apiece, and the return from these has been \$5 each for the first year.

In order to meet the growing demand of the popular golf course in this park the New York Golf Club, aggregating from 300 to 400 members, has prepared plans and specifications—which have been approved by the Department—for the erection of a golf house at the foot of Gun Hill road, on the bank of the lake. While this golf house will be erected free of expense to the City, and after a term of years become the property of the City, it will be open to the public, the same as the other golf house, for certain privileges, the club members reserving the lockers for their own accommodation. When this is completed (which it is expected will be early next year) it will relieve the congestion in the present golf house, so that all players who desire a locker will be able to secure one.

Mosholu Parkway.

6,035 feet long, 600 feet wide.

This parkway is the connecting link between Van Cortlandt and Bronx Parks. The improvements during the year have been extensive. The section between Webster avenue and the Harlem Railroad tracks, all of which was low and swampy land, has been filled in, requiring 38,000 cubic yards of filling. This fill was obtained from the contractors of the Jerome Park Reservoir, whose railroad track crossed a corner of this section, and was obtained without any expense to the Department or to the City.

Surveys, plans and specifications were prepared, and the contract let for the bridge abutments for the bridge superstructures over Webster avenue and the tracks of the Harlem Railroad, which contract includes the filling between the easterly abutment on Webster avenue and the abutment west of the railroad tracks, and making the western approach to the Webster Avenue Bridge. This contract is well under way; all the necessary excavations have been made; one of the abutments is two-thirds and another one-half completed.

Plans and specifications have been prepared for the two bridge superstructures, one over Webster avenue and the other over the railroad tracks, and the work was let to the American Bridge Company of New York on the 30th day of December, 1903, at a cost of \$48,635. The work will be commenced in the early part of the new year.

Surveys, maps, plans and specifications have also been made for the improvement of Mosholu parkway, from Webster avenue to the boundary of Van Cortlandt Park. This improvement provides for the construction of two roadways 50 feet in width, with a 100-foot plantation between. These roadways converge at two points where the topography absolutely requires it to form one roadway 60 feet in width, together with the necessary drainage facilities, etc. The contract for this work has been awarded, and the estimated cost of these improvements is \$120,000.

At the northern boundary of the parkway, between Webster avenue and the railroad, a strip 100 feet wide has been allotted by the Sinking Fund Commission to the Police Department as a site for a police station, and plans for this station have been examined and approved by the Department, and the money appropriated for the construction of an artistic station and stable, which will add very much to the appearance of this section of the parkway, as well as be a great convenience to the neighborhood and a saving of the cost of a new site to the City, which would have been probably not less than \$50,000 for a site of this size.

Bronx Park.

Area, 661 acres.

This park is subdivided into three sections: First, the northerly section, which has been set apart as a botanical garden, under the jurisdiction of the Botanical Society as to its maintenance; second, the southerly end, set apart for the New York Zoological Society for the maintenance of the "Zoo"; leaving about 150 acres, the centre section, which is maintained as a general park.

In this section the Park Department, on account of its central location, has established its shops, greenhouses, nurseries and stables, and, in the near future, hopes to establish its office. The new work done during the past year upon this section of Bronx Park will be first considered.

The road leading from Pelham avenue to the southern boundary of the Botanical Garden has been widened, the banks sloped, the gutters sodded and fully completed; and a new telford macadam road has been constructed from the junction of the Southern Boulevard and Pelham avenue to a point where the Botanical Garden joins those of the park proper. These roads have a width of 26 feet, exclusive of the gutters, and lengths, respectively, of 1,425 and 1,160 feet.

Substantial walks with rubble foundations and trap-rock screenings, 10 feet in width, have been constructed in this park as follows:

From Pelham avenue to Suicide lane, a distance of 702 feet.

From Pelham avenue to the herbaceous grounds, a distance of 1,605 feet.

From Bronx and Pelham Parkway, along the easterly shore of the Bronx river, to the Falls, a distance of 2,480 feet.

A portion of the latter path was laid during the year 1902, but it has been reformed and widened and generally improved during the present year.

The portion of the walk from the Falls to the workshop has been widened and made to serve also as a driveway 20 feet in width, and has become a very popular drive for people wishing to view the Hemlock Valley and the Falls.

A bridle path 16 feet in width has been constructed from the Bronx and Pelham parkway to a point beside the Lorillard mansion, along the westerly bank of the new lake, a distance of 1,500 feet.

The Park lake, at the easterly limit of the park, has been completed. It was found last year that, owing to the nature of the fill on the easterly side of this lake, it would not hold the water, and the whole easterly section where the new fill has been placed was lined with a concrete core wall, requiring the use of 250 barrels of Portland cement. This has remedied the difficulty, and made the lake absolutely tight, so that during the month of December it was very much used for a few days by skaters.

Two comfort stations have been planned and constructed from existing buildings, one for women, in the Porter's Lodge, near the entrance to the mansion grounds; the other, for men, in the old stone gas generator building, which is north of the Lorillard mansion.

The old stone barn formerly occupied by the Police Department was turned over by the Police to this Department in September. It was immediately overhauled and remodeled, a substantial shed with concrete floor erected in the rear, between the two wings, and it is now used as the main stable of the Park Department.

The old wooden structure in the rear of this barn was taken down and a large and handsome two-story-and-basement building erected on the site, the building being 86 feet long and 25 feet wide. This building is intended as an addition to the stable for horses and to serve as a storeroom for the watering trucks and other wagons and implements of the Department, which in the past have often had to stand outdoors during the winter months.

A new line of water pipe has been brought to the buildings from Pelham avenue, requiring the laying of 3,200 linear feet of 4-inch water pipe, upon which four hydrants have been placed. In addition a large amount of iron pipe and water pipe has been laid in various sections of this park, for drainage, including the comfort stations.

That section of the park lying at the entrance from Pelham avenue, which has been a bit of low, swampy ground for many years, has been filled in, graded and drained. A fine pool with stone walls has been made, the area sodded, and the whole made ready for seeding and planting. This work has required the hauling of several thousand cubic yards of fill, which was delivered at a nearby spot on the railroad of the Jerome Avenue Reservoir without expense to the City.

Plans were prepared, and contract let, for a stone and concrete-steel bridge over the Bronx river and Pelham avenue, and the work is well under way. The cost of this bridge, in round figures, is about \$50,000. A temporary bridge was constructed, and is now being used. The new bridge foundations are completed, and, if pushed, the bridge ought to be ready for the public early in the summer of 1904. This bridge will have a clear span of 87 feet and a width of 100 feet, 60 feet of which will be roadway, with two 20-foot walks. The old bridge that was removed was only 20 feet in width, and had to serve for all purposes.

About fifty acres in this park has been underbrushed and cleared of dead and decaying trees, and the slopes along the Southern Boulevard have been graded and seeded.

A portable sawmill, for the purpose of making use of the dead and fallen trees in the various parks, has been purchased during the year, and set up in the rear of the mill, so that hereafter, instead of burning up valuable timber and then buying lumber, the Department will be saved thousands of dollars every year by converting the fallen trees into such material in the shape of lumber as they may require for park purposes.

In this section of the park, during the year, there have been planted 37 trees upwards of three inches in diameter, 908 shrubs, 13,200 bedding plants and 5,000 herbaceous plants.

Fifty thousand feet of sod was cut and laid along the drives and walks by the Gardeners in this Department.

Two thousand five hundred native shrubs, collected in the woods of the parks, were planted along the northern bank of the lake.

The greenhouses and gardens adjoining, in this park, were maintained to their highest state of efficiency during the entire year, raising all of the pansies and bedding plants used in all the parks and squares of the Borough of The Bronx.

Botanical Garden Section of Bronx Park.

The contract that was let in 1900 for the grading of the grounds, the construction of walks and drives, the laying of water pipe, sewer pipe, etc., was finally completed in the early spring of this year, and the final estimate rendered in May. On account of the long and unreasonable delay of the contractor, the time penalty fixed in the contract was enforced against the contractor to the extent of \$6,480.

The grade of the driveway between the garden fountain and the drinking fountain, at the south end of the approach to the Museum Building, was raised for a distance of 300 feet, in order to conform to the grades necessitated by the completion of the fountains.

A path 1,800 feet long and 15 feet wide was built from the approach to the Manhattan Elevated Railroad station, southeasterly along the southerly boundary of the park, and within a few feet of St. John's College grounds, to the Southern Boulevard. The construction of this path was made necessary by the enormous numbers of visitors reaching the Garden by means of the Elevated Railway, en route for the Zoological Park.

Paths connecting the approaches to the Public Conservatories with the southern entrance at the Southern Boulevard, and with the entrance leading to the Museum Building, have been constructed, in all amounting to 2,000 feet and averaging 12 feet in width.

The path system of the herbaceous grounds has been connected with the path leading through Bronx Park to Pelham avenue.

A path 10 feet in width and 500 feet long has been built from the Southern Boulevard, at the railroad bridge, to the approach to the Elevated Railway station.

These paths have been built in the most substantial manner, with telford foundation carefully laid, hammered and rolled, and surfaced with 2-inch trap-rock screenings.

The contract for grading the ground, building telford roads, laying concrete walks, erecting the garden and drinking fountains and basins for the statuary fountain, was completed in May, and final estimate rendered. This contract was also unreasonably delayed for a long time beyond the time specified in the contract, and the contractor was penalized to the extent of \$3,060.

Plans and specifications were prepared for a stone and concrete steel bridge over the Bronx river, in the northern part of the garden, near the Newell avenue entrance. The work was let and the same is practically completed, only some details of finishing being needed.

The grading of the main driveway in connection with both sides of this bridge and the northerly entrance to the park has been completed.

There have been upwards of 30,000 cubic yards of fill carted into the easterly side of the river to make this fill from the Jerome Park Reservoir railroad trestle, and a goodly portion of the driveway on the westerly side of the Bronx river has been covered with telford stone.

Plans and specifications have been prepared for a five-arch rubble stone bridge to carry the main driveway across the Bronx river and its valley, at a point of about 500 feet from the present "Blue Bridge," the work advertised, bids opened and the contract let.

Plans were prepared in the office for a stone and concrete bridge over the Bronx river at the present site of the "Blue Bridge." This work has not yet been advertised.

Plans and specifications have been prepared for constructing flights of steps and a set of concrete-steel tanks for the aquatic plants near the Horticultural Buildings, the work advertised, contract let for \$16,598, and the work is now under way.

Plans and specifications have been prepared for a plant house to be connected with the range of propagating houses, the work let at a cost of \$7,593, and the work is now being done.

Plans and specifications have been prepared, and the work advertised and let, for the construction of two toilet houses, one for men and one for women, and a tool house, adjacent to the entrance of the Elevated Railway station. This work will be completed by the early spring of 1904.

A large amount of grading and seeding has been done in and about the Horticultural Buildings and the Museum buildings, aggregating about ten acres in the new finished lawn surface, and about fifteen acres more is so far advanced toward completion that it will be brought to a finished state in 1904.

At the commencement of the year work was being prosecuted on the connection of the sewer and drainage system of the southwestern portion of the garden with the Webster avenue sewer, the line passing under the New York Central and Hudson River Railroad bed. The work was completed in the early spring.

At the southern entrance of the herbaceous grounds, the brook and drainage system has been connected with the large stone drain built in the park adjoining.

The contract for furnishing additional furniture in the Museum building was satisfactorily completed in the early spring.

A design of the fountain planned for construction for the approach to the Museum building has been approved by the Board of Managers, under the recommendation of the committee selected by the National Sculpture Society. Considerable time will be required for preparing models and casting the bronze for this fountain, but it is expected that it will be in position by the end of 1904.

During the autumn trees were set out along the entire system of finished driveways, between the Museum building, the approach to the elevated railway station and the southern entrance at the Southern Boulevard, about forty different species being used in this planting, with the design of shading the driveways and paths as soon as possible.

A large amount of planting was done in the spring about the entrance to the elevated railway station. The total number of kinds of plants represented in all the plantations and conservatories, including the native flora of the tract, is about 11,200, which is a gain during the year of about 600 species.

New York Zoological Park Section of Bronx Park.

During the year 1903 the permanent improvements in this section of the park have been very steadily advanced. The lion house was opened to the public on February 2, with all its cages well filled. The use of this building for the balance of the year has proven satisfactory in every respect. It has provided for the comfort of its wild animals in a manner that has been highly beneficial to them, and has afforded great satisfaction to the large number of visitors. The studio has proven highly acceptable to artists and sculptors, and has been in almost constant use. About twenty-five artists and sculptors have availed themselves of the artistic privileges afforded by the Zoological Society.

It will not be possible in this report to go into the detail of the large amount of work that has been done in this park by the Zoological Society, and I shall confine myself to the principal items of construction work in the way of improvement, leaving

the reader to peruse for more definite details the annual report of the New York Zoological Society.

Bear Dens.

The bear dens have had the addition completed. The work was begun in 1902 and completed in the early spring of 1903. The final completion of this work made it possible to transfer bears from the old dens for the purpose of putting those enclosures into thorough repair.

Llama House.

Early in 1903 the society received from Mr. Robert S. Brewster a complete collection of the cameloid animals of South America, embracing the llama, guanaco, vicunia and alpaca. To provide quarters for this handsome gift the society erected a building known as the Llama House, situated near the southwest entrance. The building is 30 by 35 feet, one story in height, and contains four spacious shelter rooms and a feed room.

The Antelope House was brought to completion during the year; the work was begun in 1902. A series of twenty-three yards surrounding the Antelope House form a very extensive feature of this installation, giving a chance for indoor enclosure and outdoor exercise during suitable weather. The surface of these enclosures has been well paved with telford macadam and well provided with drains and catch basins. This outdoor improvement has been the most extensive of its kind yet made in the Zoological Park, outside of the bear dens. Over 1,392 feet of wire fencing was required for the enclosure of the yards. This building was opened in October, at which time a fine collection of animals was received, consisting of two giraffes, one eland, two white-tailed gnu, two white-bearded gnu, two zebras, one beatrix antelope, one addax antelope, two redunca antelopes, one reedbuck, four Indian antelopes, two dorcas gazelles and two crested antelopes. Two ostriches and four Steller's sea lions were quartered in the Antelope House, pending the completion of other buildings.

The outdoor cages of the Lion House were provided with rustic rock-work in their interiors, and the work was prosecuted vigorously throughout the summer and completed in October.

The walk extending along the eastern side of Bronx lake and river, from West Farms to Bronxdale, a distance of 4,195 feet, was completed in a satisfactory manner, and opens up to visitors the entire park area east of The Bronx.

Plans and specifications have been prepared, work advertised and contract let, for the erection of three important animal buildings: one, a house for ostriches, rheas, cassowaries and emus, and another for miscellaneous small animals. Each of these two buildings is 170 feet in length, and will be provided with a complete series of outdoor accommodations. The third is a large house for perching birds. It is

situated on the northwest corner of Baird court. This will be a spacious and perfectly appointed building, and will contain a really great collection of birds—perching birds, shore birds and the parrots and macaws.

Work on all the above buildings was promptly begun by the contractors, and is proceeding satisfactorily, and there is every reason to believe that the same will be completed early in 1904.

A large amount of ground improvement work has been accomplished during the year. 2,063 trees have been planted in the border plantations of the park.

A small mammal house was removed from its original location and re-erected in the nursery as a hot-house. A substantial and permanent shelter was erected in the northwest corner of the animal yard, and provided on all sides with stalls and cages for the accommodation of animals that live outdoors all summer, but require a temperature of sixty degrees in winter. This building rendered it possible to devote the entire shelter portion of the Buffalo House to the Whitney herd, and the main shelter of the Elk House to the Whitney elk herd.

The improvement of the southern half of Baird court was made by the construction of a complete network of drains and catch-basins. The western retaining wall is now being raised to the full height of the finished grade. A large amount of material has been accumulated for the laying of the macadam pavement in Baird court.

Through the generosity of Mrs. Lydia Lydig Sturgis a handsome gateway was erected, consisting of two massive pillars of cut stone, surmounted by an arch of ornamental wrought iron work, at the top of the steps leading from the buffalo entrance to the upper level of Rocking Stone Hill.

The animal collection opened to public view during the year included, in the lion house, six lions, three tigers, four leopards, two jaguars, one cheetah and two pumas. The collection in the antelope house has been mentioned before. In addition to this, there was a herd of twenty-six pure-blooded buffaloes, which were presented by Honorable William C. Whitney, and are now known as the Whitney herd. This gives the New York Zoological Society in Bronx Park the largest herd of American bison anywhere on public exhibition. Mr. Whitney also presented to the Zoological Park ten fine elk from his herd on October Mountain, Lenox, Mass.

The attendance at the "Zoo" during the year 1903 was greatly in excess of that of the previous year. The largest number of visitors registered in any one day was on May 10, when the turnstiles recorded the attendance of 34,050 visitors, the average attendance during the year being about thirty per cent. greater than the year 1902.

The amount of bonds appropriated by the Board of Estimate and Apportionment for improvements during the year aggregate \$500,000. Of this amount, \$387,700 has been spent on improvement work and contracts; \$257,923.97 was expended on the contracts for the antelope house, bear dens, ostrich and small mammal house,

bird house, improving West Farms road, etc., leaving an unexpended balance of \$112,300 of this fund to begin the new year.

Crotona Parkway.

Length, 3,815 feet. This parkway is the connecting driveway between Crotona and Bronx parks, running along the easterly side of the Southern Boulevard. The work of improving this parkway was let in 1902 to John H. Devlin, contractor. Owing to delay on the part of the contractor, the contract was canceled after about one-quarter of the work was done, and it was readvertised and relet during the present year to George I. Bailey, contractor. The work has only been started by the new contractor at the end of the year.

Crotona Park.

Area, 154.6 acres. While much work was done in this park in 1902, a great deal more has been accomplished in 1903, so that now the larger portion of this park is under a fairly good state of cultivation. The principal improvements made during the year are as follows:

Crotona avenue, which bisects this park from north to south, had, previous to the present year, been under the control of the Department of Highways. It was regulated and graded by them, and, during the wet seasons, was almost impassable. On the first of July, under opinion of the Corporation Counsel, it was turned over to this Department for care and maintenance, and money was obtained for the purpose of macadamizing this avenue; and, on the 5th of August, work was begun. The roadway was regraded and macadamized from north to south, a distance of 2,990 feet in length and 42 feet in width, with block-paved gutters; curbs reset, and new drainage facilities installed; the whole work being completed and opened to the public by the 15th of October.

A new Telford macadam road 25 feet in width was laid out, opened and constructed during the year, from Crotona avenue opposite the Wendover avenue drive, built last year, along the easterly bank of Indian lake, to the northeast corner of the park adjacent to West Farms section, a distance of 2,825 feet. This not only opens up a new section of the park, but makes an exceedingly convenient and short cut-off for light traffic between these two sections.

Indian pond, or lake, as it is known, has been a skating resort in the winter and a wet marsh in the summer. This lake has an area of about three acres, and, during the summer, about 5,000 cubic yards of vegetable mould has been removed, new retaining walls constructed around the whole lake, the dam at the southerly end graded, and banks sloped, so that it has become a permanent lake all the year round, adding very much to the beauty of that section of the park.

The other drives and walks in this park have been resurfaced with trap rock screenings.

The old road leading from the northerly end of Franklin avenue to Crotona avenue has been reconstructed a distance of 675 feet, regraded, macadamized, gutters relaid, and drainage installed.

A substantial and ornamental wire guard fence has been erected all along the southerly boundary of this park, and also on a portion of Crotona avenue, for protection against cut-off paths and destruction to the shrubbery that has been planted in this park—a total of about 1,500 feet of fence.

One thousand three hundred and forty-five feet of 1-inch and 425 feet of 2-inch iron pipe was laid for the purpose of bringing water into the lake. Fountain jets are arranged for sprays to be used in the summer.

A portion of the rock lying in the sidewalk on Crotona avenue was removed during the construction of the roadbed in Crotona avenue, thereby improving the sidewalk, and at the same time furnishing material for Telford macadam; and I wish to say, in this connection, that, had this roadway been done by contract, instead of by the park laborers, it would not have been done until well on in 1904, and it would have cost the City at least one-third more than it did.

The road leading from Tremont avenue to the Municipal Building was resurfaced during the year.

Twenty acres of forest in this park were cleaned during the early part of the year, the wood being cut by the foresters and carried away by poor people during the time when the price of coal was high.

Sixty-three trees, upwards of three inches in diameter, and 2,421 shrubs were planted in this park during the year, also 3,760 bedding plants.

Five thousand feet of sod was cut and laid at entrance to drive on One Hundred and Seventy-fifth street and walk to Prospect avenue.

Claremont Park.

Area, 38 acres.

The only improvements made in this park during the past year have been the construction of a new rubble-foundation walk 780 feet in length, near the southeasterly corner of the park, and one of about the same length along the northern boundary; the chaging and improving of the roadway and grades at Monroe avenue entrance; a new toilet house for women; and an ornamental wire fence, similar to the one built in Crotona Park, which has been erected along a portion of the Morris avenue boundary and along the northerly end of the park for a distance of about 650 feet. This fence was also constructed as a temporary protection for the lawns and shrubbery.

Fourteen new trees and 152 new shrubs have been planted during the year in this park; 865 bedding plants have been set out, and 6,000 square feet of sod cut and laid.

St. Mary's Park.

Area, 28.7 acres.

Early in the year plans and specifications were prepared for surfacing with asphalt all the walks in this park. The work was advertised and the bids received, but the lowest bid was deemed excessive (being far above a fair cost for the work), and the bids were rejected; and, as there appeared to be no probability of obtaining better prices during the year the work was not readvertised.

A handsome and substantial wrought-iron picket fence has been erected on the north, west and south sides of this park, which has added very much to the appearance of the park and contributed immensely in the way of ease in protecting the shrubbery and plants from destruction. Several of the park entrances were changed, necessarily, on account of the system of fencing. The system of walks has been revised in a way that has rendered access to the park as easy as formerly, and has added much to its general appearance.

The entire southeasterly corner of the park has been completed, new walks constructed, and about six acres in extent has been seeded and planted with a variety of trees and shrubs.

Application was made by the New York Central and Hudson River Railroad Company for the privilege of tunneling under the park grounds. This application met the approval of the Department, and has been acceded to by the City authorities; so that, in the near future, the Port Morris branch of this railroad will go directly under the park, out of sight, and the strip of land now used as a railroad bed, along the easterly border of the park, will become a part and parcel of the park, and can be converted into a very fine easterly drive.

During the year 106 trees and 1,350 shrubs have been set out in this park; 2,160 bedding plants and two beds of tulips have been planted, and 10,000 square feet of sod has been cut and laid along the new fences and the old walks.

Hall Place.

This is a small place comprising about one acre of ground, north of One Hundred and Sixty-fifth street, between Stebbens avenue and Intervale avenue. It has been graded and seeded; 11 shade trees have been set out; 500 bedding plants and one bed of tulips were planted, and it was attended to with the usual park care during the season.

Melrose Park.

Area, about 1 acre.

This was developed during the year 1902 into a fully planted park, but during the present year the walks have been concreted and a fine ornamental fence has been constructed around the park.

Franz Sigel Park.

Area, 17.5 acres.

The improvements in this park during the past year have been the completion of the grading and sodding of the Walton avenue bank, the completion of all walks at and near the western boundary, the construction of two flights of steps leading to the new comfort station and the completion of the comfort station, which was erected in 1902, but was not completed, ready for use, until the early spring of the present year. The comfort station is a one-story frame structure, with brick basement; women's toilet and waiting room on the first floor; men's toilet room and an ample storeroom for tools in the basement.

Fifty-five trees and three shrubs were planted during the year, and 3,800 bedding plants set out.

McComb's Dam Park.

Area, 27 acres.

The improvements in this park, so well begun during the year 1902, have been pressed forward this year. The large section of the park lying between Cromwell's creek and the approach to the bridge has been completed with the fill received from the Street Cleaning Department. All that is lacking is the top soil for the surface, and owing to the continuous building strikes very little, if any, cellar dirt was obtainable. As all the rest of this park has been filled in from fill brought by contractors it was thought unwise to purchase top soil to complete it, when in the very near future plenty of the material could be obtained free.

A new concrete walk has been laid under the bridge, from One Hundred and Sixty-first street to the place where Exterior street intersects the same, 15 feet wide, a distance of 510 feet.

An 18-inch tile drain 350 feet in length has been laid from the bridge to Cromwell's creek, for the purpose of carrying the wash that comes from the street at that point.

The section of this park between Jerome avenue, the bridge and the railroad track has been graded, the banks sloped and covered with top soil and planted with shrubbery.

The northerly end of the section lying between Sedgwick avenue and the railroad has been cleared of its old buildings, graded, planted and the walks extended.

The section lying between the railroad track and the river, occupied by the boat-houses, has been filled up at considerable disadvantage on account of the occupancy of the place at the time; but the fill was the ashes received from the Street Cleaning Department, and, for that place, was the best obtainable. It is now fully completed from the northerly end of the park down to Jerome avenue.

All the clubs have signified their intention of either removing their old houses and building new ones, or of remodeling them in a manner satisfactory to the Landscape Architect. One of the clubs already has its new building well under

way. This we consider one of the best improvements that has been made, for the number of people that it serves. Thousands of young men spend many hours a day in this place, which in the past has been unhealthful and malarious. The treatment it has received this year will remove almost wholly the unsanitary situation and be of lasting benefit to thousands of young men of to-day and of the future.

Extensive repairs had to be made to the dyke in one section of this part of the park in order to retain the fill.

One hundred and sixty-four trees and 1,100 shrubs have been set out in this park during the year, 1,164 bedding plants planted and two beds filled with tulips. Two acres, additional to the amount done in 1902, were graded and sodded.

Plans have been prepared by the Metropolitan Athletic Union for the construction of a one-quarter mile track, and for a public building to be used in connection with the playgrounds and athletic fields. These plans have been approved and an agreement has been signed with the Athletic Union for the construction of the building. While this association is willing to construct this building free of expense to the park, it becomes the property of the Department of Parks, and the Department has undertaken to construct the track and field and maintain the same in a first-class condition. The building is a model of its kind, being designed for a grand stand upon one side, while on the other side it has rooms for shower-baths, locker accommodation and a public comfort station, so that all athletes who wish to exercise on this field will be afforded accommodations for dressing unexcelled at any other place.

Plans and specifications have been prepared and contract let for a music pavilion to be constructed during the early spring.

University Park.

Area, 3 acres.

This park was nearly completed during the year 1902. During the present year the roads have been repaired, guard-railing erected and 36 trees planted along the streets in the front and rear—American elms on the Sedgwick avenue front and Norway maples on the Cedar avenue front. Six hundred shrubs were planted and the banks re-seeded.

St. James Park.

Area, 11.83 acres.

Active work has been going on in this park during the whole year. First, the completion of the grading that was well advanced, the laying of walks with rubble foundations, both on the north and south side; the construction of a handsome, substantial fence 5 feet in height (the same as in St. Mary's Park), on the Jerome avenue and Creston avenue sides of the park, 1,612 feet in length.

Concerts were given in the grove in this park during the present year with marked success. Plans and specifications have been prepared and the contract let for a music pavilion to be erected in this park in time for the coming season.

The easterly sidewalk of the park along Creston avenue was graded; also the westerly side along Jerome avenue has been brought to official grade and a concrete walk, six feet in width and of rubble foundation, has been put down and laid the entire length—828 feet.

The whole surface of this park was fall-ploughed at the close of 1902. Early in the spring it was graded and seeded, so that early in the year it was brought under good cultivation of fine lawn grass; and during the fall one section of it was much used as an athletic field.

During the year 25 large trees from six to ten inches in diameter were set out, and 109 trees, about three inches in diameter, and 2,421 shrubs were planted; 10,000 square feet of sod was cut and laid out on the borders of the walks and drives. The development work in this park is now completed.

Bronx and Pelham Parkway.

The year has seen wonderful changes in this parkway. It being the principal drive to the Sound, the dangerous crossing on the New Haven Railroad tracks has been a serious drawback; but after strenuous exertions for the past few years the bridge was finally completed and opened to the public the Sunday before Election Day. This one improvement has done more to accommodate the people than any other one thing in the whole Department.

The telford macadam road from the Eastchester road to the bridge, 60 feet wide, has been fully completed. On the easterly end of the bridge upwards of 20,000 cubic yards of fill has been put in, so that the approach from that end is now in usable condition and filled in for about two-thirds of its width.

One hundred and twenty-eight American elms, from $3\frac{1}{2}$ to 4 inches in diameter, were planted along the parkway in the spring, and during the winter sixty-two pin oaks were planted along the parkway's easterly end, the pin oaks being from six to ten inches in diameter and thirty to forty feet high. They were removed from nearby forests.

The northerly side of the parkway drive, leading to the bridge from Eastchester road, has been nearly completed by the sodding of the gutter and the planting of trees and shrubs and the construction of the cycle path; 19,000 square feet of sod has been cut and laid in the work.

The drive for the entire distance of the parkway has been resurfaced with trap-rock screenings and thoroughly rolled; the gutters have been cleaned and repaired where necessary.

One thousand two hundred shrubs obtained from the Boston parks have been planted along the section west of the railroad bridge.

Pelham Bay Park.

Area, 1,756 acres.

The development work begun in 1902 has been continued with vigor during the whole year.

A new drive has been constructed from the City Island road, near Glover's Rock, along the westerly shore of Pelham Bay, to the City Island bridge, a distance of 4,825 feet, called "Sound View Drive." This road has a width of thirty feet and a fine loam surface, and it opens up a section of this park that was closed to the public before, excepting on foot, and exhibits to those driving thereon a most magnificent view of the whole length of Long Island sound.

The old rookeries situated at "Jack's Rock" and used for a dancing pavilion and refreshments resort have been entirely removed and cleaned up.

The fields and forests adjacent to this road have been cleared of all brush, suckers and unnecessary timber.

Fifty new bath-houses were constructed near the southerly end of the drive, to accommodate the people in that section, by a fine, sandy beach. They were very popular during the whole season, a large number of picnickers coming to that section to enjoy themselves in the near-by groves, where temporary tables and cooking facilities were furnished them, and to avail themselves of the bath-houses as well.

The driveway started in 1902, from the Eastern Boulevard, along the westerly shore of Eastchester bay, to the Waterbury lane, has been finished and macadamized for its whole length of 3,480 feet. This work was done entirely by the Department force. Even the trap-rock and screenings were made by the stone-crusher purchased for the Department.

At the southerly end of this road, where the bath-houses were erected in 1902, and afterwards burned, one hundred new bath-houses were erected, and were patronized to their utmost capacity during the season.

The building known as the old "Hunter House," formerly occupied by the Police Department, and the building near the City Island Bridge, known as the "Marshall House," were thoroughly renovated, and improvements made thereon, at the expense of the tenants, and rented as hotels.

Fifty acres of this park, that was overrun by neglect with weeds and briars and was broken up in 1902, was sown to oats and harvested and then reploughed in the autumn and sown to rye and seeded with timothy and clover, so that the land will cut good, clean hay sufficient to feed the horses in the Department throughout the year.

Twenty-five acres more of the same kind of old meadows were ploughed up in this park during the autumn, ready for sowing in the coming spring.

The Eastern Boulevard, for its entire length of three and one-half miles, has been resurfaced with trap-rock screenings.

The meadows in this park that had any hay on at all were mown and the hay gathered, furnishing enough for the Department horses for the year.

All the old sheds, barns and tumble-down buildings that existed in this park (twenty in number), were removed and the sites graded and cleaned up.

The City Island road, from Bartow Station to the City Island Bridge, was also resurfaced where necessary. The new walk that was built in 1902, leading from Bartow Station to the City Island Bridge, a distance of 6,350 feet, was surfaced with screenings and put in good condition, and became very popular and was universally used.

A fine, substantial iron fence was constructed around the "Pell Oak," near the bridge mentioned.

Large quantities of old stone fences, farm lines and subdivisions that divided the park in many places have entirely disappeared, the stone being taken and converted into trap-rock by the stone-crusher, and the ground graded, so that now, in place of being subdivided in many places by stone walls, it is largely developed into one expansive park.

About three hundred acres of forest land has been underbrushed and cleaned in this park.

The golf links were maintained during the whole season in perfect condition. Not a single complaint was received from the players, but many commendations on account of their excellent condition.

Surveys and plans have been made for the improvement of Split Rock road, and the work begun. These plans contemplate widening to the width of 35 feet, its present width being only 16 feet. This is the main drive in the park, from the north. When this work has been completed, it will add very much to the general appearance of the park at this place. It is along this road that the breaking up and reclaiming of a good deal of waste meadow land is being done.

Fifty trees, three to four inches in diameter, were planted in various places along the new drives.

Echo Park.

Area, 3 acres.

The improvements in this park, during the year, consist of the making of plans and specifications and awarding of contract for a music pavilion, as concerts were held in this park, during a portion of the past season, with marked success.

Application was made to the Board of Estimate and Apportionment for an addition to the westerly side of the park, and the Department has succeeded in having the maps changed so that this park now takes in the bed of Ryer avenue and eight lots in addition between One Hundred and Seventy-eighth street and One Hundred and Seventy-ninth street, thereby preserving for this park the high and beautiful

rocks that would have been blasted away had Ryer avenue been cut through, and all that remains is for the legal authorities to acquire title.

Fourteen trees, 526 shrubs and 2,500 bedding plants were set out in this park in the spring, and three beds were refilled with tulips.

The patrons of the Mount Hope school adjacent, erected, in a portion of this park, a beautiful flag-pole, which was presented to the children of the school, with a beautiful American flag, on Thanksgiving day, with very appropriate ceremonies.

Public Squares.

The small squares at the junction of streets (thirty-four in number), varying in size, have been improved and cared for during the year. The one at the junction of Jerome avenue and One Hundred and Seventieth street was thoroughly graded, sodded and seeded. Trees and shrubs have been planted and cultivated during the season in all these squares.

Tree-Planting on Public Streets and Avenues.

Applications were received from the owners of property adjacent to ten different streets, for the planting of trees, under the new law, whereby trees are to be planted by the Department of Parks and paid for by assessment. It was necessary to ascertain the facts required by the Board of Estimate and Apportionment, and to make estimates on the cost of the work, which required laying out and ascertaining the number of trees to be planted, and the cost of same. This work was done, hearings were held by the Park Board, and then, under the law, application was made to the Board of Estimate and Apportionment, for their approval, early in September; but, for some unknown reason, that Board has not acted upon the applications.

Forestry Work.

For the first time in the history of the parks of The Bronx, an effort was made to make a beginning, in a systematic way, in taking care of the forest trees in the parks. A small appropriation (\$5,000) was made by the Board of Estimate and Apportionment for this work, and, under the experienced guidance of our Head Gardener and two Arboriculturists, considerable work has been done in this line. During the year about five hundred acres have been cleared, more or less, some thoroughly cleared and some partially thinned out. The thinning out of the young growth where it was too thick has been quite extensively done, and it will soon make a big change for the better in the appearance of the trees that remain. This work should be kept up in order to beautify the forest and to increase the pleasure of the public and better preserve the trees.

Nearly all the improvement work in the Department of Parks during the past year (in fact, I might say all, excepting the construction of bridges and buildings) has

been done by the Park Employees, and it has shown that we can do the work far better, cheaper and in less than one-quarter the time. A contractor comes on a job and, usually, one would think that his main object was to see how long it would take to do the work. When the Department enters upon the construction of a path or road, or the grading of a section, it puts its force to work and follows it up, day in and day out, until the work is finished, and then the same force is ready and willing to take hold of another job. Not one-half the amount of work that has been accomplished during the past year would have been accomplished if the old practice had been followed of spending all the improvement money by contract.

I wish to call attention, in this report, to the fact that out of the maintenance fund which we had for the year we have spent about \$10,814.25 for new apparatus—additional truck teams, harness, trucks, a stone-crusher, a saw-mill for converting fallen trees into lumber, and a motor lawn mower for the Parade Ground and golf links; and also, that the expense of the planting for the year, for the purchase of shrubs and trees, has been \$12,922.42. The institution of the nurseries which we have started during the year in a very short time will enable the Department of Parks to save all this expense.

Unfinished Contracts.

	Date of Letting.	
Crotona Parkway	Nov. 19	\$70,530 00
Bird House, Zoological Park	Sept. 14	114,944 00
Small Mammal House, Zoological Park	July 23	73,780 00
Bridge abutments, Mosholu Parkway	Aug. 6	59,000 00
Bridge over Bronx river in Bronx Park.....	June 11	47,660 00
Steps, Botanical Garden	Nov. 19	16,598 00
Toilets, Botanical Garden	Dec. 10	12,873 00
Plant House, Botanical Garden.....	Nov. 12	7,593 00
Music pavilions for St. James', Macomb's Dam and Echo Parks	Dec. 10	2,970 00
Mosholu Parkway improvement	Dec. 30	135,345 00
Mosholu Parkway bridges	Dec. 30	48,635 00
Five-arch Botanical Garden bridge	Dec. 30	69,000 00
Total.....		\$658,928 00

DEPARTMENT OF PARKS,
Statement of Balances and Appropriations

Title of Appropriation.	Balance of Appropriation	Transferred to.
Administration	\$12,400 00	.....
Maintenance and Construction.....	243,600 00	\$698 51
Music	9,360 00	.....
Supplies and Contingencies.....	1,500 00	125 00
Surveys, Maps and Plans.....	7,500 00	.....
Maintenance of Botanical Gardens.....	70,000 00	.....
Maintenance of Zoological Gardens.....	104,965 00	.....
Forestry Work	5,000 00	.....

BOROUGH OF THE BRONX.

Year Ending December 31, 1903.

Total.	Payments.	Transferred from.	Total.	Balance.
\$12,400 00	\$11,076 96	.....	\$11,076 96	\$1,323 04
244,298 51	241,365 36	\$1,595 00	242,960 36	1,338 15
9,360 00	9,158 58	.....	9,158 58	201 42
1,625 00	1,554 65	.....	1,554 65	70 35
7,500 00	6,687 47	125 00	6,812 47	687 53
70,000 00	65,724 82	.....	65,724 82	4,275 18
104,965 00	92,522 77	.....	92,522 77	12,442 23
5,000 00	5,000 00	.....	5,000 00	.....

Receipts.

From rents, licenses, privileges, rent for lockers, etc., year ending December 31, 1903.... \$9,867 73

Expenditures, Bond Accounts, Year Ending December 31, 1903.

New York Zoological Garden Fund.....	\$161,739 79
Botanical Garden in Bronx Park—Improving, etc.	126,612 30
Improvement of Parks, Parkways and Drives, Borough of The Bronx.....	211,369 97
Improving Bronx and Pelham Parkway.....	12,134 96
Improving Small Park, West Side Fulton Avenue near One Hundred and Sixty-ninth Street	116 39
Claremont Park—Improving, etc.....	115 91

Work Undertaken and Accomplished in 1903.

Sixth Annual Report of the Department of Parks for the Boroughs of Brooklyn and Queens, including Forty-third Annual Report of the Old City (now Borough) of Brooklyn for the year 1903.

The Commissioner's Report of the Work of the Department of Parks for the Boroughs of Brooklyn and Queens for the year 1903.

Office of the Department of Parks,
Boroughs of Brooklyn and Queens,
Litchfield Mansion, Prospect Park,
Brooklyn, December 31, 1903. }

Hon. SETH LOW, Mayor of the City of New York:

Dear Sir—In compliance with the provisions of the Charter I send you herewith the report of work undertaken and accomplished in this Department for the year closing, together with an outline of plans and recommendations for the year 1904.

I have the honor to remain,

Yours very truly,

RICHARD YOUNG,

Commissioner for the Boroughs of Brooklyn and Queens.

Following out the policy undertaken at the beginning of this administration, January 1, 1902, it has been the endeavor of your Commissioner to reclaim as much of the unimproved land under the control of the Department as possible, at the same time acquiring sites for new parks in congested districts and the creation of playgrounds, and maintaining as well as possible the finished portion of the system.

Prospect Park.

The work in Prospect Park was largely that of maintenance and repairs. The only new feature completed is the construction of an entrance opposite Lincoln road. The entrance consists of a driveway of macadam, with gravel surface, flanked

by two pressed brick gutters and a foot-path on either side of the driveway. A number of young trees and shrubs were set out during the spring and fall. The rock-work along the brook line has been reset and repaired, large areas of the park have been resoiled, the deer paddock has been reconstructed and a new enclosure of iron pickets has been constructed to accommodate the buffalo family. Parts of the bridle paths have been resurfaced with fine gravel, and the driveways along the southern part of the park have been thoroughly repaired. A new propagating house has been built adjoining the present greenhouses. The banks of the lake, which were washed away during the storm in October, have been rebuilt, and the surrounding areas repaired. The buildings and rolling stock of this park have been repaired, painted and kept in good condition. The walks surrounding the park have been regraded, borders sodded and the paths covered with limestone screenings. A contract has been let for the construction of a marble shelter on the South Lake drive, overlooking the Parade Ground, and the contractor is already at work. The shelter is a copy of a Greek temple, the roof is supported by 32 marble columns 16 feet in height, and the shelter when completed will be one of the most attractive features of Prospect Park. The building is 73 feet long and 27 feet wide. The ground surrounding the shelter will be laid out as a flower garden as soon as the weather permits in the spring. The cost of the shelter and garden will be in the neighborhood of \$30,000.

A contract has also been let for a new pergola entrance at the junction of Ocean and Parkside avenues. This will consist of 32 granite columns 14 feet high, roofed over in pergola style, and will be provided with granite seats. It is proposed to have the whole structure overrun with vines eventually. The cost of the entrance is \$27,600.

Bowling Green.

During the summer a large plot of land at the southwest corner of the Parade Ground, which for many years was used as a dumping ground for refuse, was made into a fine bowling green and was formally opened by the Brooklyn Bowling Green Club in the early part of October, thus introducing to the Borough of Brooklyn the ancient and beautiful game of bowls which has furnished a delightful and healthful recreation to many of our Scotch-Americans, who have expressed their appreciation of its advantages.

Institute Park.

This park, on which work was commenced in the spring of 1902, was completed and turned over to the City with fitting ceremonies on November 14, 1903. After an invocation by the Rev. Newell Dwight Hillis, your Commissioner presented the park to the Hon. J. Edward Swanstrom, President of the Borough, and a flag was raised on the terrace overlooking the grounds. President Swanstrom in turn delivered the park to the Hon. Seth Low, Mayor. The dedication ceremonies were held on the terrace back of the Institute Building, beginning at 3 p. m., a commodious stand

having been erected for the purpose. A large number of citizens, including public officials, were present. From the beginning, in the spring of 1902, the work of construction was pushed as rapidly as possible by a large force of men. In its construction 150,000 cubic yards of subsoil were deposited by contractors without expense to the City, and 55,000 cubic yards of top-soil have been spread over the surface. Nearly two miles of walks have been constructed with limestone screenings, and 7,161 square feet of cement pavement have been laid. A comprehensive system of sewerage and irrigation was installed during the past season, and 3,000 trees and shrubs were planted. The unsightly hills formed by the excavation for the Brooklyn Institute of Arts and Sciences have been converted into attractive mounds covered with top-soil and made ready for planting. The highest point of the terrace commands a magnificent view of Prospect Park and the surrounding country, with the bay and ocean in the distance. The park will provide a very desirable approach and surroundings for the Brooklyn Institute of Arts and Sciences when that building shall have been completed. Entrances to the park have been constructed on Flatbush avenue near the reservoir, at two points between the reservoir and the southerly side of the park land, and at the extreme southerly corner, and on Washington avenue three entrances have been made. There will also be means of approach from the Brooklyn Institute grounds. From these various entrances winding walks have been constructed. One of the most artistic features of the construction is that of the lake three and three-quarters in extent which has been excavated in the high ground above the long-meadow. The lake has provided skating already this fall for a number of children, the ice being quite safe owing to the fact that the water is but from three to four feet deep.

Highland Park.

The building of this park, which was also begun in the spring of 1902, is advancing toward completion. The roads throughout the park have been completed, having been constructed on a foundation of nine inches of broken stone covered with limestone screenings. The rustic masonry bridge over the ravine, which was completed in 1902, was improved by the laying of an asphalt roadway over it. The banks of the roads have been reshaped, sodded and seeded, the old buildings have been removed from the park, so that the diversified surface is in excellent condition for the use of the public. A fine music stand and tool house combined has just been completed on the westerly side of the park near the reservoir. This building is 30 by 30 feet in size, the lower part is constructed of rubble masonry and the upper portion consists of an open wood structure.

Sunset Park.

The work of construction in Sunset Park has been pushed forward rapidly since midsummer of 1902, and the work is now nearing completion. The rubble masonry

wall, which was built last season on the Fifth avenue side of the park, has been completed and a cut stone cap has been placed on top. A new contract was let for a similar wall 1,465 feet in length on Forty-first street, from Fifth avenue to Seventh avenue, and has been completed. A contract has been awarded for constructing a cement walk along Fifth avenue. At Sixth avenue an entrance has been built with broad granite steps leading from the gateway to the high surface of the park. The heavy rain storms during the season created a great deal of trouble with the high banks on the Fifth avenue and Forty-first street sides, and a great amount of reconstruction was found necessary before the grass could secure sufficient growth to hold the earth in position. The large plateau which was constructed on the westerly side of the park overlooking the bay has been completed, and walks have been constructed of broken stone and limestone screenings, and a comprehensive system of drainage has been laid. Twenty-five hundred cubic yards of top-soil have been spread in various sections of the park, and the banks of the lake have been graded and sodded. A large group of rhododendrons was planted near the lake, and the Fifth avenue slope was covered with a variety of conifers and vines. A large number of trees were grouped in various appropriate places, and the walks on Fifth avenue and Forty-first street and Seventh avenue were planted with Norway maples. One concert was held in Sunset Park in August and was largely attended. The old barns which have been on the property for many years were sold at auction and removed. A resolution to acquire the two additional blocks between Fifth and Seventh avenues, Forty-third and Forty-fourth streets, passed the Board of Estimate and is now in the hands of the Comptroller, who has been authorized to buy the property without the formality of condemnation, but none of this land has as yet been turned over to this Department.

Park and Playground Under Williamsburg Bridge.

On May 23, 1903, the Department of Bridges formally transferred to this Department all the land lying under the Brooklyn approach to the Williamsburg Bridge for park purposes, that Department retaining only such control of the property as might be needed for bridge purposes, such as a comfort station, etc. The land is embraced between Bedford avenue and Kent avenue, South Fifth and South Sixth streets, and is about four and a quarter acres in extent. This Department undertook the building of a playground in that part of the property lying between Bedford avenue and Berry street, and the portion lying between Berry street and Kent avenue, two blocks in extent, was laid out as a park. A contract was let for the entire work and the construction is well advanced. Walks have been laid out and the surface covered with top-soil ready for planting in the spring. A sewerage and irrigation system has been constructed, and a fence of ornamental iron posts and railing on granite coping is now being built around the park and an iron picket fence will surround the playground, the site being 410 feet long by 150 feet in width. The only obstruction to a perfect playground is the

pillars supporting the bridge approach, but these will not seriously interfere with the purpose of this Department. The land for the playground was brought to an even grade, and six inches of steam cinders were spread over the entire surface. Covering this was a layer three inches deep of limestone screenings. A 16-foot running track, seven laps to the mile, was constructed around the borders, and within this track, on the limestone screenings, arrangements have been made for the erection of a complete gymnasium outfit.

Playgrounds.

Two plots of ground which have been purchased by the Finance Department at private sale on the site of Williamsburg Park were turned over to this Department for development in the autumn. The construction of two playgrounds, one for boys at the corner of Bedford avenue and North Fourteenth street, and one for girls at the corner of Manhattan and Driggs avenues, was at once begun.

The plot designed as a boys' playground is 100 feet square. A wooden picket fence was built, and a small shelter was erected in one corner for the accommodation of the patrons. The ground was leveled off and covered with bluestone screenings and a complete gymnasium outfit, consisting of ladders, swings, parallel bars, vaulting horses, etc., was erected. A competent attendant was placed in charge.

The girls' playground consisting of a plot 113 feet by 100 feet was excavated to a depth of fifteen inches, and the bottom covered with blue puddling clay. On top of this was spread about three inches of bluestone screenings. During the late fall a gymnasium outfit similar to that in the boys' playground was installed and a woman attendant placed in charge. When cold weather set in the gymnasium was removed, the surface of the playground was flooded, and in two days of cold weather the ground was covered with ice, and the smaller children of the neighborhood to the extent of several hundred enjoyed its use. There has been almost continuous skating since the rink was first opened. As often as necessary the ice was scraped and the surface flooded. The combination of playground and skating ponds is new, and promises to be a very desirable innovation.

Fourth Avenue.

The work of this Department in connection with the building of Fourth avenue, from Sixtieth street to Flatbush avenue, has been of a very comprehensive nature. The Department of Public Works last season paved Fourth avenue with asphalt from Sixtieth to Fortieth street, forming small parks or malls in the centre of the driveway. These small parks were filled with top-soil by the Department of Public Works, and this Department undertook their improvement. The planting consists of ten trees in each mall and three groups of shrubbery, eleven plants to each. In addition to planting the malls, the sidewalks were planted with trees throughout almost its entire length from Atlantic avenue to Sixtieth street, the paving of the

street from Fortieth street to Flatbush avenue having been completed by the Department of Public Works this year. There were planted 1,340 trees and nearly 2,000 shrubs. The twenty-one blocks from Sixtieth street to Thirty-ninth street were planted in maples, and the next twenty blocks were planted with elms, the remainder of the street as far as Atlantic avenue was planted with red and pin oaks. The shrubs used were the very best obtainable in the country, and include several choice varieties. In addition to planting the malls the sidewalks were planted with Norway maples from Atlantic avenue to Twenty-fifth street, and from Thirty-fourth to Fortieth street; the nine blocks between Twenty-fifth and Thirty-fourth streets were not completed because of serious leaks in the gas mains in that locality.

Forest Park.

Aside from the general maintenance and improvement of the golf links in Forest Park, the principal improvement has been the construction of a parkway 20 feet wide from Myrtle avenue near the cemetery line along the line of the old road and connecting with the macadam boulevard heretofore built from Jamaica avenue to Forest parkway. This roadway has been constructed on a foundation of broken stone nine inches in depth and covered with limestone and trap rock screenings to a thickness of two inches. Both sides of Myrtle avenue have been fenced with wrought-iron pickets from Railroad street to Division avenue, a distance of 6,000 feet, and on Magnolia avenue for a distance of about 2,000 feet.

Small Parks.

The small parks of the Department received unusual care during the past season, and are in good condition. The lawns in many of these parks were treated to a generous coating of fertilizer during the past month.

Saratoga Square was somewhat remodeled and provided with a handsome new shelter, which was constructed under contract by Edward Johnson at a cost of \$8,300. It is very much appreciated by the visitors of this park. A contract has been let to lay concrete sidewalks around the entire park.

Winthrop Park was provided with two new entrances, one on Monitor street and the other on Russell street in the middle of the block. The shelter and comfort house was remodeled and considerably improved. Paths were repaired and borders cut and sodded. Many of the trees surrounding the park were broken down and decayed, and it therefore became imperative, in order to secure the best results, to renew most of the trees on the sidewalks. About 100 trees were planted on the outside of the park, and a few were set inside to replace those which had been destroyed or damaged.

Linton Park was provided with wrought iron ornamental gates, and the fences were repaired and painted. The flagpole was repainted and the building put in good

repair. A number of trees and shrubs were planted and the borders of the walks and beds were kept in fine condition.

New Lots Playground—The fence around this park, which had become rusty, was thoroughly overhauled and painted, new gates were set and it was found necessary to replace a large number of trees which had been blown down or otherwise injured. The flagpole was painted and the building put in good repair.

Fort Hamilton Park was designed for walks, plantation, etc., under the direction of the Landscape Architect, and was almost completed when the cold weather set in. The remainder of the work will be done in the spring, and thereby another attractive park will be added to the system.

Seaside Park—The plantation at Seaside Park was materially increased by the addition of a large English elm and 12 Oriental plane trees, besides a number of smaller trees. The great attraction in this park, however, is the fine display of flowering plants, the coloring being better than that in any other part of the system. The lawns were maintained in good condition, the grass cut and the borders of the flower-beds trimmed.

Ashmead Park was surrounded with a substantial and handsome wrought iron fence, the sidewalks were brought to grade and the entire triangle leveled. About 1,000 bulbs were planted to secure a floral display in the spring.

King's Manor Park (Jamaica)—The building in this park was entirely remodeled, the roof shingled, the piazzas rebuilt and the house painted. A comfort house in the old stone building adjacent to the manor house has been completed and is now in use.

A baseball diamond has been laid out on the meadow and was largely patronized during the entire season. Several lawn tennis courts were added to those used last year, and, in order to satisfy the growing demand, it is necessary to provide a still larger number during the coming season.

Canarsie Park has been provided with a suitable iron picket fence, has been graded and the depressions filled and about 75 trees planted. The design for the laying out of this park has been prepared by the Landscape Architect and will be completed early in the spring. It is proposed to add a pier and dock to this park, plans for the construction of which are now under way.

Parkways.

The Ocean parkway was carefully looked after, the cycle paths recoated with limestone screenings about an inch in thickness their entire length. Six hundred cubic yards of 1½-inch trap rock and five hundred cubic yards of trap screenings were used in repairing the west traffic road. The plaza at the foot of the parkway was macadamized, and the walk surrounding it paved with asphalt tiles. Much of this work was destroyed during the terrific storm in October and will have to be re-

built as soon as the weather permits. The Speedway was harrowed daily, the entire driveway sprinkled, cleaned and otherwise kept in good repair. The bridle road was resurfaced with fine gravel and sand to the extent of over six hundred truck loads. The trees were carefully looked after and the necessary pruning attended to. The trees on the lower end of the Boulevard, from Coney Island creek to the Concourse, were renewed where they had been practically ruined by the storms; 295 thrifty Oriental plane trees were planted.

Eastern Parkway—A contract was let late in the fall to provide for the much-needed paving of the sidewalks. Work was started in November and carried along until the cold weather set in. About 40,000 square feet of cement sidewalk were laid from the Plaza on either side to about Kingston avenue. It is expected to finish this work early in the spring.

The foundation was laid and pedestal built for the statue to General Henry W. Slocum at the intersection of the centre line of Bedford avenue with the centre line of Eastern parkway, the statue to face west. The design for this statue, as well as the location, was submitted to the Municipal Art Commission and unanimously approved. The site had been selected by Mayor Schieren of the old City of Brooklyn and Park Commissioner Squier in 1894.

The resurfacing of the centre drive of the Eastern parkway could not be accomplished owing to the delay of the contractor in furnishing road material. Repairs were made wherever necessary, but it was impossible owing to the heavy traffic to keep this road as it should be kept until such time as the traffic roads on both sides of the parkway are paved with a modern paving material. Under the present conditions it is almost impossible for heavy vehicles to use these cobble roads. Your Commissioner has made many unsuccessful efforts to secure an appropriation for this much-needed improvement, which will cost in the neighborhood of \$200,000.

The Department of Water Supply, Gas and Electricity made a contract to lay a 48-inch main along the northerly traffic road of this parkway without obtaining the consent of the Park Department. The carrying out of this project would seriously jeopardize the life of the beautiful trees for which this parkway is noted. This Department has endeavored to point out to the Department of Water Supply that another route could be followed which would not materially increase the cost of the laying of the water main, but the Department of Water Supply has failed to change the plans, and your Commissioner has earnestly protested against the use of this parkway for the laying of the water mains and desires that his protest be recorded.

Fort Hamilton parkway, Bay parkway, Shore road and Twenty-sixth Ward street system were regularly maintained, gutters cleaned and roadways sprinkled.

Pitkin avenue for part of its length was resurfaced with a layer of trap rock six inches in thickness, topped off with trap rock screenings.

Glenmore avenue for some six city blocks was resurfaced. Repairs to asphalt pavement have been made wherever necessary.

The driveway through Bushwick Park, which was almost destroyed by a cloudburst, has been rebuilt and is now in better condition than ever. A contract has been let to the Hastings Pavement Company to take up the dilapidated brick pavement on Bushwick avenue, between Eastern parkway and Jamaica avenue, and replace the same with an asphalt block pavement on concrete foundation at a cost of \$24,350.

It was your Commissioner's desire to begin work on the completion of the Shore road in accordance with the plans of the late Frederick Law Olmsted, which were adopted by the Shore Road Commission. It was found, however, that in order not to waste money it would be necessary to build a substantial sea wall and do a large amount of filling before any other work could be begun, and in order to do so an appropriation of at least \$1,000,000 is necessary. This amount, however, could not be secured, and therefore very little was done to improve this driveway. It is almost imperative that the road, which is barely 12 feet wide in two places, should be widened in the near future or else the City may find itself liable for damages to a larger amount than would be necessary to do the work.

Stone avenue has been paved with asphalt from Eastern parkway extension to Riverdale avenue. This street was in a disgraceful and dangerous condition and a menace to the health of the people in that section of the City. The cost of the improvement was \$55,615.

Plaza street—This parkway, circling the plaza at the main entrance to Prospect Park, from Flatbush avenue to Eastern parkway, was regulated, curbed, guttered and macadamized, and a drainage system was provided for it, the work being done by contract and completed in October at a cost of \$8,567.50.

The two triangles at the intersection of Flatbush and Vanderbilt avenues have been curbed and paved with concrete and made safe and clean landings.

New Parks.

McKinley Park, at Fort Hamilton avenue, Seventh avenue and Seventy-third street, has been acquired during the past year and turned over to the Department for improvement.

Willink Entrance.

The land lying opposite the Willink entrance, bounded by Washington avenue, Malbone street, Flatbush avenue and the present southerly boundary of Institute Park, is now in process of condemnation.

The Bliss property, so called, on the Shore road, First avenue and Bay Ridge avenue, which was before the Board of Estimate and Apportionment, was laid on the table.

The plot bounded by Lee avenue, Bedford avenue, Flushing avenue and Lynch street is now under consideration by the Board of Estimate, having passed the Local Board of Improvements.

The plot bounded by Bushwick avenue, McKibbin, Moore and Bogart streets was approved by the Local Board of the Bushwick District, and is now before the Board of Estimate and Apportionment for consideration.

The plot bounded by Avenues I and J, East Thirty-eighth and Thirty-ninth streets was recommended for purchase by the Board of Estimate and Apportionment, and the matter was referred to the Finance Department for acquirement at private purchase.

The plot bounded by Fulton street, Lewis avenue, Chauncey street and Stuyvesant avenue has been recommended for purchase by the Board of Estimate and Apportionment, and proceedings for condemnation are now under way.

Maxwell Park, in the Fifth Ward, bounded by Bridge, Tillary and Jay streets, is now in process of condemnation.

Jewell square, bounded by Fulton street, Norman place, Conway street and Broadway, has been recommended by the Local Board, and a resolution to change the map has been passed by the Board of Estimate and Apportionment.

The triangle at Knickerbocker avenue, Myrtle avenue and Bleecker street is now being acquired at private purchase by the Finance Department.

Queens County Parks.

A site has been selected at Van Alst avenue, East avenue, Ninth and Twelfth streets, but the resolution to acquire title has not yet been passed by the Board of Estimate and Apportionment.

Another site, bounded by East river, Pierce avenue, Sanford street and Vernon avenue, is now in course of acquirement.

Department of Arboriculture.

Owing to the fact that no money has as yet been provided for carrying out the provisions of chapter 453 of the Laws of 1902, with its amendments, no attempt has been made to take care of the trees in the public streets. The Department has, however, assumed the jurisdiction of them and has allowed no interference with the trees except under permit of this Department. No person was allowed to plant, prune or remove any tree on a public highway without a permit from the Department, and such permits were issued only after an investigation by one of the Arboriculturists, and when pruning of any considerable extent was attempted a competent man was detailed from this Department to supervise the work. The Department has furnished, on application, information and advice on all matters

pertaining to trees, and has rendered assistance to teachers and others interested in nature study.

Owing to the heavy rains during the past season the effectual results of spraying were interfered with, and as a result several species of insects appeared in large numbers. Of the more destructive insects the tussock moth has been held in check the past season owing to the thorough cleaning the trees received in 1902. They appeared in considerable numbers in a few localities, however, but the trees were thoroughly sprayed several times during the summer and the foilage saved.

The elm leaf beetle, which is probably the worst insect pest that has ever attacked the trees, appeared in considerable numbers in Bedford Park, and energetic measures were employed for their destruction.

The maple pulvinaria, or cottony maple scale, which did such enormous damage to the silver maples in this vicinity about ten years ago, appeared in immense numbers again the past season on the maples on Ocean parkway. The only practicable method of destroying this scale is to prune the trees, then scrape the remaining branches with stiff wire brushes. In this way the insects are sure to be destroyed. Although this is a very tedious process, no less than 695 large trees were cleaned in this manner.

Myriads of plant lice appeared during the dry weather on the Norway maples and tulip trees, threatening to cause considerable damage and making it very unpleasant for persons wishing to sit under the infested trees. A spray of kerosene emulsion was found to be quite effective.

Pruning—The work under this head consisted in a general thinning out of shrubbery, removing dead and decayed trees and broken branches. The shrubbery of all kinds received attention and the trees in the various small parks were put in good condition. Owing to the severe storms of the summer broken branches were removed from 7,000 trees.

The following is a summary of the trees and shrubs planted during the season of 1903:

Deciduous trees planted	2,594	
Coniferous trees planted	1,024	
	<hr/>	3,618
Deciduous shrubs planted	5,109	
Rhododendrons planted	641	
Kalmias planted	250	
	<hr/>	6,000
Bulbs planted	196,200	
Bedding plants planted	177,092	
	<hr/>	373,292
Total.....		<hr/> <hr/> 382,910

Henry W. Maxwell Memorial.

A fine bronze memorial tablet portraying the features of the late Henry W. Maxwell was placed upon an immense boulder excavated at Sunset Park at the triangle opposite the reservoir at Eastern parkway and Flatbush avenue, and was unveiled with fitting ceremonies on Saturday, December 26, 1903. Mr. Maxwell was one of the Park Commissioners in 1884, and was for many years a member of the Board of Education and one of Brooklyn's most public-spirited citizens, who gave freely of his wealth to the Brooklyn Institute, Industrial School and Home for Destitute Children and the Long Island College Hospital, besides several other minor charities. The tablet is one of the best productions of Augustus St. Gaudens, and bears the inscription: "Henry W. Maxwell, MDCCCL-MCMII. This memorial erected by his friends in tribute to his devotion to public education and charity in the City of Brooklyn." The unveiling ceremonies were held at 3 p. m. in the Brooklyn Institute Building. The Hon. Charles A. Schieren, chairman of the Citizens' Committee which bore the expense of the monument, presented the memorial to your Commissioner in a brief but appropriate address. Your Commissioner in turn presented the memorial to President Swanstrom on behalf of the borough. President Swanstrom delivered a short address of eulogy in presenting the memorial to Mayor Low, who received it on behalf of The City of New York. A large American flag which draped the monument was drawn aside by Mrs. Howard Whitney, a niece of Mr. Maxwell. The committee which had the arrangements in charge consisted of ex-Mayor Schieren, chairman; Theodore F. Miller, treasurer; the Hon. George B. Abbott, Justice Willard Bartlett, the Hon. Hiram R. Steele, the Hon. A. G. McDonald, W. H. Nichols, D. S. Ramsay, the Hon. A. T. White, Samuel Boucock, the Hon. Willis L. Ogden and Richard Young.

Music.

During the year twenty-six concerts were given in Prospect Park by Shannon's, Mygrant's, Conterno's and Borjes' bands, and were very largely attended. A concert was also given by Shannon's band at the exercises attending the opening of Institute Park.

Your Commissioner desires again to express his gratitude to the United German Singing Societies of Brooklyn for their generous and patriotic service in giving two great concerts in Prospect Park, the first, on May 28th, being the opening concert of the year, and the last, on September 26th, which closed the musical programme for the season. These concerts were an unqualified success from a musical standpoint as well as in popular appreciation. It was estimated that there were 20,000 people present at the first, and 30,000 attended the last concert. In addition to these, forty concerts were given in the small parks throughout the City, and met with popular favor, all of them being well attended and highly appreciated, especially in the congested districts.

The various German Singing Societies gave seven concerts at Highland, Fort Greene, Sunset, Bushwick and Winthrop Parks, all of which were most highly appreciated and largely attended.

Your Commissioner hopes that arrangements will be made for the continuance by his successor of these concerts in an increased number.

This Department also furnished a band for the celebration of Antietam Day, September 27th, and this concert was also largely attended.

The most destructive storm in the history of the Department swept over the City on October 9th. The banks of the lake in Prospect Park, near the Coney Island entrance, overflowed, and the water cut deep gullies in the macadam roadway leading to the Park circle. A great deal of sand and gravel was carried onto the Park circle, and had to be removed. Water covered the plaza in front of the gate to a depth of fifteen inches. The bridle paths on the hills were ruined, and necessitated reconstruction. The foundation of the boat-house collapsed, and a new foundation had to be built. The high tides and winds caused considerable damage to the bulkhead at Coney Island, and undermined the granite boundary wall for a distance of about fifty feet at the easterly end. A part of the concourse adjoining the bulkhead was destroyed. Your Commissioner was given permission, by resolution of the Board of Aldermen, to expend \$50,000 in repairs without advertisement. A contract has been let to J. M. Briggs for repairing the stone wall and the bulkhead at a cost of \$19,380.29, and the work of repair is now well in hand and will soon be completed.

Financial Statement Showing Amount Appropriated for Regular Maintenance, Special Work and Receipts from Rentals.

Title of Appropriation.	Appropriation for 1903, Allowed by Board of Estimate and Apportionment January 1, 1903.	Transferred by Board of Estimate and Apportionment Subsequent to January 1, 1903.	Total Appropriation for 1903.	Expended.	Outstanding on Contracts.	Balance.
Administration	\$19,162 45	\$1,750 00	\$20,912 45	\$19,200 00	.....	\$1,712 45
Labor, Maintenance and Supplies	465,000 00	2,410 00	462,590 00	443,820 51	\$11,062 24	7,707 25
Maintenance of Museums	70,000 00	.....	70,000 00	63,135 40	.....	6,864 60
Music	11,864 00	660 00	12,524 00	12,174 00	.....	350 00

Bond Accounts.

Title of Appropriation.	Amount of Appropriation.	Expenditures.	Balance.	Outstanding on Contracts.
Improvement of Parks, Parkways and Drives, Boroughs of Brooklyn and Queens.....	\$815,865 03	\$511,415 51	\$108,612 82	\$195,836 70
Bay Ridge Parkway (Shore Road), 1901.....	6,462 96	6,462 96	.....	.....

Balances from 1901, Bond Account (Brooklyn's Balances).

Title of Appropriation.	Amount of Appropriation.	Expenditures.	Balance.
Park Site and Improvement Fund.....	\$838 27	\$75 00	\$763 27
Memorial Monument Fund.....	*5,000 00	5,000 00	.....
Museum of Arts and Sciences Fund.....	424 87	.....	424 87
Memorial Arch Fund.....	3,018 57	.....	3,018 57
Park Purchase Fund.....	457 03	341 88	115 15
County Street Improvement Fund.....	*728 91	725 00	3 91
County Improvement of Streets (additional).....	52 74	.....	52 74

* Contract.

Special Account (Balance from 1901).

Title of Appropriation.	Amount of Appropriation.	Contracts.	Expenditures.	Balance.
Maintenance and Improvement of Public Parks on Brooklyn Heights, Borough of Brooklyn.....	\$1,239 80	.....	\$776 45	\$463 35
Museum of Arts and Sciences Fund, Erection of an Addition.....	822,054 64	\$568,867 84	198,461 71	54,825 09

Revenue from Rents and Privileges.

Prospect Park.....	\$4,975 00
Forest Park.....	954 00
Shore road and Bay Ridge Parkway.....	1,105 00
Coney Island.....	350 00
Canarsie Park.....	60 00
East Plaza street and Eastern Parkway.....	150 00
Kings Park.....	1 00
Furman street.....	550 08
Total.....	\$8,145 08

Sale of sheep, tools, etc., August 24, 1903.....	\$952 00	
Bay windows and ornamental projections.....	281 95	
		<u>\$1,233 95</u>
		<u><u>\$9,379 03</u></u>

Donations to the Department of Parks, 1903.

- Mrs. W. Wright, No. 230 Roebling street, five covies.
 Mr. R. Roech, No. 712 Third avenue, one horned owl.
 Mr. J. Niederstein, Flatbush avenue, one pair red foxes and one golden eagle.
 Dr. Sheppard, Shore road, one turkey buzzard.
 Mr. W. Vreeland, No. 8 Grace court, one raccoon.
 Mr. C. W. Harrington, Key West, Fla., one pair blue cranes and one alligator.
 Mrs. F. A. Houghton, No. 195 Clarmont avenue, one pair cardinals, one tame pigeon.
 Captain David Moore, No. 62 Park place, one coati mundi.
 Hon. W. C. Whitney, Lenox, Mass., one buffalo cow.
 Mr. R. Kanippe, No. 184 Euclid avenue, one chicken hawk.

WORK OF THE POLICE.

Annual Report in Relation to the Police Department—Music in the Parks—The Number of Visitors—Games Played—Other General Information.

Hon. RICHARD YOUNG, Commissioner of Parks, Boroughs of Brooklyn and Queens:

Sir—I have the honor to herewith submit my annual report of the work accomplished by the men constituting the Police Force of the Seventy-third Precinct, Prospect Park, together with such other information in relation to games, etc., as is of general interest, and which comes under police supervision.

Police Force.

During the year the Police Force consisted of the following members: Captain (1), Sergeants (4), Detective-Sergeant (1), Roundsmen (4), Patrolmen (70). One of the Roundsmen and eleven men are mounted on horses, five to patrol Ocean parkway, four the park proper and two on Eastern parkway. Five Patrolmen are mounted on bicycles to patrol the principal drives and cycle paths around the park and Ocean parkway, the three remaining Roundsmen and fifty-three Patrolmen to patrol the park, plaza and Institute Park on foot. Total force, 80.

Number of Arrests.

During the year 167 arrests were made for the following offenses: Burglary, 2; violation of City ordinances, 37; violation of Park ordinances, 80; indecent ex-

posure, 2; petit larceny, 2; disorderly conduct, 14; vagrancy, 1; assaults, 3; attempt at suicide, 2, and cruelty to animals, 1, and intoxication, 17; total, 167.

Parades in and around the Park.

The following parades occurred in or about the Park, May 30, Memorial Day parade, and June 5, the Brooklyn Sunday-school Union.

Field Sports.

During the year seventeen hundred games of baseball were played on the Parade Ground as follows: April, 180; May, 425; June, 380; July, 425; August, 310; September, 80, and October, 20. During the months of April, May and September 20 games of basket-ball were played by young ladies, 90 games of football were played during the months of October and November, 100 games of cricket were played as follows: May, 22; June, 36; July, 20; August, 18, and September, 4, and 19 days of skating on the lake during the month of January and December.

Picnics.

During the year there were 456 picnics in Prospect Park, with an attendance of 48,205 persons as follows: Sunday-school picnics, 188, persons attending, 34,647; lawn, private and family parties, 268, with an attendance of 13,558, which took place as follows: May, 188, attendance, 5,623; June, 67, attendance, 9,983; July, 119, attendance, 19,362; August, 54, attendance, 7,637; and September, 33, attendance, 5,610; total picnics, 456, persons attending, 48,205.

Accidents, etc.

There were 157 accidents during the year, as follows: To persons taken sick and falling in the park, 32; to persons playing base and foot ball on the Parade Grounds, 9; to carriages, sleighs and other vehicles, 41; bicycles, 18; accidents caused by runaway horses, 38. There were 87 ambulance calls to the aid of persons who were taken sick and otherwise injured, of which 31 were removed to hospitals and 56 left for their homes or elsewhere. There were also 3 deaths by suicide, 1 caused by hanging, 1 by shooting, and 1 by carbolic acid poisoning.

Concerts.

The following concerts were given in Prospect Park during the summer months: Saturday concerts, 14; first concert June 6; last concert September 26; Sunday concerts, 14; first concert June 7; last concert September 27; also 1 special concert May 24, 1903, and 1 concert at the dedication of Institute Park November 14, 1903.

Respectfully submitted,

MICHL. A. McNAMARA, Captain, Seventy-third Precinct.

BOROUGH OF BROOKLYN.
Improved Parks, with Names.

Name.	Location.	Area in Acres.
Bedford Park	Brooklyn and Kingston avenues, Park and Prospect places	4
Bensonhurst Beach.....	Bay parkway, Gravesend Bay, Twenty-first and Cropsey avenues	8
Brooklyn Heights Parks.....	Columbia Heights, fronting on Furman street...	5
Bushwick Park	Knickerbocker and Irving avenues, Starr and Suydam streets	6
Canarsie Beach	Rockaway parkway and Jamaica Bay.....	40
Carroll Park	President, Court, Carroll and Smith streets....	2
City Park	Canton and Navy streets, Park and Flushing avenues	7.500
City Hall Park.....	Junction of Court and Fulton streets.....	0.500
Cooper Park	Maspeth and Morgan avenues, Sharon and Guilford streets	7
Cooper Gore Park.....	Junction of Metropolitan and Orient avenues...	0.250
Cuyler Park	Junction of Fulton street and Greene avenue...	0.250
Dyker Beach Park.....	Seventh avenue, Bay Eighth street, Cropsey and Fourteenth avenues and Gravesend Bay.....	144
Fort Greene Park.....	DeKalb avenue, Washington Park, Ashland place, Willoughby and Canton streets and Myrtle avenue	30
Fort Hamilton Park.....	Fourth avenue, DeNyse street, Fort Hamilton avenue and New York Bay.....	7
Highland Park	Terminus of Eastern Parkway extension, Sunnyside and Force Tube avenues.....	25
Institute Park	Washington avenue, Eastern parkway and Flatbush avenue	58
Irving Square	Hamburg and Knickerbocker avenues, Halsey and Weirfield streets	3.500
Lincoln Terrace	Eastern parkway, Buffalo avenue, President street and Rochester avenue.....	12
Linton Park	Bradford street, Blake, Dumont and Miller avenues	3
Municipal Park	Joralemon street, opposite City Hall.....	0.333
McKinley Park	Fort Hamilton avenue, Seventh avenue and Seventy-third street	9.75
New Lots Playground.....	Sackman street, Newport, Christopher and Riverdale avenues	3
Parade Ground	Coney Island, Caton and Fort Hamilton avenues and Parade place	40
Prospect Park	Ninth avenue, Fifteenth street, Coney Island, Fort Hamilton, Ocean and Flatbush avenues..	516.167

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Name.	Location.	Area in Acres.
Red Hook Park.....	Richards, Dwight, Verona and William streets..	6
Saratoga Square	Saratoga and Howard avenues, Halsey and Macon streets	4
Seaside Park	Sea Breeze avenue, West Fifth street, East Fifth street and Atlantic Ocean.....	45
Stuyvesant Park	Junction of Stuyvesant avenue and Broadway..	0.125
Sunset Park	Forty-first and Forty-third streets, Fifth and Seventh avenues	14.250
Tompkins Park	Tompkins, Greene, Lafayette and Marcy avenues	7.750
Underhill Park	Junction of Underhill and Washington avenues.	0.250
Winthrop Park	Nassau and Driggs avenue, Russell and Monitor streets	8.500
Woodpoint Park	Junction of Metropolitan avenue and Woodpoint road	0.250
Zindel Park	Junction of Broadway and Throop avenue....	0.250
Playgrounds.		
Boys' Playground	Bedford avenue and North Fourteenth street...	0.25
Girls' Playground	Manhattan and Driggs avenues.....	0.25
Total		1,019.11

Parkways, Streets, Avenues, etc., Under Jurisdiction of Department of Parks.

BOROUGHES OF BROOKLYN AND QUEENS.

Name.	Location.	Length. Feet.	Width. Feet.
Bay Parkway (formerly Twenty-second avenue)	From Ocean parkway to Bensonhurst Beach	15,840	100
Bay Ridge Parkway (Shore Road)....	From Fort Hamilton avenue to shore of New York Bay and along shore of New York Bay to Fort Hamilton.....	15,840	320 to 900
Bushwick Avenue	From Eastern Parkway extension to Jamaica avenue	1,320	100
Buffalo Avenue	From Eastern parkway to East New York avenue	660	110
Dumont Avenue	From New Lots to Fountain avenue.....	1,320	70
Eastern Parkway	From Prospect Park to Ralph avenue....	13,200	210
Eastern Parkway Extension.....	From Ralph avenue and Eastern parkway to Highland Park.....	11,864	110
Fourth Avenue	From Flatbush avenue to the Shore road..	23,760	120
Fort Hamilton Parkway.....	From Ocean parkway to Fort Hamilton..	23,760	100

Name.	Location.	Length. Feet.	Width. Feet.
Glenmore Avenue	From Stone avenue to Eldert lane.....	10,560	60
Miller Avenue	From Eastern Parkway extension to Ja- maica avenue	528	60
New Lots Avenue.....	From Riverdale to Dumont avenue.....	5,280	60
Ocean Parkway	From Prospect Park to Coney Island....	29,040	210
Ocean Avenue	From Flatbush to Fort Hamilton avenue..	2,640	100
Pennsylvania Avenue	From Jamaica avenue to Jamaica Bay....	13,200	100
Pitkin Avenue	From East New York to Stone avenue....	2,680	80
Riverdale Avenue	From Stone to New Lots avenue.....	7,920	70
Rockaway Parkway	From Buffalo avenue to Canarsie Beach..	26,400	100
Stone Avenue	From Eastern Parkway extension to River- dale avenue	5,280	80
Seventy-fifth Street	From Fort Hamilton parkway to Bay park- way (Twenty-second avenue).....	10,560	100
Union Street	From Fourth avenue to Prospect Park...	3,960	60
Shaw Avenue	From Jamaica avenue to Forest Park, Bor- ough of Queens	1,320	80
Total		226,952	.....

BOROUGH OF QUEENS.

Improved Parks, with Names.

Name	Location.	Area in Acres.
Ashmead	Canal street, Park place and South street, Ja- maica	0.250
Forest	Jamaica avenue, Union turnpike, Flushing and Myrtle avenues, Richmond Hill.....	536
Flushing	Main street and Broadway, Flushing.....	1.200
Kings	Fulton, Alsop, Ray streets, and Shelton avenue, Junction of Jackson avenue and Third street,	
Monitor Square	Jamaica	11
	Long Island City.....	0.250
Poppenhausen	Junction of College avenue and Thirteenth street, College Point	0.243
Total		548.943

Improved Unnamed Parks.

Location.	Area in Acres.
Junction of Martel avenue and Thirteenth street, College Point.....	0.060
Fourteenth, Fifteenth and Louisa streets and Fifth avenue, College Point.....	1.100
Junction of Jackson avenue and Eleventh street, Long Island City.....	0.020
Vernon and Nott avenues and Hancock street, Ravenswood.....	0.250
Junction of Jackson avenue and Twelfth street, Long Island City.....	0.060
Junction of Jackson avenue and Sixth street, Long Island City.....	0.060
Junction of Jackson avenue and Ninth street, Long Island City.....	0.100
Junction of East New York and Pitkin avenues, Brooklyn.....	0.250
Total	1.900

Marked progress has been made in the development of the Museum of the Brooklyn Institute of Arts and Sciences on Eastern parkway and Washington avenue. The contract was let early in the year by the Department of Parks to P. J. Carlin & Co., for constructing a power-house and power-plant in the rear of the Museum Building at a cost of \$78,693. Contracts have also been awarded to Peter Lauckhardt for the construction of natural history cases for the second floor of the Museum Building at \$23,450; to A. H. Davenport Company, for orchestra chairs for the Museum Auditorium, at \$13,272; and to Joseph Ryan, for painting the interior of the second section of the Museum, at \$6,850.

The work of completing the interior of the second section of the Museum Building, by Thomas Cockerill & Son, contractors, was under way during the entire year.

On July 1 the Board of Estimate and Apportionment of the City authorized the issue of Corporate Stock of the City amounting to \$454,000, to be used in payment for the construction of an eastern wing of the building and other work on the portions of the building already under way.

On December 21 the Department of Parks awarded the contract to P. J. Carlin & Co. for building the eastern wing and for additional work on the present Museum structure at \$407,315, in accordance with the advertised specifications and plans.

The Museum has received very important gifts during the year: Five thousand nine hundred and thirty-eight specimens were presented to the Natural History Department, including some 150 mammals, birds and reptiles from the New York Zoological Society; some fifty-five birds from the Rockaway Rod and Gun Club, and three very valuable skins of mammals from Mrs. William B. Davenport. The total additions to the natural history collections were 24,949.

The gifts to the art collections include: Six very valuable paintings from the estate of the late Henry W. Maxwell; an oil painting entitled "A Gray Morning," by Leonard Ochtman, from the income of the Woodward memorial funds; extensive